

# HSBC Holdings plc

Annual Report and Accounts 2016



HSBC 

# Connecting customers to opportunities

Our purpose is to be where the growth is, enabling businesses to thrive and economies to prosper, and ultimately helping people to fulfil their hopes and realise their ambitions.



## Contents

### As a reminder

#### Reporting currency

We use US dollars.

#### Adjusted measures

We supplement our IFRS figures with adjusted measures used by management internally. These measures are highlighted with the following symbol:



► Further explanation may be found on page 30.

Unless stated otherwise, risk-weighted assets and capital are calculated and presented on a transitional CRD IV basis as implemented by the Prudential Regulation Authority.

### Our photo competition winners

In 2016, we ran a Group-wide photo competition which attracted over 6,200 submissions from 1,100 employees. The joint overall winning photos are featured in this report. The image on the inside front cover shows a rice farmer at harvest time in north-east Vietnam, and the photo on the inside back cover was taken at sunrise at Situ (Lake) Patenggang, West Java, Indonesia.

#### Cover image

The Hong Kong-Zhuhai-Macau Bridge is one of the most ambitious infrastructure projects in the Pearl River Delta. It will link three key cities, cutting transport costs and travelling times, and boosting economic development. HSBC has extended a HK\$700m receivables finance facility to one of the companies building the bridge. Receivables finance is an area where HSBC has particular expertise, and this facility is the largest it has provided for infrastructure in the region.

### Strategic Report

An overview of how we are structured, what we do and where, our strategic actions, the principal risks we face, and high-level performance information. The section is introduced by both the Group Chairman and the Group Chief Executive, and also explains the role of the Board.

This Strategic Report was approved by the Board on 21 February 2017.

Douglas Flint, Group Chairman

2	Highlights
4	Group Chairman's Statement
7	Group Chief Executive's Review
10	Our strategy
12	Strategic actions
14	Financial overview
18	Global businesses
20	Regions
22	How we do business
25	Tax
26	Risk overview
28	Remuneration

### Financial Review

Detailed reporting of our financial performance, at Group level as well as within our matrix structure. It also includes our full risk report and reporting on how we manage capital.

30	Financial summary
44	Global businesses and geographical regions
64	Risk
127	Capital

### Corporate Governance

Details of our Board of Directors and senior management, and our approach to corporate governance and remuneration.

132	Corporate Governance Report
133	Biographies of Directors and senior management
138	Board of Directors
140	Board committees
145	Internal control
146	Going concern and viability
147	Share capital and other disclosures
150	Employees
153	Directors' Remuneration Report
173	Directors' Responsibility Statement

### Financial Statements

Our financial statements and related notes and reports.

174	Report of the Independent Auditors
183	Financial Statements
194	Notes on the Financial Statements

### Other Information

Important information for our shareholders, including contact information. Like any industry and company, we have our set of abbreviations and terminology. Accordingly, we provide an explanation of the abbreviations used. A glossary of key terms is available online at [www.hsbc.com/investor-relations](http://www.hsbc.com/investor-relations).

274	Shareholder information
279	Forward-looking statements and Certain defined terms
280	Abbreviations

# Highlights

We are one of the most international banking and financial services organisations in the world.

## Group

### For year ended 31 Dec 2016

**Reported profit before tax**  
(\$bn)

2016	7.1
2015	18.9
2014	18.7

(2015: \$18.9bn)

**\$7.1bn**

**Adjusted profit before tax** ➔  
(\$bn)

2016	19.3
2015	19.5
2014	21.6

(2015: \$19.5bn)

**\$19.3bn**

**Reported revenue**  
(\$bn)

2016	48.0
2015	59.8
2014	61.2

(2015: \$59.8bn)

**\$48.0bn**

### At 31 Dec 2016

**Risk-weighted assets**  
(\$bn)

2016	857
2015	1,103
2014	1,220

(2015: \$1,103bn)

**\$857bn**

**Common equity tier 1 ratio**  
(%)

2016	13.6
2015	11.9
2014	10.9

(2015: 11.9%)

**Total assets**  
(\$bn)

2016	2,375
2015	2,410
2014	2,634

(2015: \$2,410bn)

**\$2,375bn**

Our operating model consists of four global businesses, a Corporate Centre and five geographical regions, supported by 11 global functions.

During the year, we changed our reportable segments from regions to global businesses. We also moved certain business portfolios and functions into the newly created Corporate Centre.

For further details, see page 19.

### Performance highlights for 2016

#### Strategy execution

- Following our sale of operations in Brazil, we completed a \$2.5bn share buy-back.
- We further reduced our risk-weighted assets ('RWAs') as a result of our sale of operations in Brazil and other management actions.

– Investment in costs to achieve of \$4.0bn to date has generated annual run rate savings of \$3.7bn.

– We now expect to deliver annualised cost savings of around \$6bn by the end of 2017, around \$1bn above the top end of our original target, while continuing to invest in regulatory programmes and compliance. We will invest an equivalent total of around \$6bn over the same timeframe.

– We increased market share in a number of key markets and international product areas, including trade finance in Hong Kong and Singapore.

#### Financial performance

- Reported profit before tax of \$7.1bn was \$11.8bn lower than in 2015, and was adversely impacted by significant items of \$12.2bn. These included a \$3.2bn write-off of goodwill in our Global Private Banking ('GPB')

business in Europe, costs to achieve of \$3.1bn, adverse fair value movements of \$1.8bn arising from changes in credit spreads on our own debt designated at fair value, and the impact of our sale of operations in Brazil.

– Reported revenue of \$48.0bn was down \$11.8bn. Loan impairment charges and other credit risk provisions ('LICs') fell by \$0.3bn and reported operating expenses rose by \$40m.

– Adjusted profit before tax of \$19.3bn, down \$0.2bn, reflected lower revenue and higher LICs, partly offset by a reduction in operating expenses. In 2016, we achieved positive adjusted jaws of 1.2%.

– Adjusted revenue fell by \$1.3bn or 2% despite improved performance in Commercial Banking ('CMB') and Global Banking and

Markets ('GB&M'). Retail Banking and Wealth Management ('RBWM') and GPB were impacted by challenging market conditions.

– Adjusted operating expenses fell by \$1.2bn or 4%, reflecting our cost-saving initiatives and focus on cost management. We continued to invest in regulatory programmes and compliance.

#### Capital

– Our capital position further strengthened during the year, with a common equity tier 1 ('CET1') ratio at 31 December 2016 of 13.6%, up from 11.9% at 31 December 2015, mainly due to RWA reduction initiatives and the change in the regulatory treatment of our holding in Bank of Communications Co., Limited ('BoCom').

0.8%

Return on equity

1.2%

Adjusted jaws  
► (see page 17)

\$0.51

Dividends per ordinary share in respect of 2016

## Our global businesses

### Retail Banking and Wealth Management ('RBWM')

We help millions of people across the world to manage their finances, buy their homes, and save and invest for the future. Our Insurance and Asset Management businesses support all our global businesses in meeting their customers' needs.

**Adjusted profit before tax** ◀

\$5.3bn

### Risk-weighted assets

\$115.1bn

### Commercial Banking ('CMB')

We support approximately two million business customers in 54 countries with banking products and services to help them operate and grow. Our customers range from small enterprises focused primarily on their domestic markets, through to large companies operating globally.

\$6.1bn

### Risk-weighted assets

\$275.9bn

### Global Banking and Markets ('GB&M')

We provide financial services and products to companies, governments and institutions. Our comprehensive range of products and solutions, across capital financing, advisory and transaction banking services, can be combined and customised to meet clients' specific objectives.

\$5.6bn

### Risk-weighted assets

\$300.4bn

### Global Private Banking ('GPB')

We help high net worth individuals and their families to grow, manage and preserve their wealth.

\$0.3bn

### Risk-weighted assets

\$15.3bn

## Geographical regions

### Reported profit/(loss) before tax (\$bn)

Europe	(6.8)
Asia	13.8
Middle East and North Africa	1.5
North America	0.2
Latin America	(1.6)

### Adjusted profit before tax ◀ (\$bn)

1.6
14.2
1.6
1.3
0.6

### Risk-weighted assets\* (\$bn)

298.4
334.0
59.1
150.7
34.3

\* RWAs are non-additive across geographical regions due to market risk diversification effects within the Group.

# Group Chairman's Statement

The Group has improved its productivity, embraced technological change and continues to reinforce its standards of business conduct. It has a strong capital position and is gaining market share in important areas.



**Douglas Flint** Group Chairman

2016 will be long remembered for its significant and largely unexpected economic and political events. These foreshadowed changes to the established geopolitical and economic relationships that have defined interactions within developed economies and between them and the rest of the world. The uncertainties created by such changes temporarily influenced investment activity and contributed to volatile financial market conditions. Against this background, HSBC's performance in 2016 was broadly satisfactory. Encouragingly, operating performance in the second half of the year was much stronger than expected and compared with the prior year, as businesses and financial markets responded more optimistically than predicted to these events.

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'Greater focus on the trade and investment corridors where HSBC has strong market positioning generated solid market share gains and broader product penetration'

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The Group's reported profit before tax amounted to \$7.1bn, some 62% lower than the prior year. This decline principally reflected the impact of significant items, most of which had no impact on capital, even though they were material in accounting terms. On the adjusted basis used to measure management and business performance, profit before tax was \$19.3bn, broadly in line with the \$19.5bn achieved in the prior year. This outcome was largely driven by improved cost performance as prior year initiatives gained traction and substantially offset lower revenues, while loan impairment charges were marginally higher. Earnings per share of \$0.07 compared with \$0.65 in 2015.

The Group's core capital position improved materially. A change to the regulatory treatment of our associate in mainland China, continued run-off of legacy assets, planned reduction in certain segments of our trading books and inadequately remunerated assets, together with capital released from business disposals, notably our operations in Brazil, drove this improvement. This created the capacity to return \$2.5bn of capital by way of a share buy-back, which was completed in December. We met our objective of maintaining the annual dividend in respect of the year at \$0.51, as indicated at the interim stage. This was delivered through the declaration today of a fourth interim dividend of \$0.21. Reflecting on the strength of the Group's capital position, the Board also approved a further share buy-back of up to \$1bn, which is expected to commence shortly.

## **Strategic actions are now bearing fruit**

In reviewing performance in 2016, the Board noted with approval the traction now evidenced from management actions to reshape the Group and address the challenges brought about by the continuing low interest rate environment.

Greater focus on the trade and investment corridors where HSBC has strong market positioning generated solid market share gains and broader product penetration, particularly in servicing outbound China investment flows. This is recognised in the leading industry awards highlighted in Stuart Gulliver's review.

Significant investment in technology and process redesign is now not only delivering greater cost efficiency but also is poised to markedly enhance our ability to detect and prevent financial crime. In addition, 2017 will see the progressive launch of applications that will materially improve our customers' digital experience, enhance their online security and bring greater personalisation of product offerings.

While there is still a long way to go, it was encouraging to see the significant improvement in performance across all business units in Mexico following the substantial repositioning of the Group's operations there. This contributed to the Group's success in replacing substantially all of the revenues given up through continuing run-off of legacy portfolios, risk mitigation in areas exposed to higher threat of financial crime and reduction in trading books.

Furthermore, HSBC is safer today from the threat of financial crime because of the investments we have been making in our Global Standards programme. The Board remains fully committed to our work in this area in 2017 and beyond.

### **Regulatory matters**

It was extremely disappointing that the regulatory community was unable to achieve its targeted completion of the Basel III framework in January 2017 on the consensual basis expected. It is now almost 10 years since the commencement of the global financial crisis and it is time to draw a line under further regulatory changes, particularly since there is no doubt that our industry is more strongly capitalised, better governed and more risk aware than it was a decade ago. Finalisation of the structure and calibration of the capital framework is crucial to give banks certainty over prospective capital allocations in support of lending and market activities. This is particularly important at this time when public policy is focusing on encouraging greater support for longer-dated assets, including infrastructure, and seeking to build out the capital markets of Europe and emerging markets. It is hugely important that regulators and policy makers now move as quickly as possible to finalise the capital framework in line with their stated commitment to deliver that framework without a significant, broad-based increase in capital requirements. Equally important is the avoidance of fragmentation in the global regulatory architecture as the new US administration reconsiders its participation in international regulatory forums. The best outcome would be early global agreement on unresolved issues, followed by an extended period of regulatory stability to allow familiarity and experience to be gained from what has been put in place.

We made further progress in 2016 on completing the resolution planning required of us as a global

systemically important bank ('G-SIB'). This involved removing or mitigating residual constraints on the clarity of the Group's core college of regulators' approach to winding down the Group, should this ever be necessary. While clearly we do not envisage such circumstances as other than extremely remote, completion of a comprehensive resolution framework is a necessary pillar supporting HSBC's ability to continue to operate as one of the world's G-SIBs. Indeed, our strategy is built around maintaining the scale and the reach of our international network, which in 2016 again demonstrated its resilience and competitive advantages.

Tangible benefits accrue to our shareholders from the detailed work done with our regulators to demonstrate the strength of our capital position and the effectiveness of our resolution planning. Beyond supporting the maintenance of our dividend, in 2016 management's efforts created the capacity to return capital to shareholders by way of a share buy-back and demonstrated justification for a reduction in the additional capital buffer applied to HSBC as a G-SIB.

### **UK referendum on EU membership**

Not a great deal has changed since we reported at the interim stage, given that the UK has still to trigger its formal exit notice and so no negotiations have taken place. We welcomed, however, the additional clarity given to the Government's position in the recent speech by the Prime Minister. The scale of the challenge of negotiating across the entire economic landscape, as well as addressing the legislative and other public policy adjustments that will be required, has become clearer. We believe there is now, as a consequence, a widely shared recognition that an implementation phase between the current position and the one that is ultimately negotiated will be necessary; we strongly endorse this view.

Since the referendum we have focused on advising clients on the implications of leaving the EU for their businesses. We have also been responding to UK Government outreach seeking guidance on which elements of the current EU-based legal and regulatory arrangements it should focus on to preserve the essential role that financial markets based in the UK play in supporting European trade and investment activity.

For our own part, we have broadly all the licences and infrastructure needed to continue to support our clients once the UK leaves the EU. This largely derives from our position in France where we are the sixth largest bank with a full range of capabilities. Current contingency planning suggests we may need to relocate some 1,000 roles from London to Paris progressively over the next two years, depending on how negotiations develop.

### Board changes

We welcomed Jackson Tai to the Board on 12 September last year. Jack brings a rare combination of hands-on banking expertise, top level governance experience and a deep knowledge of Asia and China. These attributes were accumulated in a 25-year career at J.P. Morgan & Co., both in the US and in Asia, and subsequently in senior roles at DBS, the leading Singapore-based regional banking group, where Jack latterly led its regional expansion as Vice Chairman and CEO. Jack was appointed a member of the Financial System Vulnerabilities Committee and the Group Risk Committee.

At the forthcoming AGM we shall bid farewell to our two longest-serving independent directors, namely, our Senior Independent Director, Rachel Lomax, and Sam Laidlaw. Rachel during her tenure has served on the Audit, Risk and Nomination Committees, and took responsibility as the first Chair of the Conduct & Values Committee to establish its terms of reference and its agenda. Sam served on, and latterly chaired, both the Remuneration and Nomination Committees. Together, Rachel and Sam have also been leading the process to manage my own succession. Their combined knowledge of regulatory and public policy, business leadership, corporate governance and consumer issues has been invaluable to the Board. On behalf of all shareholders, I want to thank them for their dedication and commitment.

### Chairman succession

In the Circular inviting shareholders to the 2016 AGM, I indicated that the process to find my own successor had been initiated with the intention of having this concluded during 2017. This process remains on track and an announcement will be made in due course.

### Outlook

We have recently upgraded our forecasts for global economic growth reflecting the likelihood of a shift in US fiscal policy and a broader based cyclical recovery. As in recent years, incremental growth is expected to be driven by emerging economies in which HSBC is well represented. Risks to this central scenario, however, remain high. In particular, we highlight the threat of populism impacting policy choices in upcoming European elections, possible protectionist measures from the new US administration impacting global trade, uncertainties facing the UK and the EU as they enter Brexit negotiations, and the impact of a stronger dollar on emerging economies with high debt levels.

Countering these factors are signs of a cyclical upturn. Global purchasing manager indices are at their strongest for some time, the US economy looks robust and growth in China has held up well, defying the concerns reflected in the market retrenchment seen in the first quarter of 2016. Additionally, commodity prices have risen, reflecting optimism regarding growth in infrastructure investment as well as agreement reached to cut oil supply. These factors also imply reflation across the major economies and rising interest rates, which would benefit HSBC's conservative balance sheet structure.

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'We enter 2017 with the restructuring of the Group essentially completed, and with a strong capital position and a conservative balance sheet'

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However, it is fair to reflect that the upgrades to economic growth we are now forecasting are largely the partial reversal of downgrades made last year when uncertainty was elevated as a result of the unexpected political events. Forecast global growth remains slightly lower than its long-term trend with risks largely to the downside.

We enter 2017 with the restructuring of the Group essentially completed, and with a strong capital position and a conservative balance sheet. We are gaining market share in areas of importance to HSBC as others scale back and our offerings become more competitive. Much of the heavy investment in reshaping the Group to improve productivity, embrace technological change and reinforce global standards of business conduct has been made.

As ever, we owe a huge amount to our 235,000 colleagues who have delivered this change at the same time as working tirelessly to meet customers' expectations of them. On behalf of the Board, I want to thank them all for their dedication and commitment.



**Douglas Flint**  
**Group Chairman**  
21 February 2017

# Group Chief Executive's Review

The strength of our network gives us an unrivalled ability to help clients navigate complexity and uncover new opportunities.



**Stuart Gulliver** Group Chief Executive

We made good progress in 2016. The implementation of our strategic actions is well advanced and our global universal business model performed well in challenging conditions. Our reported profit before tax reflected a number of large significant items, including a write-off of all the remaining goodwill in Global Private Banking in Europe, an accounting loss on the sale of our Brazil business, and investments to achieve our cost-saving target. Our adjusted profits were broadly unchanged year on year following solid performances by our global businesses. These enabled us to capture market share in strategic product areas and build a platform for future growth. We delivered positive adjusted jaws in 2016.

## Performance

Global Banking and Markets recovered from a sector-wide slow start to generate higher adjusted revenue than for 2015. Our Markets businesses performed well in challenging conditions, particularly in Fixed Income products. Our transaction banking businesses also grew revenue, especially Global Liquidity and Cash Management. We made market share gains in Fixed Income in Europe, and achieved our best ever league table rankings in global debt capital markets and cross-

border mergers and acquisitions. HSBC was recognised as the 'World's Best Investment Bank' and 'World's Best Bank for Corporates' at the *Euromoney* Awards for Excellence 2016.

Commercial Banking performed well, particularly in the UK and Hong Kong, growing adjusted revenue in spite of a slow-down in global trade. Gains in Global Liquidity and Cash Management, and Credit and Lending, exceeded the reduction in trade finance revenue. Global Trade and Receivables Finance continued to capture market share in major markets including Hong Kong and Singapore, maintaining our position as the world's number one trade finance bank.

Retail Banking and Wealth Management performance was mixed. Overall adjusted revenue was down, due largely to the impact of reduced client activity in Hong Kong on our Wealth Management businesses. At the same time, strong mortgage balance growth in the UK, Hong Kong and mainland China, and higher current account and savings balances in the UK and Hong Kong, helped increase revenue in Retail Banking. These increased balances should support revenue growth in 2017 and beyond.

We have considered it appropriate to write off the remaining goodwill in the European private banking business. This goodwill relates principally to the original purchase of Safra Republic Holdings in 1999. The restructuring of Global Private Banking is now largely complete, and although Global Private Banking is now much smaller than it was three years ago, it is deliberately positioned for sustainable growth with a focus on serving the personal wealth management needs of the leadership and owners of the Group's corporate clients.

Our cost-reduction programmes continue to bring down our adjusted operating expenses. The traction that these programmes have gained in the last 18 months has enabled us to increase the amount of costs that we are able to remove from the business. We now expect to deliver annualised cost savings of around \$6bn by the end of 2017, and will invest an equivalent total of around \$6bn over the same time-frame in order to achieve this.

These savings should more than compensate for additional investment in regulatory programmes and compliance.

We continue to make strong progress in implementing our strategic actions to improve returns and gain maximum value from our international network. We are on course to complete the majority of these actions by the end of 2017 (see pages 12 to 13), in line with our targets. Our targeted reduction of risk-weighted assets is 97% complete, and the success of our cost saving programmes means that we now expect to exceed our cost reduction target.

The turnaround of our Mexico business continues to accelerate. Improved lending and deposit balances, interest rate rises and better collaboration between businesses helped generate significantly higher profits compared with 2015. We also made significant market share gains, particularly in consumer lending.

We have continued to enhance our business in Asia-Pacific, launching our first exclusively HSBC-branded credit card in mainland China, growing assets under management and insurance new business premiums, and increasing loans in the Pearl River Delta. We also extended our leadership of the offshore renminbi bond market and achieved our best ranking for China outbound mergers and acquisitions since 2003.

We are better protected from financial crime because of the investment we have made in our Global Standards programme. Our Monitor has raised certain concerns, but we have continued to progress and our commitment remains unwavering. By the end of this year, we are on track to have our anti-money laundering and sanctions policy framework in place and to have introduced major compliance IT systems across the Group. Beyond 2017, we will continue to work to fine tune those systems and to ensure that our improvements are fully integrated into our day-to-day risk management practices.

Our strong common equity tier 1 ratio of 13.6% reinforces our ability to support the dividend, invest in the business and manage the continuing uncertain regulatory environment.

### Delivering value for shareholders

In December, we completed the \$2.5bn equity buy-back that we commenced at the half-year. We are also now in a position to retire more of the capital that previously supported the Brazil business. Having received the appropriate regulatory clearances, we will therefore execute a further share buy-back of up to \$1bn in the first half of 2017. This will bring the total value of shares repurchased since last August to \$3.5bn.

We will continue to contemplate further share buy-backs as circumstances permit, and we remain confident of sustaining the annual dividend at the current level for the foreseeable future through the long-term earnings capacity of the business.

### A business fit for the future

While our strategic actions are improving our network, we are also anticipating and adapting to the social, economic and technological trends that are changing our operating environment and our customers' needs and expectations.

The adoption of rapidly evolving digital technologies by our customers is arguably the most transformative force for the financial services industry. Through our global network, we are able to identify and respond to digital trends across 70 countries and territories, applying the technologies that provide the greatest benefit to our customers. We are investing \$2.1bn in digital transformation in Retail Banking and Wealth Management, Commercial Banking, and Global Banking and Markets between 2015 and the end of 2020, and we have already launched innovative ways to make banking faster, easier and safer. HSBC is now the biggest financial services user of biometrics globally, and we continue to roll out voice recognition and fingerprint technology across our network. In 2016, we enhanced our internet and mobile banking platforms in several of our key markets, including the UK and Hong Kong, and launched innovation labs around the world dedicated to the application of artificial intelligence, data management and improvements in cybersecurity. These labs, together with our fintech partnerships, will help us use technology to deliver better banking for our customers.

If digital technology is mankind's greatest opportunity, preventing climate change is its greatest challenge. The Paris Agreement of December 2015 reflected a new consensus on the need to strengthen the global response to climate change. Major injections of capital are now required to finance new technologies, infrastructure and the transition of traditional industries from high to low carbon, and to cover the costs of climate adaptation. As the principal intermediaries between entrepreneurs, businesses and investors, banks have a responsibility to help direct this flow of capital. We are already working with our clients and with investors to help them allocate capital and direct finance towards lower-carbon, carbon-resilient activities, and in 2016 we established a Sustainable Financing Unit to coordinate this work across business lines. Headquartered in London, but with resources in New York and Hong Kong, this new unit will support colleagues tasked with creating and delivering innovative climate products, and help them uncover new sources of sustainable finance.

**'The changes we have made since 2011 have equipped HSBC to improve returns and gain maximum value from our international network'**

We are also seeking to influence client practices and to build the data, the tools and the transparency necessary to embed understanding of climate risk into the way that markets function. In 2016, HSBC Global Research expanded its coverage of environment, social and corporate governance factors to give our clients the information they need to inform their investment decisions. This builds on the work of the world-leading HSBC Climate Change Centre for Excellence, which in 2017 celebrates 10 years of delivering market-leading information on climate policy to clients across the globe. Work is also underway to expand the Group's disclosure of non-financial data to meet the needs of shareholders and other stakeholders.

We are investing to adapt to the changing face of trade. As the world's largest trade finance bank with more than 150 years' experience at both ends

of the world's busiest trade routes, we are perfectly placed to help modernise and digitise long-standing trade finance methods, many of which would still be recognisable to HSBC's founders. We are already working with a broad coalition of partners around the world to make the promise of blockchain technology a reality with regards to trade finance. HSBC has already helped develop a blockchain prototype for a letter of credit that confirms the possibility of sharing information between all parties on a private distributed ledger. In early 2017, we signed a memorandum of understanding with six other banks to make domestic and cross-border commerce easier for European SMEs using blockchain technology. We are also seeking to create ways of financing the growing services trade, which we estimate will account for a quarter of global trade by 2030. At a time when international politics threaten to increase rather than decrease the cost of trade, we will continue to invest both time and resources to find ways of making trade finance cheaper, faster, simpler and more secure for our customers.

### Looking forward

We anticipate new challenges in 2017 from geopolitical developments, heightened trade barriers and regulatory uncertainty. However, the changes we have made since 2011 have equipped HSBC to manage the complexity of today's global business environment. HSBC is a strong and resilient business with a global universal business model geared to find growth opportunities in a low-growth world. If globalisation continues to retreat, as seems likely, we are in a strong position to capitalise on the regional opportunities that this will present, particularly in Asia and Europe. Most importantly, the strength of our network gives us an unrivalled ability to help our clients navigate that same complexity and overcome their own challenges, whether exploring new markets or making the transition to a low-carbon economy.

**Stuart Gulliver**  
**Group Chief Executive**  
21 February 2017

# Our strategy

We have developed a long-term strategy that reflects our purpose and enables us to capture value from our international network.

## Two-part long-term strategy

### Develop our international network

To facilitate international trade and capital flows and serve our clients, with potential to help them grow from small enterprises into large multinationals.

### Invest in wealth and retail businesses with local scale

To make the most of global social mobility, wealth creation and long-term demographic changes in our priority markets.

## Value of the network and our strategy

### Access to global growth opportunities

Our unparalleled network covers countries accounting for more than 90% of global GDP, trade and capital flows. We have a leading presence in large and fast-growing economies.

Our priority markets cover both sides of 11 of the world's 15 largest trade corridors for goods and services forecast for 2030, and represent at least one side of the other four corridors. Six of the 15 corridors are within Asia and five connect countries between two geographical regions.

### Lower risk profile and volatility from our diversified, universal banking model

Our 10-year profit before tax volatility of 0.9x compares favourably with our peers.

Transaction banking product revenue of \$14.7bn on an adjusted basis leads the industry. More than 45% of our client revenue comes from businesses and individuals with an international presence.

Business synergies of \$10.5bn, equivalent to 22% of reported revenue reflect products and services provided across our global businesses.

### Strong capital and funding base

CET1 ratio of 13.6%, supported by increased shareholders' equity to meet new regulatory requirements since the end of 2010.

Four interconnected, global businesses share balance sheets and liquidity in addition to strong commercial links.

### Stable shareholder returns

Industry leading dividend – approximately \$55bn declared from 2011 to 2016, as well as circa \$2.5bn of share repurchases.

## Long-term trends

**Our strategy positions us to capitalise on several long-term trends.**

Increasing connectivity and global flows of trade, finance and data are key drivers of GDP growth.

### Business to consumer cross-border e-commerce transactions (\$tn)

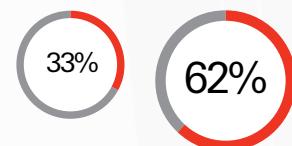
2015	0.3
2020	1.0

Source: McKinsey Global Institute, *Digital globalization: The new era of global flows* (2016)

Economic weight is shifting to Asian and Middle Eastern economies, which are expected to grow GDP threefold by 2050.

### Shipping volumes, measured by weight of goods unloaded

1990: 4,126m metric tonnes    2015: 10,033m metric tonnes



Source: United Nations Conference on Trade and Development

The middle class is expected to grow from one-third to two-thirds of the world's population by 2030, while the number of people over age 60 is expected to more than double by 2050.

### Size of middle class population (bn)

2010	28%	1.8
2020	54%	3.2
2030	66%	5.0

Key  
■ Asia  
■ Rest of the world

Source: OECD Development Centre, *Emerging Middle Class in Developing Countries* (2010)

## Client examples

### ATN International ('ATNI'): US, telecommunications and renewable energy

International portfolio of businesses in US and elsewhere. ATNI sought out HSBC's international capabilities while pursuing renewable energy investments in India. In 2016, we helped ATNI with custodian services and provided finance structuring advice for its Singaporean and Indian subsidiaries. We provide ATNI with trade, cash management, foreign exchange and other services.

### Mubea: Germany, automotive

Automotive parts manufacturer operating across 20 countries in Europe, Asia and the Americas. HSBC expanded its relationship with Mubea to also serve its subsidiaries in the US and Mexico, and provide centralised international cash and liquidity management.

### Tangle Teezer: UK, consumer goods

UK-based hairbrush manufacturer with its first product launch in 2008, and a range of products now sold in more than 70 markets. Since 2009, HSBC has helped Tangle Teezer expand internationally through our knowledge and capabilities around the world. In 2016, we assisted it in developing its presence in the US, China and Hong Kong.

### Grupo Aeroportuario ('GACM'): Mexico, infrastructure

Responsible for the construction, administration and operation of Mexico City's new international airport. In 2016, we advised and coordinated financing for GACM including a \$1bn 30-year green bond issuance, the largest green bond in Latin America, and the first emerging market green bond to receive a Green Bond Assessment grade from Moody's.

# Strategic actions

We are well on our way towards achieving the actions outlined in our June 2015 Investor Update.

## Capturing value from our international network

In June 2015, we outlined a series of strategic actions to make the most of our competitive advantages and respond to a changing environment.

These actions are focused on improving efficiency in how we use our resources, and on investing for growth in line with our strategy. Each action has targets defined to the end of 2017. The table opposite contains a summary of our progress in 2016 with additional details provided below.

### Resizing and simplifying our business

We have made significant progress in resizing and simplifying our business. In 2016, management actions reduced RWAs in GB&M and legacy credit by \$46bn and we completed asset sales totalling \$10.1bn from our US consumer and mortgage lending ('CML') run-off portfolio.

As part of our initiative to optimise our network, we completed the sale of HSBC Bank Brazil on 1 July 2016. We will continue to serve the international and cross-border needs of our large corporate clients in Brazil through HSBC Brasil S.A. – Banco de Investimento.

In the NAFTA region, we grew adjusted revenue in Mexico by 18% compared with 2015, supported by market share gains in RBWM across key lending products and a doubling of personal loans issued. In the US, we grew adjusted revenue in GB&M and RBWM compared with 2015 and continued to support our clients internationally. Revenues from international subsidiaries of our US clients increased by 11% compared with 2015.

We have made good progress in our cost-saving programme and are on track to exceed our exit rate target

set for the end of 2017. We expect to achieve total cost savings of \$6.0bn through one-off investments ('costs to achieve') of \$6.0bn. The additional savings will fund increased costs related to regulatory programmes and compliance. In 2016, operating expenses fell by 4% on an adjusted basis compared with 2015, facilitated by increased efficiency in our processes. For example, we launched a new customer-facing digital portal to standardise and accelerate the onboarding process in 26 markets covering more than 70% of CMB corporate clients, and we decreased the number of manual payments by 80%.

### Redeploying capital to grow our business

At the heart of our business is our international network. We are focusing efforts to grow our businesses by looking at customers' needs across products, geographies and supply chains. In 2016, revenue from transaction banking products was up 2% despite difficult macroeconomic conditions. We grew revenues in our Global Liquidity and Cash Management (GLCM) business. In 2016, we were named 'Best Bank for Corporates' by *Euromoney* and 'Best Supply-Chain Finance Bank Global' by the *Trade Finance* Awards.

We continue to invest for growth in Asia. In December, we launched our own HSBC-branded credit cards in mainland China with a full range of digital features. We increased the number of new RBWM clients in China's Pearl River Delta by 51% compared with 2015, and grew our mortgage loan books by more than 51%. We grew revenues from international subsidiaries of our ASEAN-region commercial banking clients, and in Singapore our innovation lab is developing

cloud-based treasury services for businesses and exploring blockchain technology to support documentary trade transactions.

We remain recognised as the leading bank for international renminbi ('RMB') products and services. We were the first bank to facilitate overseas institutional investment into the China interbank bond market since access was expanded in early 2016. We were also the first to be appointed custodian bank in the two newly active RMB qualified foreign institutional investor ('RQFII') markets of the US and Thailand this year.

Finally, we continue to strengthen our efforts to protect customers and the wider financial system from financial crime. In 2016, this included further upgrades to our systems, as well as additional training for our employees. Further detail can be found under the Financial Crime Risk section of [www.hsbc.com/financial-crime-risk](http://www.hsbc.com/financial-crime-risk).

## Selected awards and recognition 2016

### ***Euromoney Awards for Excellence 2016***

**Best Bank for Corporates**

**Best Investment Bank**

### ***Euromoney Cash Management Survey 2016***

**Best Global Cash Manager (Non-Financial Institutions)**

**#1 Global For All Transactions (Financial Institutions)**

### ***Trade Finance Awards 2016***

**Best Supply-Chain Finance Bank Global**

### ***Asiamoney Offshore RMB Poll 2016***

**Best Overall Offshore RMB Products / Services**

## Progress against strategic actions

Actions to resize and simplify the Group				
Strategic actions	Targeted outcome by the end of 2017	Progress	Key performance indicators	Status
<b>Reduce Group risk-weighted assets ('RWAs') by circa \$290bn</b>	<ul style="list-style-type: none"> <li>– Group RWA reduction \$290bn</li> <li>– Return GB&amp;M to Group target profitability; &lt;1/3 of Group RWAs</li> </ul>	<ul style="list-style-type: none"> <li>– Further reduction of \$143.2bn in 2016, notably in GB&amp;M</li> <li>– GB&amp;M RWAs of \$300.4bn, 37% of the Group total</li> </ul>	– RWA reduction from management actions: circa \$267bn (circa 97% of 2015–17 target on a constant currency basis)	✓
<b>Optimise global network</b>	– Reduced footprint	– Completed our sale of Brazil operations on 1 July 2016; maintained a Brazil presence to serve large corporate clients' international needs	– Present in 70 countries and territories at end of 2016 (down from 73 at end of 2014)	✓
<b>Rebuild NAFTA region profitability</b>	<ul style="list-style-type: none"> <li>– US profit before tax circa \$2bn</li> <li>– Mexico profit before tax circa \$0.6bn</li> </ul>	<ul style="list-style-type: none"> <li>– Successfully achieved a non-objection to our US capital plan, which includes a dividend payment to HSBC Holdings plc in 2017, as part of the Comprehensive Capital Analysis and Review ('CCAR')</li> <li>– Mexico market share gains across key RBWM lending products</li> </ul>	<ul style="list-style-type: none"> <li>– US (excluding CML run-off portfolio) adjusted profit before tax: \$0.4bn (down 22% on 2015)</li> <li>– Mexico adjusted profit before tax: \$0.3bn (up 354% on 2015)</li> </ul>	– ✓ <sup>1</sup>
<b>Set up UK ring-fenced bank</b>	– Completed by 2018	<ul style="list-style-type: none"> <li>– Appointed Chair and CEO of HSBC UK; other senior appointments in progress</li> <li>– Migration of key roles underway with circa 35% of Birmingham positions filled</li> </ul>	– Implementation in progress	✓
<b>Deliver \$4.5–5.0bn of cost savings</b>	– 2017 exit rate to equal 2014 operating expenses	<ul style="list-style-type: none"> <li>– \$2.2bn cost savings realised in 2016</li> <li>– Positive jaws in 2016 compared with 2015</li> <li>– FTE reduction of circa 900 in 2016</li> </ul>	– Adjusted costs (excluding Brazil) down 4% on 2015	✓
Actions to redeploy capital and invest				
<b>Deliver growth above GDP from international network</b>	– Revenue growth of international network above GDP	<ul style="list-style-type: none"> <li>– GLCM revenue up 6% on 2015 driven by growth in deposits and the effect of US rate rises</li> <li>– Global Trade and Receivables Finance ('GTRF') revenue down 7% on 2015, reflecting a decline in market conditions</li> </ul>	<ul style="list-style-type: none"> <li>– Transaction banking revenue: \$14.7bn (up 2% on 2015)</li> <li>– Revenue synergies: \$10.5bn (down 5% on 2015)</li> </ul>	–
<b>Investments in Asia – prioritise and accelerate</b>	<ul style="list-style-type: none"> <li>– Market share gains</li> <li>– Circa 10% growth per annum in assets under management in Asia</li> </ul>	<ul style="list-style-type: none"> <li>– Awarded Asia's 'Best Investment Bank' and Asia's 'Best Bank for Financing' by <i>Euromoney</i> Awards for Excellence 2016</li> <li>– Launched digital banking platform (HSBCnet) for SMEs in Guangdong allowing faster payment services with Hong Kong</li> <li>– Growing business around China's Belt and Road initiative, including energy sector deals linking China to Malaysia and Egypt</li> </ul>	<ul style="list-style-type: none"> <li>– Guangdong loans: \$4.7bn (up 16% on 2015)</li> <li>– ASEAN adjusted revenue: \$3.1bn (down 2% on 2015)</li> <li>– Asset Management assets under management distributed in Asia: \$143bn (up 11% on 2015)</li> <li>– Insurance manufacturing annualised new business premiums in Asia: \$2.3bn (up 13% on 2015)</li> </ul>	✓
<b>Grow business from renminbi ('RMB') internationalisation</b>	– \$2.0–2.5bn revenue	<ul style="list-style-type: none"> <li>– 52% RQFII custodian market share (in Securities Services); ranked first by market share in all active RQFII markets</li> <li>– Joint lead manager for China's Ministry of Finance RMB3bn bond in the UK, the first sovereign RMB bond issued outside China</li> </ul>	– RMB internationalisation revenue, from offshore business partly or wholly denominated in RMB as well as selected products in mainland China: \$1.25bn (down 25% on 2015)	–
<b>Global Standards – safeguarding against financial crime<sup>3</sup></b>	– Implementation completed	<ul style="list-style-type: none"> <li>– Continued progress towards putting in place an effective and sustainable AML and sanctions compliance programme, including through the creation of a new Financial Crime Risk function and improvements in technology and systems to manage financial crime risk</li> </ul>	<ul style="list-style-type: none"> <li>– By end 2017: AML and sanctions policy framework in place; major compliance IT systems introduced across the Group, including for customer due diligence, transaction monitoring and sanctions screening</li> <li>– Post-2017: Policy framework and associated operational processes fully integrated in day-to-day financial crime risk management practices in an effective and sustainable way; IT systems continue to be fine-tuned</li> </ul>	✓ <sup>2</sup>

<sup>1</sup> On track to achieve equivalent profit before tax target on a local currency basis; US dollar target set using the 2014 average exchange rate.

<sup>2</sup> As set out under 'Key performance indicators'.

<sup>3</sup> Further detail on the Monitor and the US deferred prosecution agreement and related agreements and consent orders can be found on pages 82 and 66, respectively.

# Financial overview

## Reported results

This table shows our reported results for the last three years, ended 31 December 2016, 2015 and 2014.

### Reported profit before tax

Reported profit before tax of \$7.1bn was \$11.8bn or 62% lower than in 2015. This was primarily due to net adverse movements relating to significant items and the unfavourable effects of foreign currency translation, which are described in more detail on page 30. Excluding significant items and currency translation, profit before tax fell by \$0.2bn.

### Reported revenue

Reported revenue of \$48.0bn was \$11.8bn or 20% lower than in 2015, in part due to a net unfavourable movement in significant items of \$7.6bn, which included:

- adverse fair value movements of \$1.8bn arising from changes in credit spreads on our own debt designated at fair value, compared with favourable movements of \$1.0bn in 2015;
- a \$3.6bn reduction in revenue resulting from our sale of operations in Brazil to Banco Bradesco S.A., which includes a \$1.7bn accounting loss recognised on the sale; and
- the non-recurrence of a \$1.4bn gain on the sale of part of our shareholding in Industrial Bank Co. Limited ('Industrial Bank') in 2015; partly offset by
- a \$0.6bn gain on the disposal of our membership interest in Visa Europe in the second quarter of 2016 and a \$0.1bn gain on disposal of our membership interest in Visa US in the fourth quarter of 2016.

In addition, foreign currency translation differences between the periods had an adverse effect of \$3.0bn.

These factors contributed to a fall in reported revenue in all our global

Reported results	2016 \$m	2015 \$m	2014 \$m
Net interest income	<b>29,813</b>	32,531	34,705
Net fee income	<b>12,777</b>	14,705	15,957
Net trading income	<b>9,452</b>	8,723	6,760
Other income	<b>(4,076)</b>	3,841	3,826
<b>Net operating income before loan impairment charges and other credit risk provisions ('revenue')</b>	<b>47,966</b>	59,800	61,248
Loan impairment charges and other credit risk provisions ('LICs')	<b>(3,400)</b>	(3,721)	(3,851)
<b>Net operating income</b>	<b>44,566</b>	56,079	57,397
Total operating expenses	<b>(39,808)</b>	(39,768)	(41,249)
<b>Operating profit</b>	<b>4,758</b>	16,311	16,148
Share of profit in associates and joint ventures	<b>2,354</b>	2,556	2,532
<b>Profit before tax</b>	<b>7,112</b>	18,867	18,680

businesses and Corporate Centre. Excluding significant items and the adverse effects of foreign currency translation differences between the periods, revenue fell by \$1.3bn or 2%.

– costs to achieve of \$3.1bn compared with \$0.9bn in 2015; partly offset by – a reduction of \$1.0bn in settlements and provisions in connection with legal matters.

In addition, the reported results include the operating expenses incurred in our Brazil business of \$1.1bn compared with \$2.5bn in 2015.

Excluding significant items and the adverse effects of foreign currency translation differences between the periods, operating expenses fell by \$1.2bn. Reductions in all our global businesses reflected the effects of our cost-saving initiatives.

### Reported LICs

Reported LICs of \$3.4bn were \$0.3bn lower than in 2015 as reductions in RBWM and CMB more than offset an increase in GB&M. The reduction included favourable effects of foreign currency translation differences between the periods of \$0.2bn, and the impact of LICs incurred in the disposed Brazil operations of \$0.7bn compared with \$0.9bn in 2015.

### Reported operating expenses

Reported operating expenses of \$39.8bn were \$40m or 0.1% higher than in 2015. This includes favourable effects of currency translation differences of \$2.1bn between the periods, and an increase in significant items of \$3.3bn, including:

- a \$3.2bn write-off of goodwill in our GPB business in Europe; and

### Reported income from associates

Reported income from associates and joint ventures of \$2.4bn decreased by \$0.2bn.

On 21 February 2017, the Board announced a fourth interim dividend of \$0.21 per ordinary share.

## Adjusted performance

Our reported results are prepared in accordance with IFRSs as detailed in the Financial Statements on page 194. We also present adjusted performance measures to align internal and external reporting, identify and quantify items management believes to be significant, and provide insight into how management assesses period-on-period performance. Adjusted performance measures are highlighted with the following symbol: 

To derive adjusted performance, we adjust for:

- the year-on-year effects of foreign currency translation differences; and
- the effect of significant items that distort year-on-year comparisons and are excluded in order to understand better the underlying trends in the business.

 For reconciliations of our reported results to an adjusted basis, including lists of significant items, see page 47.

## Adjusted results

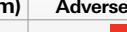
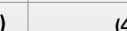
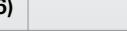
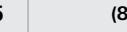
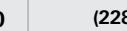
This table shows our adjusted results for 2016 and 2015. These are discussed in more detail on the following pages.

Adjusted results 	2016 \$m	2015 \$m
Net operating income before loan impairment charges and other credit risk provisions (revenue)	<b>50,153</b>	51,419
Loan impairment charges and other credit risk provisions ('LICs')	(2,652)	(2,604)
Total operating expenses	(30,556)	(31,730)
<b>Operating profit</b>	<b>16,945</b>	17,085
Share of profit in associates and joint ventures	<b>2,355</b>	2,443
<b>Profit before tax</b>	<b>19,300</b>	19,528

## Adjusted profit before tax

On an adjusted basis, profit before tax of \$19.3bn was \$0.2bn or 1.2% lower than in 2015. This primarily reflected lower revenue, higher LICs and a reduction in our share of profits from associates. This was partly offset by a decrease in operating expenses.

### Movement in adjusted profit before tax compared with 2015

	2016 (\$m)	Adverse	Favourable	(%)
Revenue	<b>50,153</b>	(1,266) 		(2)
LICs	(2,652)	(48) 		(2)
Operating expenses	(30,556)		1,174 	4
Share of profits in associates and joint ventures	<b>2,355</b>	(88) 		(4)
Profit before tax	<b>19,300</b>	(228) 		(1)

## Adjusted performance continued

### Movement in adjusted revenue compared with 2015 ◀

	2016 \$m	2015 \$m	Variance \$m	%
RBWM	<b>18,925</b>	19,242	(317)	(2)
CMB	<b>12,887</b>	12,753	134	1
GB&M	<b>14,919</b>	14,566	353	2
GPB	<b>1,757</b>	1,965	(208)	(11)
Corporate Centre	<b>1,665</b>	2,893	(1,228)	(42)
Total	<b>50,153</b>	51,419	(1,266)	(2)

### Adjusted revenue ◀

Adjusted revenue of \$50.2bn was \$1.3bn or 2% lower. The reduction reflected the following:

- In RBWM, lower revenue (down \$0.3bn) was mainly a result of a fall in income in our Wealth Management business. The reduction resulted from lower investment distribution income compared with a strong performance in 2015, notably in the first half of the year, and adverse market impacts in Insurance Manufacturing. By contrast, revenue grew in savings and deposits, as we grew balances in Hong Kong, the UK and Mexico, and from wider spreads in Hong Kong and Latin America.
- In GPB, lower revenue (down \$0.2bn) reflected reduced brokerage and trading activity due to the continued repositioning of the business, together with adverse market sentiment and unfavourable market conditions.
- In Corporate Centre, revenue fell (down \$1.2bn), partly due to the US CML portfolio (down \$0.5bn) as a result of continued run-off and portfolio sales. Revenue also fell in Central Treasury as a result of higher adverse fair value movements relating to the economic hedging of our long-term debt (\$0.2bn) and higher interest expense on our debt (\$0.2bn).

These were partly offset:

- In GB&M, revenue increased (up \$0.4bn) despite adverse movements in credit and funding valuation adjustments of \$0.3bn. In Rates and Credit, higher revenue reflected growth in market share in Europe. We also increased revenue in Global Liquidity and Cash Management ('GLCM') from balance growth and wider spreads. By contrast lower trading volumes in Europe and

Asia resulted in a reduction in Equities revenue.

- In CMB, revenue rose (up \$0.1bn), notably in GLCM reflecting balance growth and wider spreads in Hong Kong. Revenue also increased in Credit and Lending as a result of loan growth in the UK.

▶ For further details on the performance of our global businesses, see page 18.

### Adjusted LICs ◀

Adjusted LICs of \$2.7bn were \$48m higher than in 2015, reflecting increases in GB&M resulting from a small number of individually assessed LICs within the oil and gas, and metals and mining sectors, notably in the first half of 2016 in the US. LICs also increased in RBWM, particularly in Mexico. These increases were largely offset by a reduction in LICs in CMB.

### Adjusted operating expenses ◀

Adjusted operating expenses of \$30.6bn were \$1.2bn or 4% lower than in 2015. This primarily reflected cost savings of \$2.2bn realised in 2016, with run-rate savings of around \$3.7bn since the commencement of our cost-saving programme. The fall in operating expenses also included a reduction of \$0.5bn in the UK bank levy. These

reductions were partly offset by the impact of inflation and our continued investment in regulatory programmes and compliance.

Run-the-bank costs of \$26.9bn were \$0.3bn lower, and change-the-bank costs of \$2.7bn were \$0.4bn lower, both compared with 2015. Within these, our total expenditure on regulatory programmes and compliance, comprising both run-the-bank and change-the-bank elements, was \$3.0bn, up \$0.4bn or 14% compared with 2015. This reflected the ongoing implementation of our Global Standards programme to enhance our financial crime risk controls and capabilities, and to meet our external commitments.

In the fourth quarter of 2016, our adjusted operating expenses increased compared with the third quarter reflecting a small number of specific items. This included the write-off of software.

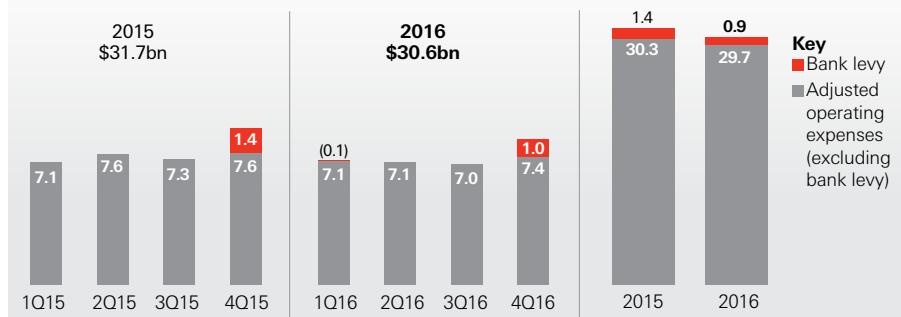
The number of employees expressed in full-time equivalent staff ('FTEs') at 31 December 2016 was 235,175, a decrease of 20,028 from 31 December 2015. This included a 19,145 reduction following our disposal of operations in Brazil. Excluding Brazil, the decrease in FTEs was 883, as a reduction of 17,855 FTEs realised across global businesses and global functions was partly offset by investment in our Global Standards Programme of 5,694 FTEs, costs to achieve FTEs of 8,073 and investment for growth.

▶ For further details on the categorisation of run-the-bank and change-the-bank costs, see page 38.

### Adjusted income from associates and joint ventures ◀

Adjusted income from associates and joint ventures of \$2.4bn fell by \$0.1bn compared with 2015.

### Adjusted operating expenses ◀ (\$bn)



## Balance sheet and capital

### Balance sheet strength

Total reported assets were \$2.4tn, 1% lower than at 31 December 2015 on a reported basis, and 5% higher on a constant currency basis. We have maintained the strength of our balance sheet, as targeted asset growth was partly offset by reductions in our legacy portfolios and the completion of our sale of operations in Brazil to Banco Bradesco S.A. We also issued more than \$30bn of senior debt during the year from HSBC Holdings plc ('HSBC Holdings') to build up the Group's total loss absorbing capacity in line with anticipated regulatory requirements.

### Distributable reserves

The distributable reserves of HSBC Holdings at 31 December 2016 were \$42bn, and at 31 December 2015 were \$47bn. The reduction was driven by our share buy-back (\$2.5bn) and the effects of dividends paid (\$11bn), which more than offset profits of \$7bn.

### Capital strength

We manage our capital in an effort to ensure we exceed current regulatory requirements and are well placed to meet those expected in the future. We monitor our position using capital ratios. These measure capital relative to a regulatory assessment of risks taken. We quantify how these risks relate to our businesses using RWAs.

Our CET1 ratio at 31 December 2016 was 13.6%, up from 11.9% at 31 December 2015.

► Details of these risks are included on page 127.

## Delivery against Group financial targets

### Return on equity (%)

2016	0.8
2015	7.2
2014	7.3

### Return on equity

Our medium-term target is to achieve a return on equity ('RoE') of more than 10%. In 2016, we achieved an RoE of 0.8% compared with 7.2% in 2015. In 2016, significant items, which included a write-off of goodwill in GPB in Europe, costs to achieve and adverse fair value movements arising from changes in credit spread on our own debt designated at fair value, had a significant effect on our reported RoE. Together with the UK bank levy, significant items reduced the return achieved by 6.9 percentage points.

### Adjusted revenue down

2.5%

↓  
Adjusted jaws

+1.2%

### Adjusted costs down

3.7%

### Adjusted jaws

Jaws measures the difference between the rates of change for revenue and costs. Positive jaws occurs when the figure for the annual percentage change in revenue is higher than, or less negative than, the corresponding rate for costs.

We calculate adjusted jaws using adjusted revenue and costs. Our target is to maintain positive adjusted jaws.

In 2016, adjusted revenue fell by 2.5%, whereas our adjusted operating expenses reduced by 3.7%. Adjusted jaws was therefore positive 1.2%.

### Total dividends declared in respect of the year (\$bn)

2016	10.1
2015	10.0
2014	9.6

### Dividends

In the current uncertain environment, we plan to sustain the annual dividend in respect of the year at its current level for the foreseeable future. Growing our dividend in the future will depend on the overall profitability of the Group, delivering further release of less efficiently deployed capital and meeting regulatory capital requirements in a timely manner. Actions to address these points were core elements of our Investor Update in June 2015.

# Global businesses

We manage our products and services globally through our global businesses.

## Retail Banking and Wealth Management ('RBWM')

RBWM serves close to 36 million customers worldwide through four main business areas: Retail Banking, Wealth Management, Asset Management and Insurance.

RBWM provides services to individuals under the HSBC Premier and Advance propositions aimed at mass affluent and emerging affluent customers who value international connectivity and benefit from our global reach and scale. For customers who have simpler everyday banking needs, RBWM offers a full range of banking products and services reflecting local requirements.

### Higher Retail Banking revenue, but challenging market conditions in Wealth Management

- Adjusted profit before tax of \$5.3bn was \$0.4bn or 6% lower compared with 2015. This was driven by lower revenue in our Wealth Management business, together with higher LICs. By contrast, lower operating expenses reflected our continued focus on cost management.
- Adjusted revenue of \$18.9bn was \$0.3bn or 2% lower, as growth in Retail

Banking revenue was more than offset by a fall in Wealth Management. The reduction in Wealth Management (down 0.5bn) was driven by decreased investment distribution revenue as a result of lower mutual fund and retail securities turnover due to weaker market sentiment. This compared with a strong performance in the first half of 2015. In addition, insurance manufacturing revenue fell, reflecting adverse market impacts (\$345m), although this was partly offset by the value of new business.

However, in Retail Banking revenue rose \$0.2bn or 1%, as revenue increased in current accounts and savings (up \$0.4bn) from growth in balances, notably in Hong Kong and the UK. We also benefited from wider deposit spreads in Hong Kong and Mexico. By contrast, revenue in personal lending fell (down \$0.2bn), despite growth in balances of \$9bn or 3%, notably in Hong Kong, the UK and Mexico, driven by spread compression (mainly in the UK).

- LICs increased by \$0.1bn, notably in Mexico, reflecting growth in unsecured lending balances.

- Operating expenses were 1% lower as inflation and investments were more than

Commentary is on an adjusted basis, which is the GAAP measure for our global businesses. ➔

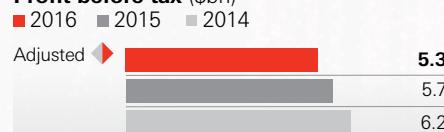
➔ The comparative period has been restated to reflect changes to reportable segments, as described on page 44.

offset by transformation and other cost-saving initiatives.

### Key events:

- Our retail banking revenue rose by 1%, with increases in current account and savings partly offset by falls in credit card and mortgage revenue, reflecting spread compression, mainly in the UK.
- In the UK, growth in mortgage balances was facilitated by our expansion into the mortgage intermediary market, with 12 brokers added in 2016, which accounted for 7% of our new mortgage originations during 2016.

### Profit before tax (\$bn)



### Change in adjusted profit before tax ➔

-6%

### Key events:

- Despite the fall in global trade, we gained market share in key markets, including trade finance in Hong Kong and Singapore, and Receivables Finance in the UK.
- HSBC was named '2016 Best Trade Bank in the World' by *Trade and Forfaiting Review*, and won the 'Best Global Cash Manager for Non-Financial Institutions' at the *Euromoney Awards 2016*.

### Profit before tax (\$bn)



### Change in adjusted profit before tax ➔

+12%

## Commercial Banking ('CMB')

CMB serves approximately two million customers in 54 countries and territories. Our customers range from small enterprises focused primarily on their domestic markets through to corporates operating globally.

It supports our customers with tailored financial products and services to allow them to operate efficiently and to grow.

Services provided include working capital, term loans, payment services and international trade facilitation, among other services, as well as expertise in mergers and acquisitions, and access to financial markets.

### Revenue growth in a challenging market

- Adjusted profit before tax of \$6.1bn was 12% higher than in 2015 primarily because of lower LICs, and revenue growth despite challenges in global trade.
- Adjusted revenue rose by \$0.1bn or 1%. This included growth of \$0.2bn in GLCM

driven by increased balances and wider spreads in Hong Kong. Revenue in Credit and Lending also increased (up \$0.1bn), reflecting continued loan growth in the UK. This was partly offset by lower revenue in Global Trade and Receivables Finance ('GTRF').

- LICs reduced by \$0.4bn as 2016 included lower levels of individually assessed LICs, as well as a net release of collective allowances primarily relating to charges made in the fourth quarter of 2015, notably in the oil and gas sector.

- Operating expenses reduced compared with 2015 as the effect of inflation was more than offset by ongoing cost discipline and the impact of our transformation initiatives. This helped us achieve positive jaws of 2.1%.

- Management initiatives drove a further reduction in RWAs of \$23bn in 2016, leading to a cumulative reduction of \$46bn since our Investor Update in 2015, \$18bn above our target.

## Global businesses

### Global Banking and Markets ('GB&M')

GB&M serves approximately 4,100 clients in more than 50 countries and territories. It supports major government, corporate and institutional clients worldwide. Our product specialists continue to deliver a comprehensive range of transaction banking, financing, advisory, capital markets and risk management services.

#### Markets revenue up despite challenging market conditions

- Adjusted profit before tax of \$5.6bn was \$63m higher than in 2015, as revenue increased and operating expenses decreased, reflecting transformational cost savings, partly offset by an increase in LICs.
- Adjusted revenue of \$14.9bn rose \$353m or 2%, despite adverse movements in Credit and Funding valuation adjustments compared with favourable movements in 2015 (net effect, down \$297m), primarily

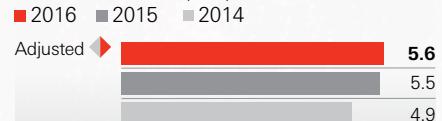
relating to movements on our own credit spreads on structured liabilities. Excluding these, revenue rose \$650m or 5%, mainly in Rates and Credit, as we gained market share in Europe. In GLCM, revenue increased as we grew average balances and benefited from wider spreads. By contrast, revenue fell in Equities, reflecting lower trading volumes in Europe and Asia.

- LICs increased (up \$0.4bn), predominantly driven by a small number of individually assessed exposures within the oil and gas, and metals and mining sectors, notably in the first half of 2016 in the US.
- Operating expenses fell by \$93m, reflecting reduced performance-related pay, disciplined cost management, efficiency improvements including technology delivery rationalisation, and FTE reductions. These reductions more than offset the investments we made in the business.

#### Key events:

- Through 2016, we continued to focus on delivery of our RWA reductions, and achieved a reduction of \$8bn, which included \$39bn through management initiatives, partly offset by business growth.
- 'World's Best Investment Bank' – *Euromoney* Awards for Excellence 2016

#### Profit before tax (\$bn)

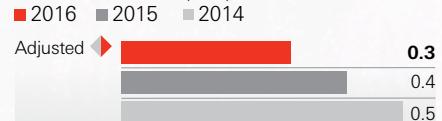


### Change in adjusted profit before tax

+1%

– We recognised a \$3.2bn write-off relating to the goodwill of the business in Europe, which is not reflected in the adjusted performance. For additional information, refer to Note 20 on page 238.

#### Profit before tax (\$bn)



### Change in adjusted profit before tax

-25%

#### Key events:

- There was negative net new money of \$17bn, reflecting the repositioning of the business. However, we attracted positive net new money in key markets targeted for growth, notably in the UK, Channel Islands and Hong Kong.

#### Lower revenue reflecting repositioning and adverse market conditions

- Adjusted profit before tax of \$0.3bn fell by \$0.1bn as revenue decreased, partly offset by a reduction in costs.

## Corporate Centre

During 2016, we established the Corporate Centre, to better reflect the way we manage our businesses. Corporate Centre comprises Central Treasury, including Balance Sheet Management ('BSM'), our legacy businesses, interests in associates and joint ventures, central stewardship costs that support our businesses and the UK bank levy.

#### Lower revenue due to continued disposal of legacy portfolios and Central Treasury, partly offset by a reduction in costs

- Adjusted profit before tax of \$2.0bn was \$0.5bn or 19% lower, driven by a fall in revenue and lower income from associates, partly offset by lower operating expenses, notably a reduced charge relating to the UK bank levy.
- Revenue fell by \$1.2bn, partly driven by reductions in our US CML portfolio

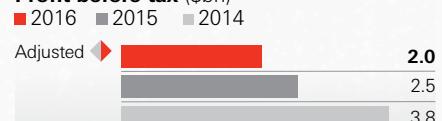
(\$0.5bn) as a result of lower average lending balances and portfolio sales. Revenue also fell in Central Treasury as a result of higher adverse fair value movements relating to the economic hedging of our long-term debt (\$0.2bn) and higher interest expense (\$0.2bn).

- LICs were broadly unchanged as increased charges in the US CML portfolio were broadly offset by higher releases of credit risk provisions in the legacy credit portfolio.
- Operating expenses were \$0.8bn lower, partly reflecting the benefits of transformational savings in our technology, operations and other functions, and a lower UK bank levy charge (down \$0.5bn).
- Income from associates was \$0.1bn lower, primarily in Saudi Arabia.

#### Key events:

- Completed asset sales of \$10bn from our US CML run-off portfolio. As at 31 December 2016, gross lending balances in this portfolio were \$5.7bn.

#### Profit before tax (\$bn)



### Change in adjusted profit before tax

-19%

► For further details on the financial performance of our global businesses, see pages 45 to 51.

# Regions

We coordinate activities across global businesses and supporting functions through a regional structure.

## Europe

We serve clients in Europe with a broad range of services, and facilitate international trade and investment. London is the strategic hub for GB&M.

### **Reported loss before tax included significant items of \$8.4bn**

- Reported loss before tax was \$6.8bn. This compared with a reported profit before tax of \$688m in 2015, with the fall driven by a net adverse movement in significant items, including the write-off of goodwill relating to our GPB business, adverse fair value movements arising from changes in credit spreads on our own debt designated at fair value compared with favourable movements in 2015, and higher costs to achieve.
- On an adjusted basis, profit before tax of \$1.6bn fell by \$0.5bn or 26%, as revenue decreased by \$0.9bn (5%), partly offset by lower costs (down by \$369m or 2%), which included a reduction of \$0.5bn related to the UK bank levy, and a reduction in LICs of \$37m (8%).
- Reported revenue fell by \$5.0bn, primarily as a result of adverse movements of \$1.8bn arising from changes in credit spread on our own debt, compared with favourable movements of \$0.8bn in 2015, and the adverse effects of currency translation differences (\$1.6bn). Adjusted revenue fell by \$945m or 5%, reflecting a reduction in RBWM of \$465m (7%), notably in life insurance manufacturing in France as a result of adverse market updates, and in GPB reflecting the repositioning of the business. In Corporate Centre, lower adjusted revenue (down \$0.8bn), partly reflected higher adverse fair value movements of \$0.2bn relating to the economic hedging of our long-term debt, and higher interest expense of \$0.2bn. These reductions were partly offset by growth in revenue in GB&M (\$0.2bn), notably in Rates, GLCM and Global Banking, and in CMB (\$0.2bn), in Credit and Lending.
- Reported costs rose by \$2.6bn, primarily reflecting a write-off of goodwill relating to our GPB business of \$3.2bn and an increase of \$1.5bn in costs to achieve, partly offset by the favourable effects of currency translation of \$1.3bn. Adjusted costs fell by \$0.4bn (2%). Excluding the reduction in the UK bank levy (\$0.5bn), costs rose by 1% driven by higher charges from our global service and technology centres due to increased transformation activities relating to IT transformation and process improvement.

### **Profit before tax (\$bn)**

■ 2016 ■ 2015



## Asia

HSBC's history is founded on financing trade with Asia, and the continent remains central to our strategy. We aim to grow our business in China's Pearl River Delta and the ASEAN region, and we continue to strengthen our leadership position in the internationalisation of China's renminbi currency.

### **Lower revenue, notably in Wealth Management, offset by cost management initiatives**

- Reported profit before tax was \$13.8bn, \$2.0bn lower than for 2015, notably due to the non-recurrence of a gain of \$1.4bn on the disposal of part of our shareholding in Industrial Bank.
- On an adjusted basis, profit before tax was broadly unchanged, as a decrease in revenue was offset by a reduction in costs.
- Reported revenue fell by \$2.0bn, driven by the non-recurrence of the gain on Industrial Bank, as noted above, and the adverse effects of currency translation differences of \$0.3bn. Adjusted revenue decreased by \$253m (1%). Lower adjusted revenue in RBWM resulted from investment distribution income falling, reflecting weaker market sentiment compared with a strong performance in the first half of 2015. This was partly offset by wider deposit spreads and deposit balance growth. In GB&M, adjusted revenue also declined, mainly in Equities and Foreign Exchange, partly offset by increases in Rates. By contrast, revenue in Corporate Centre increased, notably as income from Balance Sheet Management, within Central Treasury, rose.
- Reported costs decreased by \$104m, as an increase in costs to achieve of \$354m was partly offset by the favourable effects of currency translation differences of \$177m. Adjusted costs decreased by \$227m (2%), notably as a result of cost management initiatives, which more than offset the effects of inflation and our investment growing our business in China's Pearl River Delta and the ASEAN region.

### **Profit before tax (\$bn)**

■ 2016 ■ 2015



## Middle East and North Africa

HSBC is the longest-serving international bank in the region, with one of the largest networks there, offering a universal banking model and playing a vital role in facilitating international trade. Our priority markets in the region are Saudi Arabia, Egypt and the United Arab Emirates ('UAE').

### Strong performance reflecting robust cost management and lower LICs

- Reported profit before tax was \$1.5bn, and was broadly unchanged from 2015.
- On an adjusted basis, profit before tax increased by \$178m (13%), primarily reflecting a reduction in costs of \$142m, and a decrease in LICs of \$135m, partly offset by lower share of profit in associates and joint ventures.
- Reported revenue fell by \$210m, primarily due to the adverse effects of currency translation differences (\$182m). Adjusted revenue decreased marginally, mainly reflecting reductions in RBWM in Turkey as we restructured our business there, and in CMB in the UAE, mainly within GTRF, in part reflecting customer exits. This was partly offset by GB&M with growth in GLCM, which benefited from interest rate rises across the region, in Global Banking mainly driven by infrastructure and real estate fee income in the UAE and Egypt, and Securities Services due to higher balances and spreads.
- Reported LICs fell by \$154m with adjusted LICs decreasing by \$135m, mainly in CMB in the UAE due to lower charges and the release of provisions taken in 2015, notably relating to exposures in the oil and gas sector.
- Costs were \$137m lower on a reported basis, and \$142m (9%) lower on an adjusted basis, mainly in the UAE and Turkey due to cost-saving initiatives, which more than offset our continued investment in compliance.
- Share of profit in associates and joint ventures fell by \$70m (14%), mainly due to higher impairment charges in Saudi British Bank and lower revenue in HSBC Saudi Arabia reflecting lower asset management and investment banking revenues. This was partly offset by revenue growth in Saudi British Bank and well-managed costs in both associates.

### Profit before tax (\$bn)

■ 2016 ■ 2015

	2016	2015
Reported	1.5	1.5
Adjusted	1.6	1.4

## North America

The US is a key partner in global trade, and the US dollar remains the primary currency for global trade and payments. We support our North American customers within the NAFTA region and around the world, helping them grow their businesses.

### Continued run-off of the US CML portfolio led to a fall in revenue, partly offset by cost reductions across all businesses

- Reported profit before tax was \$185m, and fell by \$429m from 2015, partly reflecting the net adverse effects of significant items, notably higher costs to achieve of \$298m.
- Adjusted profit before tax fell by \$208m (14%) from the continued reduction in our US CML run-off portfolio.
- Reported revenue fell \$592m, and included the adverse effects of significant items (\$57m) and currency translation of \$59m. Movements in significant items were primarily driven by minimal fair value movements arising from changes in credit spread on our own debt in 2016, compared with favourable movements of \$219m in 2015, although these movements were partly offset by a gain of \$116m recorded on our sale of Visa US shares in 2016 and lower losses on disposal in our CML run-off portfolio of \$77m. Adjusted revenue was \$475m lower, primarily from a decrease in income in the US CML run-off portfolio in Corporate Centre. By contrast, adjusted revenue in GB&M increased by 6%, notably as a result of increased income in Rates and Credit driven by higher client flows and collateralised financing activity.
- LICs increased by \$188m on a reported basis and \$191m on an adjusted basis, primarily as a result of a small number of individually assessed charges in the mining sector in GB&M, as well as higher charges in the US CML run-off portfolio. In CMB, there were net collectively assessed releases in 2016, compared with charges in 2015, relating to exposures in the oil and gas sector.
- Reported costs fell by \$353m, although this included a rise of \$298m in costs to achieve in significant items, partly offset by a reduction in fines, penalties and charges in relation to legal matters of \$128m. Adjusted costs fell by \$460m, reflecting lower staff costs across all businesses.

### Profit before tax (\$bn)

■ 2016 ■ 2015

	2016	2015
Reported	0.2	0.6
Adjusted	1.3	1.5

## Latin America

We are focusing on growing our business in Mexico, where we are among the top five banks by assets and our branch network has a market share of more than 10%. On 1 July 2016, we completed our sale of operations in Brazil, but we will continue to provide access to the region for large multinational companies.

### Continued progress in strategic initiatives with a strong business performance

- Reported loss before tax was \$1.6bn. This compared with a profit of \$310m in 2015, with the loss driven by a number of significant items, primarily the accounting loss on our sale of Brazil operations which totalled \$1.7bn.
- On an adjusted basis, profit before tax rose by \$0.4bn due to higher revenue, partly offset by higher LICs and costs.
- Reported revenue fell by \$3.9bn, partly driven by the accounting loss on our sale of Brazil operations (\$1.7bn). The reported results also include the revenue earned in our Brazil business of \$1.5bn in 2016, compared with \$3.3bn in 2015, and the adverse effects of currency translation differences of \$0.9m. However, adjusted revenue was \$0.7bn (29%) higher than for 2015. We increased revenue in RBWM in Mexico with lending growth and an increase in market share across core retail portfolios, and in Argentina, reflecting wider spreads and growth in deposits, together with higher income from insurance. Revenue also increased in GB&M, partly due to increased client activity, and in CMB from lending and deposit balance growth.
- Reported LICs fell by \$266m, primarily driven by a reduction in Brazil (\$184m) and favourable effects of currency translation (\$120m). By contrast, adjusted LICs rose by \$38m due to higher LICs in RBWM in Mexico of \$124m reflecting growth in unsecured lending and a rise in delinquency rates, partly offset by lower LICs in CMB and GB&M.
- Reported costs fell by \$1.7bn, and included \$1.1bn of costs relating to Brazil in 2016, compared with \$2.5bn in 2015. These also included the favourable effects of currency translation differences (\$0.6bn). Excluding these factors, adjusted costs increased by \$0.3bn (or 16%), although this was below the average rate of inflation in the region as we continued to control our costs.

### Profit before tax (\$bn)

■ 2016 ■ 2015

	2016	2015
Reported	(1.6)	0.3
Adjusted	0.6	0.2

# How we do business

We conduct our business intent on supporting the sustained success of our customers, people and communities.

## Building lasting business relationships

We serve more than 37 million customers around the world, ranging from individuals to the largest companies. We are committed to conducting our business in a way that delivers fair value to customers and supports them in realising their ambitions.

### Conduct and ensuring fair outcomes

Operating with high standards of conduct is central to our long-term success and ability to serve customers. In 2016, we continued to embed good conduct practice across all our businesses, with a range of initiatives to further improve the service and experience we offer to customers.

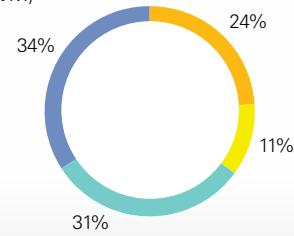
For example, in the UK we have introduced a simplified overdraft charging structure with real time notifications to prompt customers whenever they are at risk of incurring

unarranged overdraft charges. In the UAE, we automated pricing for foreign exchange to provide clients with consistent and competitive rates for cross-currency payments. We also enhanced our investment advice processes and introduced tools and guidelines to make all our customer communication clear and easy to understand.

These and related initiatives are guided by our Conduct Framework, which focuses on delivering fair customer outcomes and improved market integrity through our behaviours. The Conduct Framework guides activities to strengthen our business, and increases our understanding and awareness of how the decisions we make affect customers and other stakeholders.

► Additional detail on the Conduct Framework is available online at [www.hsbc.com/conduct](http://www.hsbc.com/conduct). For further details on regulatory compliance risk and on conduct-related costs included in significant items, see pages 81 and 62, respectively.

Complaint types  
(RBWM)



Key

- Product – features and policy
- Product – fees and charges
- Other product-related complaints
- Service complaints

### Our values

Our values define who we are as an organisation and make us distinctive.

#### Open

We are open to different ideas and cultures, and value diverse perspectives.

#### Connected

We are connected to our customers, communities, regulators and each other, caring about individuals and their progress.

#### Dependable

We are dependable, standing firm for what is right and delivering on commitments.

### Increasing quality of service

We rely on customer feedback to help determine where we can make improvements. In RBWM, we conducted more than 1.6 million customer surveys in 2016 across multiple points of customer interaction, including live online chat. We also improved the speed and quality of complaint resolution with more than two-thirds of retail customer complaints resolved on first contact, an improvement of 9% compared with 2015.

Customer feedback helps us to identify and address root causes of complaints. For example, we increased capacity in our call centres in response to concerns about long waiting times in the UK. We also addressed the most common complaints related to fees and charges through increased staff training and customer communication. As a result, complaints of this type reduced significantly in a number of our markets, including a 35% reduction in Hong Kong and a 27% reduction in France.

### Innovation and technology

Our customers increasingly use digital channels to interact, including mobile banking. We are investing in innovation and technology to serve customers better and enhance security around financial transactions and customer data. In 2016, we introduced voice biometric identification technology for retail customers globally. HSBC is one of the first large-scale global users of this technology.

In the UK, we also launched a mobile application for commercial banking customers that allows them to digitally verify their identity. Since its launch, nearly 80% of the customers able to use this digital channel have chosen to do so. We have also adjusted our branch network to reflect changing customer needs and concluded our retail branch review in the UK, with a further reduction of 117 branches in 2016.

In Hong Kong, we launched a research and development lab in partnership with the government to promote technology development for the financial sector. Areas of focus include biometrics, data analytics, cybersecurity and internet finance. Separately, we are developing a mobile application to help

retail customers manage all of their finances more effectively through a single interface.

### Sustainable finance

We recognise that reducing global carbon dioxide emissions is a critical challenge for society. We seek to be a leader in managing climate change risk while developing opportunities with our customers. We continue to facilitate investment in areas such as infrastructure and renewable energy that help lower carbon dioxide emissions.

In 2016, for example, we helped issue the largest-ever renewable energy bond in Canada to support a solar power farm. In the UK, we provided financing and asset management expertise to support deployment of energy smart meters throughout the country. In December, we established a team dedicated to sustainable finance within the business in order to engage clients more effectively in assessing and responding to potential impacts from climate change.

**255,000**  
workday hours  
volunteered

**\$137m**  
charitable giving  
in 2016

## Empowering people

### Valuing diversity

Building a more diverse and inclusive workforce is critical to developing a sustainable and successful business. Our approach aims to increase and leverage diversity of thought to improve workforce agility, enhance our risk management capability, drive innovation and grow markets.

Our diversity and inclusion ambitions focus on attracting, developing and retaining talent that reflects our customers and the communities where we do business, and deploying that talent effectively to anticipate and address expectations. Our seven global employee networks support this strategy and focus on gender, age, ethnicity, LGBT+, faith, working parents and carers, and ability. We have continued our focus on improving gender balance within senior leadership.

### Supporting our employees

We believe that if someone is worth talking to, they are worth listening to. Exchange meetings are our way of doing that: meetings with no agendas and where managers are participants rather than leaders. These meetings bring people together to listen to each other, and allow people to express themselves without interruption or rebuttal. Our employee surveys indicate that Exchange participants respond positively by 11% more than others when asked if there is honest, two-way communication.

Similarly, our At Our Best programme reinforces the habits required for a strong culture, including asking for feedback, being mindful of one's own emotions and deploying tools for making better decisions. In 2016, nearly 100,000 employees attended an At Our Best training course, and a further 18,000 managers attended similar training centred on managing teams.

The programme is supported through a behaviour recognition scheme and the launch of Our Charter, a framework for good decision-making.

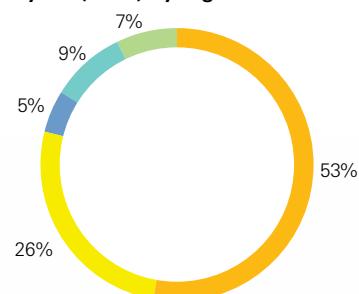
To further strengthen our culture and promote positive behaviours, we have developed culture change plans that are regularly discussed in global and local management forums. The plans emphasise enabling a speak-up culture, principles-based judgement and other behaviours that are key to supporting the Group's strategic objectives such as managing financial crime risk. In 2016, our employees completed more than eight million courses in person or through online learning in order to build skills and reinforce behaviours more broadly.

We have a wellbeing programme that provides benefits and services to support employees' wellness. For example, we offer free, confidential counselling to address personal issues at home or work. We also allow employees who have been at HSBC for five years or more to apply to take a sabbatical. Above all, we aim to provide a working environment where colleagues can talk openly about wellbeing issues, including anxiety and stress. Such measures are particularly valuable amid the demands of multiple change programmes and financial crime remediation initiatives.

### Whistleblowing

We operate a global whistleblowing platform, HSBC Confidential, which allows staff to report matters of concern confidentially. During 2016, employees have raised more than 1,100 cases. Common themes among the cases raised included concerns regarding staff behaviour and recruitment practices, allegations of fraud perpetrated by staff, and weaknesses in incentive arrangements and information security.

### Employees (FTEs) by region



### Exchange meeting insights

(% of employees who believe Exchange allows them to talk freely about issues important to them)

**84%**

### Employee retention

**81.7%**

### Gender diversity statistics

■ Male ■ Female

Holdings Board	14	(70%)
Group Management	6	(30%)
Board	11	(92%)
Senior employees	1	(8%)
All employees	6,551	(75%)
	2,230	(25%)
	116,077	(48%)
	125,230	(52%)

## How we do business

### Ensuring sustainable outcomes

Our Global Sustainability function works with our global businesses, global functions and our regions to manage environmental and social issues that affect the Group and on which we can have an impact. Key issues are reviewed below and further details are available online at [www.hsbc.com/sustainability](http://www.hsbc.com/sustainability). Sustainability performance data for 2016 will be available in spring 2017.

#### Climate change

We have committed to supporting the global shift to a low-carbon economy. Our award-winning Global Research team published 60 reports on sustainability topics in 2016. These included the implications of the Paris Agreement on climate change.

In light of the Paris Agreement, we reviewed our mining and metals policy, and included restrictions on lending to new thermal coal mines, in addition to our existing policies on coal-fired power plants and deforestation. We also added more specific guidance on human rights impacts that could arise in the mining sector.

For more information about our sustainability risk policies see page 84.

We completed a number of GB&M and CMB client transactions that help lower carbon dioxide emissions in areas including infrastructure and renewable energy. In 2016, HSBC was the third-ranked bookrunner for green, social and sustainability bonds that exceeded \$250m excluding self-led transactions by Dealogic. We also published a report on our own green bond, issued in 2015.

We scored the highest grade in a global index run by CDP, a not-for-profit organisation that rates companies and governments on how they are tackling the climate change challenge. We also published an HSBC Statement on Climate Change, providing a summary of our approach and initiatives.

We are reducing the amount of energy we consume, and increasing the proportion from renewable sources. By the end of 2016, more than 17% of our electricity was from wind or solar farms, compared with 9% in 2015. We signed additional agreements in 2016 to increase the percentage of the

electricity we use from new wind and solar sources. In total, we have agreements in place to meet 23% of our global electricity needs from these sources by 2018.

We report our carbon dioxide emissions on page 62.

#### Sustainable investment

Our Global Research team has expanded its environmental, social and governance research offering, hiring analysts to specifically cover social and governance drivers, and to cover the fast-growing green bond market.

Our Global Asset Management business published a new climate change policy to encourage the transition to a low-carbon economy and increase the climate resilience of clients' investments.

#### Human rights

We have issued our first statement as required by the UK's Modern Slavery Act, which can be found at [www.hsbc.com](http://www.hsbc.com).

We updated our supplier code of conduct to take account of revised legislation on modern slavery and human rights. More than 240 of our largest suppliers have already accepted this code.

#### Community investment

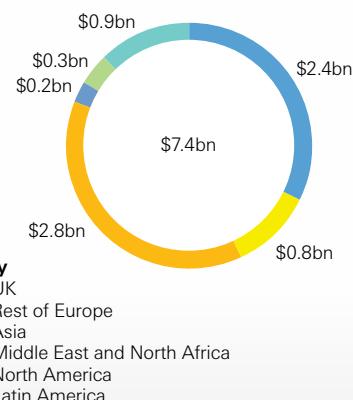
In 2016, we contributed \$137m to charitable programmes, and our employees volunteered 255,000 hours in community activities during the working day.

Our flagship environmental partnership, the HSBC Water Programme, exceeded its five-year targets at the end of 2016. Building on this success, we are extending the programme for a further three years.

In 2016, we renewed our commitments to our two flagship global education programmes, the HSBC Youth Opportunities Programme and Junior Achievement More than Money, for another three years. These programmes help young people access education and realise their potential.

### Tax

#### Taxes paid by region



Taxes paid by HSBC relate to HSBC's own tax liabilities including tax on profits earned, employer taxes, bank levy and other duties/levies such as stamp duty.

#### Our approach to tax

We apply the spirit and the letter of the law in all territories where we operate. We have adopted the UK Code of Practice for the Taxation of Banks. As a consequence, we pay our fair share of tax in the countries in which we operate. We continue to strengthen our processes to help ensure our banking services are not associated with any arrangements known or suspected to facilitate tax evasion. HSBC continues to apply global initiatives to improve tax transparency such as:

- the US Foreign Account Tax Compliance Act ('FATCA');
- the OECD Standard for Automatic Exchange of Financial Account Information (also known as the Common Reporting Standard);
- the Capital Requirements Directive IV ('CRD IV') Country by Country Reporting; and
- the OECD Base Erosion and Profit Shifting ('BEPS') initiative.

We do not expect BEPS or similar initiatives adopted by national governments to adversely impact HSBC's results. Further financial and tax information for the countries in which we operate will be published in 2017 in a CRD IV Country by Country report at [www.hsbc.com/tax](http://www.hsbc.com/tax).

# Risk overview

We actively manage risk to protect and enable the business.

## Managing risk

HSBC has maintained a conservative and consistent approach to risk throughout its history, helping to ensure we protect customers' funds, lend responsibly and support economies. By carefully aligning our risk appetite to our strategy, we aim to deliver long-term shareholder returns.

All employees are responsible for the management of risk, with the ultimate accountability residing with the Board. We have a strong risk culture, which is embedded through clear and consistent communication and appropriate training for all employees. A comprehensive risk management framework is applied throughout the Group, with effective governance and corresponding risk management tools. This framework is underpinned by our risk culture and reinforced by the HSBC Values and our Global Standards programme.

Our Global Risk function oversees the framework, and is led by the Group Chief Risk Officer, an executive Director. It is independent from the global businesses, including our sales and trading functions, to provide challenge, appropriate oversight, and balance in risk/reward decisions.

HSBC's risk appetite defines its desired forward-looking risk profile, and informs the strategic and financial planning process.

It is articulated in our Risk Appetite Statement, which is approved by the Board. Key elements include:

- risks that we accept as part of doing business, such as credit risk and market risk;
- risks that we incur as part of doing business, such as operational risk, which are actively managed to remain below an acceptable tolerance; and
- risks for which we have zero tolerance, such as knowingly engaging in activities where foreseeable reputational risk has not been considered.

We operate a comprehensive stress testing programme to help ensure the strength and resilience of HSBC, taking part in regulators' as well as our own internal stress tests. In 2016, we

participated in the annual stress test by the Bank of England, our lead regulator, and again exceeded its requirements comfortably. This reflected our conservative risk appetite, and our diversified geographical and business mix. It also reflected our ongoing strategic actions, including the sale of our operations in Brazil, RWA reductions in GB&M and continued sales from our US CML run-off portfolio. Our internal stress test scenarios include potential macroeconomic, geopolitical and operational risk events, and events that are applicable to HSBC. The results help management understand material risks and consider potential mitigants.

 Our risk management framework and risks associated with our banking and insurance manufacturing operations are described on pages 68 and 82 respectively.

Key risk appetite metrics		Risk appetite	2016
Component	Measure		
Returns	Return on average ordinary shareholders' equity	≥10.0%	<b>0.8%</b>
Capital	Common equity tier 1 ratio – CRD IV end point basis	≥11.0%	<b>13.6%</b>
Liquidity	HSBC consolidated balance sheet advances-to-deposits ratio	≤90%	<b>67.7%</b>
Loan impairment charges	Loan impairment charges as % of advances: RBWM	≤0.50%	<b>0.37%</b>
	Loan impairment charges as % of advances: wholesale (CMB, GB&M and GPB)	≤0.45%	<b>0.27%</b>

## Top and emerging risks

Our top and emerging risks framework helps enable us to identify current and forward-looking risks so that we may take action to either prevent them materialising or limit their effect.

Top risks are those that may have a material impact on the financial results, reputation or business model of the Group in the year ahead. Emerging risks are those that have large unknown components and may form beyond a one-year horizon. If these

risks were to occur, they could have a material effect on HSBC.

During 2016, we made two changes to our top and emerging risks to reflect our assessment of their effect on HSBC. Firstly, 'IT systems infrastructure and resilience' was added as a new risk due to the need to ensure core banking systems remain robust as digital and mobile banking services continue to evolve. Secondly, 'Dispute risk' was removed as the key drivers of this

thematic issue have already materialised and are therefore reported through other reporting channels. In addition, three thematic risks were renamed to better reflect the challenges facing HSBC. We use the new names in the table that follows.

 Our current top and emerging risks are summarised on the next page and discussed in more detail on page 64.

 Our approach to identifying and monitoring top and emerging risks is described on page 70.

Risk	Trend	Mitigants
<b>Externally driven</b>		
Economic outlook and capital flows	▲	We are actively monitoring our wholesale credit and trading portfolios to identify areas of stress following the UK electorate's vote to leave the European Union. We have also undertaken stress tests on our businesses and portfolios to assess potential impacts under a range of possible exit scenarios.
Geopolitical risk	▲	We have increased physical security at our premises where the risk of terrorism is heightened and have enhanced our major incident response capabilities.
Turning of the credit cycle	►	A number of sectors remain under enhanced monitoring with risk appetite and new lending significantly curtailed, including our oil and gas and commodities lending portfolios.
Cyber threat and unauthorised access to systems	▲	We have brought all cybersecurity initiatives together under one programme in order to strengthen our resilience and defence capabilities. We have revised our cybersecurity risk appetite to reflect our evolving defence approach.
Regulatory and technological developments with adverse impact on business model and profitability	►	We are actively engaged with regulators and policy makers to help ensure that new regulatory requirements are considered fully and can be implemented in an effective manner. We have established a specialist digital solutions team to lead our response to new technologies.
Regulatory focus on conduct of business and financial crime	►	We created a new function, Financial Crime Risk, which brings together all areas of financial crime risk management at HSBC and continued to enhance our management of conduct in areas including the treatment of potentially vulnerable customers, market surveillance, employee training and performance management.
US deferred prosecution agreement and related agreements and consent orders	►	We are continuing to take concerted action to remediate anti-money laundering and sanctions compliance deficiencies and to implement Global Standards.
<b>Internally driven</b>		
IT systems infrastructure and resilience	▲	We have invested in specialist teams and are upgrading our systems capability to enhance data and digital capabilities and help ensure strong delivery quality and resilience to customers.
Impact of organisational change and regulatory demands on employees	►	We have increased our focus on resource planning and employee retention and well-being, and are developing initiatives to equip line managers with skills to both manage change and support their employees.
Execution risk	►	The Group Change Committee monitored the progress of the high priority programmes across the Group that support the strategic actions, reviewing progress on deliverables and addressing resource prioritisation issues as they arose.
Third-party risk management	►	To help enable a consistent risk assessment of the third-party services that the Group utilises, we are implementing a framework to provide a holistic view of third-party risks, which assesses third parties against key criteria, combined with associated control monitoring, testing and assurance throughout the third-party lifecycle.
Enhanced model risk management expectations	▲	We have implemented a new global policy on model risk management and updated the model governance framework to address key internal and regulatory requirements. Additional resources have also been recruited to support the independent model review function.
Data management	►	We continued to enhance our data governance, quality and architecture to help enable consistent data aggregation, reporting and management.

▲ Risk heightened during 2016

► Risk remained at the same level as 2015

• Thematic risk renamed during 2016

# Remuneration

Our remuneration policy supports the achievement of our strategic objectives by balancing reward for short- and long-term sustainable performance.

## Remuneration principles

The remuneration strategy for our employees is based on a series of key principles.



### What we do

- Focus on total compensation with a strong link between pay and performance
- Judge not only what is achieved, but also how it is achieved, in line with the HSBC Values
- Operate a thorough performance management and HSBC Values assessment process
- Recognise and reward our employees for outstanding positive behaviour
- Design our policy to align compensation with long-term stakeholder interests
- Apply consequence management to strengthen the alignment between risk and reward



### What we don't do

- Reward inappropriate or excessive risk taking or short-term performance at the expense of long-term company sustainability
- Use only a formulaic approach to determine bonuses for our executives
- Award discretionary bonuses to employees rated unacceptable against the HSBC Values and behaviours
- Allow our employees to hedge against their unvested or retained awards
- Offer employment contracts with a notice period of more than 12 months
- Have pre-arranged individual severance agreements

## Embedding our values in our remuneration framework

Instilling the right behaviours, and driving and encouraging actions that are aligned to organisational values and expectations, are essential. We therefore have a number of programmes to reinforce our values.

Pay	Outcomes
Positive adjustments	<ul style="list-style-type: none"><li>– Individuals who exhibit exceptional conduct and behaviours are awarded positive variable pay adjustments during the year.</li></ul>
Global consequence management policy	<ul style="list-style-type: none"><li>– Ensures clear messaging to employees on the impact of any inappropriate conduct as part of reward communications, with consistency in approach and actions taken depending on the severity of the misconduct.</li></ul>
Global recognition programme	<ul style="list-style-type: none"><li>– Our global recognition programme is now available in more than 50 countries.</li><li>– In 2016, approximately 600,000 recognitions were made with a total value of \$8.1m.</li></ul>
Performance management	<ul style="list-style-type: none"><li>– Employees set objectives, which connect business, team and individual goals and are guided by expected behaviours aligned to our core values.</li><li>– All employees receive a behaviour rating based on their adherence to HSBC Values to ensure performance is judged not only on what is achieved, but also on how it is achieved.</li><li>– Employees and managers are encouraged to hold frequent conversations throughout the year, exploring alternative ways to stay connected outside the regular performance management cycle using a mix of informal and formal check-ins on a range of topics, including performance, development and wellbeing.</li></ul>

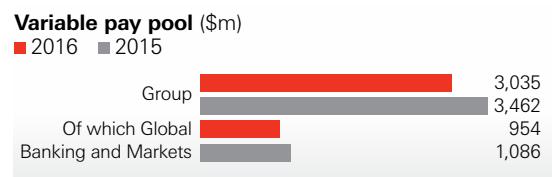
## How we set our variable pay pool

When deciding on the variable pay pool, the Remuneration Committee considers a number of factors, which are set out in the following table:

Performance and risk appetite statement	– Our variable pay pool takes into account our performance in the context of our risk appetite.
Countercyclical funding methodology	– To dampen effects of economic cycles, the variable pay pool's size has a floor and a ceiling, and we also limit the payout ratio as performance increases to prevent the risk of inappropriate behaviour.
Distribution of profits	– Our funding methodology ensures that the distribution of post-tax profit between capital, shareholders and variable pay is appropriate, and that the majority of post-tax profit is allocated to capital and shareholders.
Commerciality and affordability	– We face challenges arising from being headquartered in the UK, which has more stringent reward practices. We take into account these challenges in determining the size of the variable pay pool to ensure we can continue to attract and retain talent in key markets.

## Our variable pay pool for 2016

Our variable pay pool is \$3,035m, a decrease of 12.3% compared with 2015.



## Remuneration for our executive Directors

Our remuneration policy for executive Directors was approved at our 2016 Annual General Meeting and implemented for the first time in 2016. Full details of our remuneration policy can be found online in our Directors' Remuneration Policy Supplement 2016.

The table below shows the amount our executive Directors earned in 2016.

► For details of Directors' pay and performance for 2016, see the Directors' Remuneration Report on page 153.

### (Audited)

(in £000)	Base salary	Fixed pay allowance	Pension	Annual incentive	GPSP/LTI <sup>1</sup>	Sub-total	Taxable benefits	Non-taxable benefits	Notional returns	Total
<b>Douglas Flint</b>	<b>2016</b> 1,500	—	450	—	—	<b>1,950</b>	100	86	—	<b>2,136</b>
	2015	1,500	—	750	—	2,250	151	95	—	2,496
<b>Stuart Gulliver</b>	<b>2016</b> 1,250	<b>1,700</b>	375	<b>1,695</b>	—	<b>5,020</b>	<b>557</b>	<b>71</b>	<b>27</b>	<b>5,675</b>
	2015	1,250	1,700	625	1,072	1,969	6,616	662	53	9
<b>Iain Mackay</b>	<b>2016</b> 700	<b>950</b>	<b>210</b>	<b>987</b>	—	<b>2,847</b>	<b>52</b>	<b>37</b>	<b>17</b>	<b>2,953</b>
	2015	700	950	350	1,068	1,101	4,169	54	28	5
<b>Marc Moses</b>	<b>2016</b> 700	<b>950</b>	<b>210</b>	<b>1,005</b>	—	<b>2,865</b>	<b>15</b>	<b>38</b>	<b>18</b>	<b>2,936</b>
	2015	700	950	350	827	1,101	3,928	6	29	5

<sup>1</sup> Executive Directors received Group Performance Share Plan ('GPSP') awards for 2015. For 2016, executive Directors will receive a long-term incentive ('LTI') award, with a performance period ending in 2019, which will be included in the single figure table for the financial year ending on 31 December 2019. If target performance is achieved for this award, LTI payout would be 50% of grant value. In this case, the 2016 total single figure for year-on-year comparison would be (in £000) £7,670 for Stuart Gulliver, £4,069 for Iain Mackay and £4,052 for Marc Moses.

## Financial summary

	Page
Use of non-GAAP financial measures	30
Critical accounting estimates and judgements	30
Consolidated income statement	31
Group performance by income and expense item	32
Net interest income	32
Net fee income	34
Net trading income	34
Net income/(expense) from financial instruments designated at fair value	35
Gains less losses from financial investments	36
Net insurance premium income	36
Other operating income	36
Net insurance claims and benefits paid and movement in liabilities to policyholders	37
Loan impairment charges and other credit risk provisions	38
Operating expenses	38
Share of profit in associates and joint ventures	40
Tax expense	40
Consolidated balance sheet	41
Movement in 2016	42

The management commentary included in the Strategic Report, the Report of the Directors: 'Financial Review', together with the 'Employees' and 'Corporate sustainability' sections of 'Corporate Governance' and the 'Directors' Remuneration Report' is presented in compliance with the IFRSs Practice Statement 'Management Commentary' issued by the IASB.

### Use of non-GAAP financial measures

Our reported results are prepared in accordance with IFRSs as detailed in the Financial Statements starting on page 183. In measuring our performance, the financial measures that we use include those derived from our reported results in order to eliminate factors that distort period-on-period comparisons. These are considered non-GAAP financial measures.

Non-GAAP financial measures that we use throughout the *Annual Report and Accounts 2016* are described below. Non-GAAP financial measures are described and reconciled to the closest reported financial measure when used.

The global business segmental results on pages 45 to 60 are presented on an adjusted basis in accordance with IFRS 8 'Operating Segments' as detailed in 'Basis of preparation' on page 44.

### Adjusted performance

Adjusted performance is computed by adjusting reported results for the year-on-year effects of foreign currency translation differences and significant items, which distort year-on-year comparisons.

We use 'significant items' to describe collectively the group of individual adjustments excluded from reported results when arriving at adjusted performance. These items, which are detailed below, are ones that management and investors would ordinarily identify and consider separately when assessing performance to understand better the underlying trends in the business.

These items include the operating results for our Brazil operations sold to Banco Bradesco S.A. on 1 July 2016, as well as the loss recognised on disposal.

We consider adjusted performance provides useful information for investors by aligning internal and external reporting, identifying and quantifying items management believes to be significant and providing insight into how management assesses year-on-year performance.

### Foreign currency translation differences

Foreign currency translation differences reflect the movements of the US dollar against most major currencies during 2016. We exclude our reporting currency translation differences when deriving constant currency data because using these data allows us to assess balance sheet and income statement performance on a like-for-like basis to understand better the underlying trends in the business.

### Foreign currency translation differences

Foreign currency translation differences for 2016 are computed by retranslating into US dollars for non-US dollar branches, subsidiaries, joint ventures and associates:

- the income statements for 2015 and 2014 at the average rates of exchange for 2016; and
- the balance sheets at 31 December 2015 and 31 December 2014 at the prevailing rates of exchange on 31 December 2016.

No adjustment has been made to the exchange rates used to translate foreign currency denominated assets and liabilities into the functional currencies of any HSBC branches, subsidiaries, joint ventures or associates. When reference is made to foreign currency translation differences in tables or commentaries, comparative data reported in the functional currencies of HSBC's operations have been translated at the appropriate exchange rates applied in the current period on the basis described above.

### Significant items

The tables on pages 54 to 60 detail the effects of significant items on each of our global business segments and geographical regions in 2016, 2015 and 2014.

### Critical accounting estimates and judgements

The results of HSBC reflect the choice of accounting policies, assumptions and estimates that underlie the preparation of HSBC's consolidated financial statements. The significant accounting policies, including the policies which include critical accounting estimates and judgements, are described in Note 1.2 on the Financial Statements. The accounting policies listed below are highlighted as they involve a high degree of uncertainty and have a material impact on the financial statements:

- Impairment of loans and advances: For collective impairment allowances, estimation methods include the use of historical information supplemented by significant management judgement about whether current economic and credit conditions are such that actual incurred losses are likely to be greater or less than experienced in the past. For individually assessed loans, judgements are made about the financial condition of individual borrowers, which can involve a wide range of factors relating to their business and the value of any security. The exercise of judgement requires the use of assumptions that are highly subjective and sensitive, in particular to changes in economic and credit conditions across a large number of geographical areas. See Note 1.2(d) on page 198.
- Deferred tax assets: The most significant judgements relate to those made in respect of expected future profitability. See Note 1.2(h) on page 202.
- Valuation of financial instruments: In determining the fair value of financial instruments a variety of valuation techniques are used, some of which feature significant unobservable inputs and are subject to substantial uncertainty. See Note 1.2(c) on page 197.
- Impairment of interests in associates: Impairment testing involves significant judgement in determining the value in use, and in particular estimating the present values of cash flows expected to arise from continuing to hold the investment, based on a number of management assumptions. See Note 1.2(a) on page 196.

- Goodwill impairment: A high degree of uncertainty is involved in estimating the future cash flows of the cash generating units ('CGUs') and the rates used to discount these cash flows. See Note 1.2(a) on page 196.
- Provisions: A high degree of judgement may be required due to the high degree of uncertainty associated with determining whether a present obligation exists, and estimating the probability and amount of any outflows that may arise. See Note 1.2(i) on page 202.

Given the inherent uncertainties and the high level of subjectivity involved in the recognition or measurement of the items above, it is possible that the outcomes in the next financial year could differ from the expectations on which management's estimates are based, resulting in the recognition and measurement of materially different amounts from those estimated by management in these Financial Statements.

## Consolidated income statement

### Summary consolidated income statement

	2016 \$m	2015 \$m	2014 \$m	2013 \$m	2012 \$m
Net interest income	<b>29,813</b>	32,531	34,705	35,539	37,672
Net fee income	<b>12,777</b>	14,705	15,957	16,434	16,430
Net trading income	<b>9,452</b>	8,723	6,760	8,690	7,091
Net income/(expense) from financial instruments designated at fair value	(2,666)	1,532	2,473	768	(2,226)
Gains less losses from financial investments	<b>1,385</b>	2,068	1,335	2,012	1,189
Dividend income	<b>95</b>	123	311	322	221
Net insurance premium income	<b>9,951</b>	10,355	11,921	11,940	13,044
Gains on disposal of US branch network, US cards business and Ping An Insurance (Group) Company of China, Ltd	—	—	—	—	7,024
Other operating income/(expense)	(971)	1,055	1,131	2,632	2,100
<b>Total operating income</b>	<b>59,836</b>	71,092	74,593	78,337	82,545
Net insurance claims and benefits paid and movement in liabilities to policyholders	(11,870)	(11,292)	(13,345)	(13,692)	(14,215)
<b>Net operating income before loan impairment charges and other credit risk provisions</b>	<b>47,966</b>	59,800	61,248	64,645	68,330
Loan impairment charges and other credit risk provisions	(3,400)	(3,721)	(3,851)	(5,849)	(8,311)
Net operating income	<b>44,566</b>	56,079	57,397	58,796	60,019
<b>Total operating expenses</b>	<b>(39,808)</b>	(39,768)	(41,249)	(38,556)	(42,927)
Operating profit	<b>4,758</b>	16,311	16,148	20,240	17,092
Share of profit in associates and joint ventures	<b>2,354</b>	2,556	2,532	2,325	3,557
<b>Profit before tax</b>	<b>7,112</b>	18,867	18,680	22,565	20,649
Tax expense	(3,666)	(3,771)	(3,975)	(4,765)	(5,315)
<b>Profit for the year</b>	<b>3,446</b>	15,096	14,705	17,800	15,334
Attributable to:					
– ordinary shareholders of the parent company	<b>1,299</b>	12,572	13,115	15,631	13,454
– preference shareholders of the parent company	<b>90</b>	90	90	90	90
– other equity holders	<b>1,090</b>	860	483	483	483
– non-controlling interests	<b>967</b>	1,574	1,017	1,596	1,307
<b>Profit for the year</b>	<b>3,446</b>	15,096	14,705	17,800	15,334

### Five-year financial information

	Footnotes	2016 \$	2015 \$	2014 \$	2013 \$	2012 \$
Basic earnings per share		<b>0.07</b>	0.65	0.69	0.84	0.74
Diluted earnings per share		<b>0.07</b>	0.64	0.69	0.84	0.74
Dividends per ordinary share	1	<b>0.51</b>	0.50	0.49	0.48	0.41
		%	%	%	%	%
Dividend payout ratio	2	<b>728.6</b>	76.5	71.0	57.1	55.4
Post-tax return on average total assets		<b>0.1</b>	0.6	0.5	0.7	0.6
Return on risk-weighted assets	3	<b>0.7</b>	1.6	1.5	2.0	1.8
Return on average ordinary shareholders' equity		<b>0.8</b>	7.2	7.3	9.2	8.4
Average foreign exchange translation rates to \$:						
\$1: £		<b>0.741</b>	0.654	0.607	0.639	0.631
\$1: €		<b>0.904</b>	0.902	0.754	0.753	0.778

For footnotes, see page 63.

Unless stated otherwise, all tables in the Annual Report and Accounts 2016 are presented on a reported basis.

For a summary of our financial performance in 2016, see page 14.

For further financial performance data for each global business and geographical region, see pages 45 to 51 and 54 to 60, respectively.

## Group performance by income and expense item

### Net interest income

	Footnotes	2016 \$m	2015 \$m	2014 \$m
Interest income		<b>42,414</b>	47,189	50,955
Interest expense		<b>(12,601)</b>	(14,658)	(16,250)
<b>Net interest income</b>	4	<b>29,813</b>	32,531	34,705
Average interest-earning assets		<b>1,723,702</b>	1,726,949	1,786,536
		%	%	%
Gross interest yield	5	<b>2.46</b>	2.73	2.85
Less: cost of funds		<b>(0.87)</b>	(1.00)	(1.05)
Net interest spread	6	<b>1.59</b>	1.73	1.80
Net interest margin	7	<b>1.73</b>	1.88	1.94

For footnotes, see page 63.

In 2016, we earned net interest income of \$0.9bn in Brazil (2015: \$2.1bn) from average interest earning assets in Brazil of

\$25.8bn (2015: \$40.0bn). Our net interest margin excluding Brazil was 1.70% (2015: 1.79%).

### Summary of interest income by type of asset

	Footnotes	2016			2015			2014		
		Average balance \$m	Interest income \$m	Yield %	Average balance \$m	Interest income \$m	Yield %	Average balance \$m	Interest income \$m	Yield %
Short-term funds and loans and advances to banks		<b>203,799</b>	<b>1,510</b>	<b>0.74</b>	221,924	2,277	1.03	237,148	3,068	1.29
Loans and advances to customers		<b>865,356</b>	<b>29,272</b>	<b>3.38</b>	909,707	33,104	3.64	931,311	37,429	4.02
Reverse repurchase agreements – non-trading		<b>168,207</b>	<b>1,227</b>	<b>0.73</b>	162,308	1,301	0.80	198,273	1,800	0.91
Financial investments		<b>430,775</b>	<b>7,248</b>	<b>1.68</b>	396,113	7,508	1.90	399,816	8,323	2.08
Other interest-earning assets		<b>55,565</b>	<b>3,157</b>	<b>5.68</b>	36,897	2,999	8.13	19,988	335	1.68
<b>Total interest-earning assets</b>		<b>1,723,702</b>	<b>42,414</b>	<b>2.46</b>	1,726,949	47,189	2.73	1,786,536	50,955	2.85
Trading assets and financial assets designated at fair value	8, 9	<b>179,780</b>	<b>3,897</b>	<b>2.17</b>	195,285	4,626	2.37	238,958	5,596	2.34
Impairment allowances		<b>(9,127)</b>			(10,606)			(14,015)		
Non-interest-earning assets		<b>653,115</b>			682,143			668,564		
<b>Year ended 31 Dec</b>		<b>2,547,470</b>	<b>46,311</b>	<b>1.82</b>	2,593,771	51,815	2.00	2,680,043	56,551	2.11

For footnotes, see page 63.

### Summary of interest expense by type of liability and equity

	Footnotes	2016			2015			2014		
		Average balance \$m	Interest expense \$m	Cost %	Average balance \$m	Interest expense \$m	Cost %	Average balance \$m	Interest expense \$m	Cost %
Deposits by banks	10	<b>49,782</b>	<b>342</b>	<b>0.69</b>	55,863	378	0.68	61,217	481	0.79
Financial liabilities designated at fair value – own debt issued	11	<b>62,042</b>	<b>942</b>	<b>1.52</b>	58,489	717	1.23	66,374	837	1.26
Customer accounts	12	<b>1,074,661</b>	<b>5,492</b>	<b>0.51</b>	1,075,901	7,401	0.69	1,088,493	9,131	0.84
Repurchase agreements – non-trading		<b>118,789</b>	<b>626</b>	<b>0.53</b>	117,947	355	0.30	190,705	652	0.34
Debt securities in issue		<b>114,343</b>	<b>2,807</b>	<b>2.45</b>	129,039	3,521	2.73	129,724	4,554	3.51
Other interest-bearing liabilities		<b>22,387</b>	<b>2,392</b>	<b>10.68</b>	28,396	2,286	8.05	10,120	595	5.88
<b>Total interest-bearing liabilities</b>		<b>1,442,004</b>	<b>12,601</b>	<b>0.87</b>	1,465,635	14,658	1.00	1,546,633	16,250	1.05
Trading liabilities and financial liabilities designated at fair value (excluding own debt issued)		<b>138,486</b>	<b>1,986</b>	<b>1.43</b>	151,294	2,071	1.37	178,518	2,856	1.60
Non-interest bearing current accounts		<b>184,016</b>			190,914			185,990		
<b>Total equity and other non-interest bearing liabilities</b>		<b>782,964</b>			785,928			768,902		
<b>Year ended 31 Dec</b>		<b>2,547,470</b>	<b>14,587</b>	<b>0.57</b>	2,593,771	16,729	0.64	2,680,043	19,106	0.71

For footnotes, see page 63.

## Significant items and currency translation

	2016 \$m	2015 \$m
<b>Significant items</b>	<b>951</b>	2,104
– releases/(provisions) arising from the ongoing review of compliance with the UK Consumer Credit Act	2	(10)
– acquisitions, disposals and dilutions	949	2,114
<b>Currency translation</b>		1,808
<b>Year ended 31 Dec</b>	<b>951</b>	3,912

Net interest income of \$29.8bn decreased by \$2.7bn or 8% compared with 2015. This was partly the impact of the disposal of our operations in Brazil on 1 July 2016, which reduced net interest income by (\$1.2bn), and adverse effects of currency translation differences. These decreases were partly offset by growth in net interest income in Asia, notably in Hong Kong, and in Mexico, partly offset by a decrease in the UK and the US.

Net interest margin in 2016 of 1.73% was 15 basis points ('bps') lower than 2015. This reflected the effects of the disposal and currency translation noted above, which had an adverse effect of 8bps. The remainder of the decrease was primarily as a result of lower yields on customer lending, which had an adverse effect of 9bps on our net interest margin, partly reflecting the continuing run-off of our US CML portfolio. In addition, we recorded an increase in the cost of debt, partly offset by a lower cost of funds on customer accounts, notably in Hong Kong.

### Interest income

Interest income decreased by \$4.8bn compared with 2015, notably driven by our sale of Brazil operations (\$3.1bn) and currency translation. Excluding these factors, total interest income increased marginally.

Interest income on loans and advances to customers decreased by \$3.8bn, driven by a reduction of \$1.9bn relating to our operations in Brazil, and the adverse effects of currency translation. Excluding these factors, interest income on customer lending was broadly unchanged. The effects of growth in balances in Europe and Mexico, together with central bank rate rises in Mexico and Argentina, were broadly offset by the run-off of our US CML portfolio and the effect of lower average balances in Asia.

Income growth in Mexico was driven by growth in average balances, reflecting gains in market share and higher yields, notably on term lending due to central bank rate increases. Income increased in Europe as the effect of growth in average balances, primarily an increase in term lending volumes, more than offset the effect of lower yields on both term lending and mortgages, reflecting competitive pricing in the market and lower interest rates in the eurozone. By contrast, interest income decreased in Asia, as a result of lower average balances in term lending, despite increased mortgage balances, notably in Hong Kong. Yields in Asia also decreased marginally as a result of central bank rate cuts in China during 2015, although these were partly offset by rate rises in Hong Kong.

Interest income on short-term funds and financial investments decreased by \$1.0bn in 2016, including a decrease of \$0.7bn relating to Brazil. Excluding the effect of currency translation and Brazil, interest income on short-term funds and financial investments increased by \$0.2bn. The movement predominantly reflected increases in available-for-sale debt securities in Asia, reflecting growth in our surplus liquidity. In North America income increased, driven by higher balances primarily due to net purchase of US Treasury securities, and a higher yield, following the US rate rise at the end of 2015.

Interest income on reverse repurchase agreements – non-trading was \$0.1bn lower, including a decrease relating to Brazil (\$0.4bn). Excluding currency translation and Brazil, income increased primarily in North America, reflecting higher balances and improved market rates.

### Interest expense

Reported interest expense decreased by \$2.1bn, driven by the reductions relating to Brazil (\$1.8bn) and currency translation. Excluding these factors, interest expense rose by \$0.4bn, as increases in the cost of debt and repurchase agreements were partly offset by decreases in interest expense on customer accounts.

Interest expense on customer accounts decreased by \$1.9bn, including amounts relating to Brazil (\$0.8bn) and currency translation. Excluding these factors, interest expense on customer accounts decreased by \$0.5bn, driven by Asia and Europe, partly offset by Mexico, Argentina and North America. In Asia, the effect of an increase in balances was more than offset by a lower cost of funds, partly a change in portfolio mix towards lower-cost accounts in Hong Kong, which more than offset the effect of central bank rate rises. In addition to these factors, the central bank rate cuts in a number of markets, including mainland China, Australia and India, further lowered our cost of funds. In Europe, interest expense decreased as a result of a reduction in the cost of funds, partly due to a negative rate environment, although the average balances increased, notably in the UK. These decreases were partly offset by higher interest expense on customer accounts in the US, Mexico and Argentina, reflecting promotional deposit offerings and the central bank rate rises.

Interest expense on debt securities in issue and own debt designated at fair value decreased by \$0.5bn, including the impact of Brazil (\$0.8bn). Excluding currency translation and the effect of Brazil, interest expense increased by \$0.4bn. This was driven by an increase in the cost of funds and an increase in average balances, as redemptions across the Group were more than offset by issuances of senior debt from HSBC Holdings plc ('HSBC Holdings'). The increase in the cost of debt designated at fair value was as a result of longer maturities and the structural subordination of our new issuances from HSBC Holdings.

Interest expense increased on repurchase agreements by \$0.3bn, notably in North America, reflecting higher balances and market rates.

### Net fee income

	<b>2016</b> \$m	2015 \$m	2014 \$m
Account services	<b>2,417</b>	2,745	3,407
Funds under management	<b>2,076</b>	2,570	2,658
Cards	<b>1,970</b>	2,281	2,460
Credit facilities	<b>1,795</b>	1,919	1,890
Broking income	<b>1,060</b>	1,441	1,371
Unit trusts	<b>863</b>	1,007	1,005
Imports/exports	<b>820</b>	971	1,115
Remittances	<b>766</b>	772	833
Underwriting	<b>705</b>	762	872
Global custody	<b>662</b>	721	726
Insurance agency commission	<b>419</b>	519	516
Other	<b>2,116</b>	2,308	2,692
Fee income	<b>15,669</b>	18,016	19,545
Less: fee expense	<b>(2,892)</b>	(3,311)	(3,588)
<b>Year ended 31 Dec</b>	<b>12,777</b>	14,705	15,957

### Significant items and currency translation

	<b>2016</b> \$m	2015 \$m
Significant items		
– acquisitions, disposals and dilutions	<b>233</b>	533
Currency translation		574
<b>Year ended 31 Dec</b>	<b>233</b>	1,107

Net fee income fell by \$1.9bn compared with 2015, partly as a result of the adverse effects of currency translation of \$0.6bn, primarily in the UK, Argentina and Mexico, which notably affected account services, cards and fee expense. The sale of our operations in Brazil to Banco Bradesco S.A. reduced net fee income by a further \$0.3bn. In addition, the decrease was driven by RBWM in Hong Kong, reflecting risk-averse retail investor sentiment in Asia.

Fee income from broking and unit trusts decreased by \$525m, largely due to a strong performance in Hong Kong in the first half of 2015. The decrease was mainly in RBWM in Hong Kong, from lower securities broking income resulting from a reduction in stock market turnover.

In addition, fee income from cards decreased by \$311m, primarily reflecting lower interchange fees in the UK, following regulatory change in late 2015.

Fee income from funds under management decreased by \$0.5bn, partly driven by a reclassification between fee income from funds under management and fee expense in Germany (\$0.2bn). In addition, fee income from funds under management decreased in RBWM's Global Asset Management business, driven by a change in the product mix towards lower margin fixed income products, as well as in GPB in Switzerland.

The reduction in fee income from funds under management was partly offset by a fall in fee expense of \$419m, primarily reflecting lower brokerage fees, and the reclassification noted above.

### Net trading income

	<i>Footnote</i>	<b>2016</b> \$m	2015 \$m	2014 \$m
Trading activities		<b>8,702</b>	7,285	5,419
Net interest income on trading activities		<b>1,386</b>	1,775	1,907
Gain/(loss) on termination of hedges		<b>1</b>	(11)	1
Other trading income – hedge ineffectiveness		<b>(5)</b>	15	34
– on cash flow hedges		<b>23</b>	(11)	19
– on fair value hedges		<b>(655)</b>	(330)	(620)
Fair value movement on non-qualifying hedges	13	<b>9,452</b>	8,723	6,760
<b>Year ended 31 Dec</b>				

For footnote, see page 63.

### Significant items and currency translation

	Footnote	2016 \$m	2015 \$m
<b>Significant items</b>			
Included within trading activities		<b>26</b>	230
– favourable debit valuation adjustment on derivative contracts		<b>26</b>	230
Included in other net trading income		<b>(508)</b>	(42)
– fair value movement on non-qualifying hedges	13	<b>(687)</b>	(327)
– acquisitions, disposals and dilutions		<b>179</b>	285
<b>Total significant items</b>		<b>(482)</b>	188
Currency translation			596
<b>Year ended 31 Dec</b>		<b>(482)</b>	784

For footnote, see page 63.

Net trading income of \$9.5bn was \$0.7bn higher than in 2015, despite the net adverse effects of \$1.3bn of significant items and currency translation summarised in the table above. The increase (excluding the movements tabulated above) was driven by:

- favourable movements on assets held as economic hedges of foreign currency debt designated at fair value of \$1.7bn in 2016 compared to minimal movements in 2015. These movements were offset by adverse movements in foreign

currency debt designated at fair value in 'Net income/(expense)' from financial instruments designated at fair value'; and

- increases in GB&M (\$0.2bn), notably in Rates and in Credit, as we gained market share in Europe, partly offset by a decrease in Equities, reflecting lower trading volumes in Europe and Asia. In addition, we recorded adverse movements of \$70m in credit and funding valuation adjustments compared with favourable movements of \$227m in the prior year, primarily relating to movements in our own credit spread on structured liabilities.

### Net income/(expense) from financial instruments designated at fair value

	2016 \$m	2015 \$m	2014 \$m
Net income/(expense) arising from:			
Financial assets held to meet liabilities under insurance and investment contracts	<b>1,480</b>	531	2,300
Liabilities to customers under investment contracts	<b>(218)</b>	34	(435)
HSBC's long-term debt issued and related derivatives	<b>(3,975)</b>	863	508
– change in own credit spread on long-term debt (significant item)	<b>(1,792)</b>	1,002	417
– other changes in fair value	<b>(2,183)</b>	(139)	91
Other instruments designated at fair value and related derivatives	<b>47</b>	104	100
<b>Year ended 31 Dec</b>	<b>(2,666)</b>	1,532	2,473

The majority of our financial liabilities designated at fair value are fixed-rate, long-term debt issuances, and are managed in conjunction with interest rate swaps as part of our interest rate management strategy.

*These liabilities are discussed further on page 242.*

### Significant items and currency translation

	2016 \$m	2015 \$m
<b>Significant items</b>	<b>(1,488)</b>	1,426
– own credit spread	<b>(1,792)</b>	1,002
– acquisitions, disposals and dilutions	<b>304</b>	424
Currency translation		24
<b>Year ended 31 Dec</b>	<b>(1,488)</b>	1,450

We recorded a net expense from financial instruments designated at fair value of \$2.7bn in 2016, compared with net income of \$1.5bn in 2015. In 2016, there were unfavourable movements of \$1.8bn in the fair value of our own long-term debt reflecting changes in credit spread, compared with favourable movements of \$1.0bn in 2015.

The decrease was also as a result of 'Other changes in fair value' on our long-term debt and related derivatives, which reflected:

- higher adverse movements of \$1.7bn in 2016 compared with minimal movements in 2015 on foreign currency debt designated at fair value and issued as part of our overall funding strategy (offset by assets held as economic hedges in 'Net trading income'); and

- higher adverse movements of \$0.2bn relating to the economic hedging of interest and exchange rate risk on our long-term debt.

By contrast, net income from financial assets held to meet liabilities under insurance and investment contracts of \$1.5bn was \$0.9bn higher than in 2015. This was primarily driven by improved equity market performance in Asia and Europe in 2016, partly offset by the disposal of our operations in Brazil in July 2016.

Net income arising from financial assets held to meet liabilities under insurance and investment contracts results in a corresponding movement in liabilities to customers, reflecting the extent to which they participate in the investment performance of the associated asset portfolio. These offsetting movements are recorded in 'Net income/(expense) arising from liabilities to customers under investment contracts' and 'Net

insurance claims and benefits paid and movement in liabilities to policyholders'.

In 2016, the majority of the variance arose in unit-linked contracts where the policyholder bears the investment risk, and was therefore offset by movements in liabilities to customers.

### Gains less losses from financial investments

	2016 \$m	2015 \$m	2014 \$m
Net gains from disposal	<b>1,421</b>	2,179	1,708
– debt securities	357	345	665
– equity securities	1,058	1,829	1,037
– other financial investments	6	5	6
Impairment of available-for-sale equity securities	(36)	(111)	(373)
<b>Year ended 31 Dec</b>	<b>1,385</b>	2,068	1,335

### Significant items and currency translation

	2016 \$m	2015 \$m
Significant items	<b>701</b>	1,385
– gain on disposal of our membership interest in Visa – Europe	584	—
– gain on disposal of our membership interest in Visa – US	116	—
– gain on the partial sale of shareholding in Industrial Bank	—	1,372
– acquisitions, disposals and dilutions	1	13
Currency translation	34	
<b>Year ended 31 Dec</b>	<b>701</b>	1,419

In 2016, gains less losses from financial investments decreased by \$0.7bn compared with 2015. This was largely due to the significant items and currency translation tabulated above, notably the non-recurrence of the gain on the partial sale of

our shareholding in Industrial Bank of \$1.4bn in 2015, partly offset by gains on disposal of our membership interests in Visa Europe of \$0.6bn and in Visa US of \$0.1bn in 2016.

### Net insurance premium income

	2016 \$m	2015 \$m	2014 \$m
Gross insurance premium income	<b>10,588</b>	11,012	12,370
Reinsurance premiums	(637)	(657)	(449)
<b>Year ended 31 Dec</b>	<b>9,951</b>	10,355	11,921

### Significant items and currency translation

	2016 \$m	2015 \$m
Significant items		
– acquisitions, disposals and dilutions	362	764
Currency translation		169
<b>Year ended 31 Dec</b>	<b>362</b>	933

Net insurance premium income was \$0.4bn lower than in 2015, and included reductions due to the disposal of our operations in Brazil (\$0.4bn) and currency translation movements of \$0.2bn. Net insurance premium income increased in Hong Kong, partly offset by reductions in France in response to low interest rates

and market volatility, and in the UK, following the disposal of our pension business in 2015.

### Other operating income

	2016 \$m	2015 \$m	2014 \$m
Rent received	157	171	162
Gains/(losses) recognised on assets held for sale	(1,949)	(244)	220
Gains on investment properties	4	61	120
Gain on disposal of property, plant and equipment, intangible assets and non-financial investments	35	53	32
Losses arising from dilution of interest in Industrial Bank and other associates and joint ventures	—	—	(32)
Change in present value of in-force long-term insurance business	902	799	261
Other	(120)	215	368
<b>Year ended 31 Dec</b>	<b>(971)</b>	1,055	1,131

### Change in present value of in-force long-term insurance business

	2016 \$m	2015 \$m	2014 \$m
Value of new business	<b>900</b>	809	870
Expected return	<b>(532)</b>	(552)	(545)
Assumption changes and experience variances	<b>513</b>	504	(116)
Other adjustments	<b>21</b>	38	52
<b>Year ended 31 Dec</b>	<b>902</b>	799	261

### Significant items and currency translation

	2016 \$m	2015 \$m
<b>Significant items</b>		
Included within gains/(losses) recognised on assets held for sale:	<b>(163)</b>	(214)
– portfolio disposals	<b>(163)</b>	(214)
Included within the remaining line items:	<b>(1,763)</b>	157
– acquisitions, disposals and dilutions	<b>(1,763)</b>	157
Total significant items	<b>(1,926)</b>	(57)
Currency translation	71	71
<b>Year ended 31 Dec</b>	<b>(1,926)</b>	14

Other operating income decreased by \$2.0bn from 2015. This was as a result of the loss on the sale of our operations in Brazil of \$1.7bn and the effects of the other significant items recorded in the table above. In addition, we recorded lower revaluation gains on investment properties.

These decreases were partly offset by higher favourable movements of \$0.1bn in present value of in-force ('PVIF') long-term insurance business, which was primarily driven by an

increase in the value of new business written in Hong Kong, partly offset by a reduction in France and the impact of the disposal of our operations in Brazil.

In 2016, we recognised \$513m of income in 'Assumption changes and experience variances', which was broadly unchanged from the \$504m recognised in 2015. For further details, please see Note 20.

### Net insurance claims and benefits paid and movement in liabilities to policyholders

Footnote	2016 \$m	2015 \$m	2014 \$m
<b>Net insurance claims and benefits paid and movement in liabilities to policyholders:</b>			
– gross	<b>12,508</b>	11,872	13,723
– less reinsurers' share	<b>(638)</b>	(580)	(378)
<b>Year ended 31 Dec</b>	<b>14</b>	<b>11,870</b>	11,292
			13,345

For footnote, see page 63.

### Significant items and currency translation

	2016 \$m	2015 \$m
<b>Significant items</b>		
– acquisitions, disposals and dilutions	<b>538</b>	962
Currency translation	246	246
<b>Year ended 31 Dec</b>	<b>538</b>	1,208

Net insurance claims and benefits paid and movement in liabilities to policyholders were \$0.6bn higher compared with 2015, and included reductions due to the disposal of our operations in Brazil (\$0.4bn) and currency translation movements of \$0.2bn.

This increase was primarily due to improved returns on financial assets supporting unit-linked contracts, where the policyholder bears the investment risk, reflecting improved equity market performance in Hong Kong compared to 2015. In addition, movements in liabilities to policyholders were higher due to

increased premium income, and interest rate-driven changes to liability valuations in Hong Kong.

These increases were partly offset by decreased premiums and reducing investment returns in France.

The gains or losses recognised on the financial assets designated at fair value that are held to support these insurance contract liabilities are reported in 'Net income/(expense) from financial instruments designated at fair value' on page 203.

### Loan impairment charges and other credit risk provisions

	2016 \$m	2015 \$m	2014 \$m
New allowances net of allowance releases	<b>3,977</b>	4,400	5,010
Recoveries of amounts previously written off	(627)	(808)	(955)
<b>Loan impairment charges:</b>	<b>3,350</b>	3,592	4,055
– individually assessed allowances	1,831	1,505	1,780
– collectively assessed allowances	1,519	2,087	2,275
Releases of impairment on available-for-sale debt securities	(63)	(17)	(319)
<b>Other credit risk provisions</b>	<b>113</b>	146	115
<b>Year ended 31 Dec</b>	<b>3,400</b>	3,721	3,851
Impairment charges on loans and advances to customers as a percentage of average gross loans and advances to customers	<b>0.39%</b>	0.39%	0.43%

### Significant items and currency translation

	2016 \$m	2015 \$m
<b>Significant items</b>	<b>748</b>	933
– acquisitions, disposals and dilutions	748	933
Currency translation		184
<b>Year ended 31 Dec</b>	<b>748</b>	1,117

Loan impairment charges and other credit risk provisions ('LICs') of \$3.4bn were \$0.3bn lower than in 2015. This was partly as a result of favourable currency translation differences of \$0.2bn, notably in Mexico and the UK. In addition, our sale of operations in Brazil resulted in a \$0.2bn reduction.

Collectively assessed LICs of \$1.5bn were down \$568m compared with 2015. This reduction included the net favourable effect of \$230m as a result of our sale of operations in Brazil and favourable currency translation of \$95m. The remaining variance reflected the following:

- In CMB (down \$226m), a net release of collectively assessed LICs compared with a net charge in 2015. The net release of allowances in 2016 was primarily on exposures related to the oil and gas sector, notably in the US and Canada, the UAE and Asia. This reflected a more positive outlook for this sector. By contrast, in 2015 we increased our collective allowances on exposures related to the oil and gas sector. The reduction in collectively assessed LICs was partly offset by an increase in the UK, primarily reflecting new allowances against exposures in the oil and gas sector.
- In GB&M, a net release of collectively assessed LICs, notably in the UK and US, compared with a net charge in 2015.

This was partly offset:

- In RBWM, where collectively assessed LICs rose by \$75m. The increase was mainly in Mexico reflecting our strategic focus on growing unsecured lending, as well as an increase in delinquency rates. By contrast, collectively assessed LICs decreased in a small number of markets in the Middle East and North Africa and Asia.
- In Corporate Centre, LICs increased in our US CML run-off portfolio by \$67m.

Individually assessed LICs of \$1.8bn increased by \$326m compared with 2015. Higher charges in GB&M were partly offset by a reduction in CMB and favourable currency translation of \$79m. This primarily reflected the following:

- In GB&M (up \$0.6bn), the increase was primarily in the US related to a significant specific charge against a mining-related corporate exposure, as well as charges relating to exposures in the oil and gas sector. Additionally, in Hong Kong, individually assessed LICs in 2016 largely related to a single corporate exposure. This compared with a net release of LICs in 2015.

This was partly offset:

- In CMB, lower individually assessed LICs (down \$261m), included favourable currency translation of \$70m and a net favourable effect of \$45m attributable to our sale of operations in Brazil. The decrease also reflected lower individually assessed LICs in Indonesia, where charges in 2015 related to a small number of exposures across multiple sectors. Lower charges in both the UK and the UAE also contributed to the reduction. These decreases were partly offset by higher LICs in Hong Kong, related to various sectors, including manufacturing, and in Canada due to a rise in the number of exposures in the oil and gas sector migrating to default. Notably, the increase in individually assessed LICs in Canada was more than offset by the movement in collective allowances related to the oil and gas sector, discussed above.

In 2016, we recorded higher net releases of impairment allowances against available for sale debt securities. These were primarily related to asset-backed securities ('ABSs') in our Legacy Credit business in Corporate Centre.

### Operating expenses

In addition to detailing operating expense items by category, as set out in the table below, we also categorise adjusted expenses as follows:

- 'Run-the-bank' costs comprise business-as-usual running costs that keep operations functioning at the required quality and standard year on year, maintain IT infrastructure and support revenue growth. Run-the-bank costs are split between front office and back office, reflecting the way the Group is organised into four global businesses ('front office') supported by global functions ('back office').
- 'Change-the-bank' costs comprise expenses relating to the implementation of mandatory regulatory changes and other investment costs incurred relating to projects to change business-as-usual activity to enhance future operating capabilities.
- 'Costs to achieve' comprise those specific costs relating to the achievement of the strategic actions set out in the Investor Update in June 2015. They comprise costs incurred between 1 July 2015 and 31 December 2017, and do not include ongoing initiatives such as Global Standards. Any costs arising within this category have been incurred as part of a significant transformation programme. Costs to achieve are included within significant items and incorporate restructuring costs that were identified as a separate significant item prior to 1 July 2015.
- The UK bank levy is reported as a separate category.

### Operating expenses

	2016 \$m	2015 \$m	2014 \$m
<b>By expense category</b>			
Employee compensation and benefits	<b>18,089</b>	19,900	20,366
Premises and equipment (excluding depreciation and impairment)	<b>3,758</b>	3,830	4,204
General and administrative expenses	<b>12,715</b>	13,832	14,361
<b>Administrative expenses</b>	<b>34,562</b>	37,562	38,931
Depreciation and impairment of property, plant and equipment	<b>1,229</b>	1,269	1,382
Amortisation and impairment of intangible assets	<b>777</b>	937	936
Goodwill impairment	<b>3,240</b>	—	—
<b>Year ended 31 Dec</b>	<b>39,808</b>	39,768	41,249

	2016 \$m	2015 \$m
<b>By expense group</b>		
Run-the-bank – front office	<b>13,612</b>	13,711
Run-the-bank – back office	<b>13,275</b>	13,437
Change-the-bank	<b>2,746</b>	3,161
Bank levy	<b>922</b>	1,421
Significant items	<b>9,253</b>	5,947
Currency translation	<b>—</b>	2,091
<b>Year ended 31 Dec</b>	<b>39,808</b>	39,768

### Staff numbers (full-time equivalents)

	2016	2015	2014
<b>Global businesses</b>			
Retail Banking and Wealth Management	<b>124,810</b>	145,868	151,802
Commercial Banking	<b>44,712</b>	48,651	48,650
Global Banking and Markets	<b>46,659</b>	47,894	46,605
Global Private Banking	<b>8,054</b>	8,513	8,775
Corporate Centre	<b>10,940</b>	4,277	1,771
<b>At 31 Dec</b>	<b>235,175</b>	255,203	257,603

Reported operating expenses of \$39.8bn were \$40m higher than in 2015. This reflected an increase in significant items of \$3.3bn which included:

- a \$3.2bn write-off of the goodwill in our GPB business in Europe (please see Note 20 for further details);
- costs to achieve of \$3.1bn, compared with \$0.9bn in 2015; partly offset by

- the operating expenses incurred in our Brazil business of \$1.1bn in 2016, compared with \$2.5bn in 2015; and
- a reduction of \$1.0bn in settlements and provisions in connection with legal matters.

The increase in significant items was partly offset by the favourable effects of currency translation of \$2.1bn.

### Significant items and currency translation

	2016 \$m	2015 \$m
<b>Significant items</b>		
– costs associated with portfolio disposals	<b>28</b>	—
– costs to achieve	<b>3,118</b>	908
– cost to establish UK ring-fenced bank	<b>223</b>	89
– impairment of GPB – Europe goodwill	<b>3,240</b>	—
– regulatory provisions in GPB	<b>344</b>	172
– restructuring and other related costs	<b>—</b>	117
– settlements and provisions in connection with legal matters	<b>681</b>	1,649
– UK customer redress programmes	<b>559</b>	541
– acquisitions, disposals and dilutions	<b>1,059</b>	2,471
Currency translation	<b>—</b>	2,091
<b>Year ended 31 Dec</b>	<b>9,252</b>	8,038

Excluding the significant items and currency translation tabulated above, operating expenses of \$30.6bn were \$1.2bn lower than in 2015. This primarily reflected cost savings of \$2.2bn achieved in 2016 and a reduction in the UK bank levy of \$0.5bn. This was partly offset by the impact of inflation and continued investment in regulatory programmes and compliance.

Run-the-bank costs of \$26.9bn were \$0.3bn lower than in 2015 and change-the-bank costs of \$2.7bn were \$0.4bn lower than in 2015.

Our total investment in regulatory programmes and compliance, comprising both run-the-bank and change-the-bank elements, was \$3.0bn, up \$0.4bn or 14% from 2015. This reflected the ongoing implementation of our Global Standards programme to enhance our financial crime risk controls and capabilities, and to meet our external commitments.

We have maintained our transformational efforts and continue to realise the benefit of our cost-saving programme.

- Within RBWM, savings of \$0.4bn reflected the impact of our branch optimisation programme enabled by our digital initiatives.
- Within Operations and Technology, savings of \$1.2bn reflected migrations to lower cost locations, the simplification of our IT structure and the implementation of target operating models.
- Within our back office functions, savings of \$0.4bn were realised as a result of the re-engineering and simplification of processes and the implementation of global operating models.

Taking the 2016 savings into account, our run rate savings are now \$3.7bn since the start of our initiatives.

The number of employees expressed in FTEs at 31 December 2016 was 235,175, a decrease of 20,028 since 31 December 2015. This included a 19,145 reduction following our disposal of operations in Brazil. Excluding Brazil, the decrease in FTE was 883 as a reduction of 17,855 FTEs realised across global businesses and global functions was partly offset by investment in our Global Standards Programme of 5,694 FTEs, costs to achieve FTEs of 8,073 and investment for growth.

### Share of profit in associates and joint ventures

	2016 \$m	2015 \$m	2014 \$m
<b>Share of profit in associates</b>	<b>2,326</b>	2,518	2,493
– Bank of Communications Co., Limited	1,892	2,011	1,974
– The Saudi British Bank	415	462	455
– other	19	45	64
<b>Share of profit in joint ventures</b>	<b>28</b>	38	39
<b>Year ended 31 Dec</b>	<b>2,354</b>	2,556	2,532

Our share of profit in associates and joint ventures was \$2.4bn, a decrease of \$0.2bn or 8%, which included the adverse effects of currency translation of \$0.1bn, notably affecting our share of profit in BoCom.

Excluding the impact of currency translation, our share of profit in associates and joint ventures fell by \$0.1bn or 4%, relating to higher impairment charges in the Saudi British Bank and lower revenue in HSBC Saudi Arabia, reflecting lower asset management and investment banking revenue. This was partly offset by revenue growth in Saudi British Bank and well-managed costs in both associates.

Our share of profit in BoCom for the year was \$1.9bn. At 31 December 2016, we performed an impairment review

of our investment in BoCom and concluded that it was not impaired, based on our value in use calculation (see Note 20 on the Financial Statements for further details).

In future periods, the value in use may increase or decrease depending on the effect of changes to model inputs. It is expected that the carrying amount will increase in 2017 due to retained profits earned by BoCom. At the point where the carrying amount exceeds the value in use, HSBC would continue to recognise its share of BoCom's profit or loss, but the carrying amount would be reduced to equal the value in use, with a corresponding reduction in income, unless the market value has increased to a level above the carrying amount.

### Tax expense

	2016 \$m	2015 \$m	2014 \$m
Profit before tax	7,112	18,867	18,680
Tax expense	(3,666)	(3,771)	(3,975)
<b>Profit after tax for the year ended 31 Dec</b>	<b>3,446</b>	15,096	14,705
Effective tax rate	51.55%	19.99%	21.28%

The effective tax rate for 2016 of 51.6% was higher than the 20.0% in 2015, reflecting events that occurred in 2016 that reduced the reported profit before tax but not taxable profits. These included the non-deductible goodwill impairment and the non-deductible loss on our disposal of operations in Brazil. The

2016 tax charge includes tax losses not recognised, prior year adjustments and the impact of the 8% bank corporation tax surcharge applicable in the UK from 1 January 2016. Further detail is provided in Note 7 of the Financial Statements.

## Consolidated balance sheet

### Five-year summary consolidated balance sheet

	<i>Footnote</i>	<b>2016 \$m</b>	2015 \$m	2014 \$m	2013 \$m	2012 \$m
<b>Assets</b>						
Cash and balances at central banks		<b>128,009</b>	98,934	129,957	166,599	141,532
Trading assets		<b>235,125</b>	224,837	304,193	303,192	408,811
Financial assets designated at fair value		<b>24,756</b>	23,852	29,037	38,430	33,582
Derivatives		<b>290,872</b>	288,476	345,008	282,265	357,450
Loans and advances to banks		<b>88,126</b>	90,401	112,149	120,046	117,085
Loans and advances to customers	15	<b>861,504</b>	924,454	974,660	992,089	962,972
Reverse repurchase agreements – non-trading		<b>160,974</b>	146,255	161,713	179,690	70,112
Financial investments		<b>436,797</b>	428,955	415,467	425,925	421,101
Assets held for sale		<b>4,389</b>	43,900	7,647	4,050	19,269
Other assets		<b>144,434</b>	139,592	154,308	159,032	160,624
<b>Total assets at 31 Dec</b>		<b>2,374,986</b>	2,409,656	2,634,139	2,671,318	2,692,538
<b>Liabilities and equity</b>						
<b>Liabilities</b>						
Deposits by banks		<b>59,939</b>	54,371	77,426	86,507	95,480
Customer accounts		<b>1,272,386</b>	1,289,586	1,350,642	1,361,297	1,311,396
Repurchase agreements – non-trading		<b>88,958</b>	80,400	107,432	164,220	40,567
Trading liabilities		<b>153,691</b>	141,614	190,572	207,025	304,563
Financial liabilities designated at fair value		<b>86,832</b>	66,408	76,153	89,084	87,720
Derivatives		<b>279,819</b>	281,071	340,669	274,284	358,886
Debt securities in issue		<b>65,915</b>	88,949	95,947	104,080	119,461
Liabilities of disposal groups held for sale		<b>2,790</b>	36,840	6,934	2,804	5,018
Liabilities under insurance contracts		<b>75,273</b>	69,938	73,861	74,181	68,195
Other liabilities		<b>106,805</b>	102,961	114,525	117,377	118,123
<b>Total liabilities at 31 Dec</b>		<b>2,192,408</b>	2,212,138	2,434,161	2,480,859	2,509,409
<b>Equity</b>						
<b>Total shareholders' equity</b>		<b>175,386</b>	188,460	190,447	181,871	175,242
Non-controlling interests		<b>7,192</b>	9,058	9,531	8,588	7,887
<b>Total equity at 31 Dec</b>		<b>182,578</b>	197,518	199,978	190,459	183,129
<b>Total liabilities and equity at 31 Dec</b>		<b>2,374,986</b>	2,409,656	2,634,139	2,671,318	2,692,538

For footnote, see page 63.

### Five-year selected financial information

	<i>Footnotes</i>	<b>2016 \$m</b>	2015 \$m	2014 \$m	2013 \$m	2012 \$m
<b>Called up share capital</b>						
Capital resources	16, 17	<b>10,096</b>	9,842	9,609	9,415	9,238
Undated subordinated loan capital		<b>172,358</b>	189,833	190,730	194,009	180,806
Preferred securities and dated subordinated loan capital	18	<b>1,967</b>	2,368	2,773	2,777	2,778
Risk-weighted assets	16	<b>42,600</b>	42,844	47,208	48,114	48,260
<b>Financial statistics</b>		<b>857,181</b>	1,102,995	1,219,765	1,092,653	1,123,943
Loans and advances to customers as a percentage of customer accounts		<b>67.7</b>	71.7	72.2	72.9	73.4
Average total shareholders' equity to average total assets		<b>7.37</b>	7.31	7.01	6.55	6.16
Net asset value per ordinary share at year-end (\$)	19	<b>7.91</b>	8.73	9.28	9.27	9.09
Number of \$0.50 ordinary shares in issue (millions)		<b>20,192</b>	19,685	19,218	18,830	18,476
Closing foreign exchange translation rates to \$:						
\$1: £		<b>0.811</b>	0.675	0.642	0.605	0.619
\$1: €		<b>0.949</b>	0.919	0.823	0.726	0.758

For footnotes, see page 63.

A more detailed consolidated balance sheet is contained in the Financial Statements on page 186.

**Combined view of customer lending and customer deposits**

Footnote	2016	2015
	\$m	\$m
<b>Combined customer lending</b>		
Loans and advances to customers	<b>861,504</b>	924,454
Loans and advances to customers reported in 'Assets held for sale'	<b>3,623</b>	19,021
– Brazil	20	—
– other		17,001
	<b>3,623</b>	2,020
<b>At 31 Dec</b>	<b>865,127</b>	943,475
<b>Combined customer deposits</b>		
Customer accounts	<b>1,272,386</b>	1,289,586
Customer accounts reported in 'Liabilities of disposal groups held for sale'	<b>2,713</b>	16,682
– Brazil	20	—
– other		15,094
	<b>2,713</b>	1,588
<b>At 31 Dec</b>	<b>1,275,099</b>	1,306,268

For footnote, see page 63.

### Movement in 2016

Total reported assets of \$2.4tn were 1% lower than at 31 December 2015 on a reported basis, and 5% higher on a constant currency basis.

We have maintained the strength of our balance sheet, as targeted asset growth was partly offset by reductions in our legacy portfolios and the completion of our sale of operations in Brazil to Banco Bradesco S.A. We also issued more than \$30bn of senior debt during the year from HSBC Holdings to build up the Group's total loss-absorbing capacity in line with anticipated regulatory requirements.

Our ratio of customer advances to customer accounts was 68%. Loans and advances to customers fell on a reported basis by \$63bn and customer accounts fell on a reported basis by \$17bn. These changes included:

- adverse currency translation movements of \$62bn on loans and advances to customers and \$81bn on customer accounts;
- a \$9bn reduction in corporate overdraft and current account balances relating to a small number of clients in our Global Liquidity and Cash Management business in the UK that settled their overdraft and deposit balances on a net basis; and
- an \$11bn transfer to 'Assets held for sale' of US first lien mortgage balances in Corporate Centre.

Excluding these movements, customer lending increased by \$19bn, as a result of strong fourth-quarter growth in Asia and increases in Europe throughout the year.

### Assets

Cash and balances at central banks increased by \$29bn or 29%, primarily from higher euro denominated balances in continental Europe, and in the US.

Trading assets increased by \$10bn, mainly in Hong Kong and the US. This included higher balances in settlement accounts and an increase in debt and equity securities.

Reverse repurchase agreements – non-trading increased by \$15bn, primarily in the US, as we managed our surplus liquidity to maximise returns.

Assets held for sale reduced by \$40bn, of which \$42bn related to our disposal of operations in Brazil.

Loans and advances to customers decreased by \$63bn on a reported basis, primarily in Europe (down \$48bn) and North America (down \$17bn), partly offset by Asia (up \$9bn). This included:

- adverse currency translation movements of \$62bn;

- a \$9bn reduction in corporate overdraft balances in Europe, with a corresponding fall in corporate customer accounts; and
- an \$11bn transfer to 'Assets held for sale' of US first lien mortgage balances in Corporate Centre, reflecting our strategic focus on reducing our legacy portfolios. (We sold most of these loans during 2016).

Excluding these factors, customer lending balances increased by \$19bn or 2%. We grew balances in Asia by \$13bn, notably in Hong Kong in both GB&M (\$8bn) and CMB (\$4bn) in term lending, although trade lending remained broadly unchanged. We also grew RBWM balances (\$4bn), particularly in mortgages in Hong Kong. We recorded particularly strong growth in the fourth quarter (\$20bn) in the region. In addition, we increased balances in Europe by \$15bn as a result of higher term lending in CMB and mortgages in RBWM, both mainly in the UK. By contrast, US GB&M balances fell, reflecting our active management of overall client returns.

### Liabilities

Customer accounts at 31 December 2016 were \$17bn lower than at 31 December 2015 and included:

- adverse currency translation movements of \$81bn; and
- a \$9bn reduction in corporate current account balances, in line with a fall in corporate overdraft positions.

Excluding these factors, customer accounts grew by \$73bn, primarily in RBWM and in GLCM in Hong Kong and the UK, with the latter driven by targeted customer mandate acquisition.

Trading liabilities increased by \$12bn, mainly in the US, reflecting an increase in settlement accounts and net short positions from increased trading activity at the end of 2016, compared with the same period in 2015.

Financial liabilities designated at fair value increased by \$20bn, reflecting new issuances of senior debt by HSBC Holdings.

Debt securities in issue fell by \$23bn, mainly in HSBC Bank plc, following reductions in commercial paper issuances. These have been replaced by intra-group funding from HSBC Holdings from total loss-absorbing capacity resources. In the US, balances also fell, reflecting a lower funding requirement as we continued to run off legacy portfolios.

Liabilities of disposal groups held for sale decreased by \$34bn, reflecting the completion of our sale of operations in Brazil.

### Equity

Total shareholders' equity fell by \$13.1bn or 7%. The effects of profits generated in the year were more than offset by dividends paid and an increase in accumulated foreign exchange losses, reflecting the significant appreciation of the US dollar against the British pound and the euro. The net increase in treasury shares, principally reflecting our share buy-back initiative, also reduced shareholders' equity by \$2.5bn.

### Risk-weighted assets

Risk-weighted assets ('RWAs') were \$857.2bn at 31 December 2016, a decrease of \$245.8bn compared with 31 December 2015. After foreign currency translation differences, RWAs reduced by \$207.7bn in 2016. This reflected targeted RWA-reduction initiatives of \$143.2bn and the change of regulatory treatment of our investment in BoCom reducing RWAs by \$120.9bn. This was partly offset by book size increases of \$38.7bn.

The RWA initiatives included:

- exposure reductions, process improvements and refined calculations, which reduced RWAs by \$69.8bn, 55% of which were in GB&M;
- the disposal of our activities in Brazil, which reduced RWAs by \$41.8bn; and

- an accelerated sell-down of our consumer mortgage portfolio in the US and our Legacy Credit book, together contributing \$31.6bn to the reduction

The book size increase of \$38.7bn primarily came from higher term lending to corporate customers in CMB and higher general lending to customers in GB&M, both mainly in Europe and Asia.

#### Customer accounts by country

	2016 \$m	2015 \$m
<b>Europe</b>		
– UK	<b>446,615</b>	491,520
– France	<b>361,278</b>	404,084
– Germany	<b>35,996</b>	35,635
– Switzerland	<b>13,925</b>	13,873
– other	<b>9,474</b>	10,448
	<b>25,942</b>	27,480
<b>Asia</b>		
– Hong Kong	<b>631,723</b>	598,620
– Mainland China	<b>461,626</b>	421,538
– Singapore	<b>46,576</b>	46,177
– Australia	<b>39,062</b>	41,307
– Malaysia	<b>18,030</b>	17,703
– Taiwan	<b>12,904</b>	14,114
– India	<b>11,731</b>	11,812
– Indonesia	<b>11,289</b>	11,795
– other	<b>5,092</b>	5,366
	<b>25,413</b>	28,808
<b>Middle East and North Africa (excluding Saudi Arabia)</b>		
– United Arab Emirates	<b>34,766</b>	42,824
– Turkey	<b>16,532</b>	18,281
– Egypt	<b>4,122</b>	6,356
– other	<b>3,790</b>	6,602
	<b>10,322</b>	11,585
<b>North America</b>		
– US	<b>138,790</b>	135,152
– Canada	<b>88,751</b>	86,322
– other	<b>42,096</b>	39,727
	<b>7,943</b>	9,103
<b>Latin America</b>		
– Mexico	<b>20,492</b>	21,470
– other	<b>14,423</b>	15,798
	<b>6,069</b>	5,672
<b>At 31 Dec</b>	<b>1,272,386</b>	1,289,586

## Global businesses and geographical regions

	Page
Change in reportable segments	<b>44</b>
Analysis of adjusted results by global business	<b>45</b>
Reconciliation of reported and adjusted items	<b>47</b>
Reconciliation of reported and adjusted items - global businesses	<b>48</b>
Retail Banking and Wealth Management	<b>51</b>
Commercial Banking	<b>52</b>
Global Banking and Markets	<b>52</b>
Global Private Banking	<b>53</b>
Corporate Centre	<b>53</b>
Analysis of reported results by geographical regions	<b>54</b>
Reconciliation of reported and adjusted items - geographical regions	<b>56</b>
Analysis of reported results by country	<b>59</b>

### Change in reportable segments

(Audited)

The Group Chief Executive as supported by the GMB is considered to be the CODM for the purposes of identifying the Group's reportable segments.

They review operating activity on a number of bases, including by global business and geographical region. While in 2015 we considered the reportable segments to be the geographical regions, over time the focus of internal management reporting provided to the GMB and CODM has moved towards global business. The shift in internal reporting was further augmented in 2016 to include financial information and metrics on the consumption of, and returns on, capital by global business to support the GMB assessment of business performance and the allocation of capital resources. As a result global business is now the most prominent view used by management to allocate resources and assess performance, and is considered to be the Group's reportable segment.

In addition, we made the following realignments within our internal reporting to the GMB and CODM:

- Creation of a Corporate Centre: Certain functions were combined to create a Corporate Centre. These include Balance Sheet Management, legacy businesses and interests in associates and joint ventures. The Corporate Centre also includes the results of our financing operations, central support costs with associated recoveries and the UK bank levy, previously reported within Other.
- Reallocation of Head Office costs: We have reviewed central costs previously reported in Other and reallocated them to

the global businesses where appropriate. Residual costs are reported within the Corporate Centre.

- Customer realignment: We conducted a number of internal reviews aligning customer requirements to those global businesses best suited to service their respective needs, resulting in the transfer of a portfolio of customers from CMB to GB&M and the transfer of certain policyholders in Asia from CMB to RBWM during the year.

Comparative data have been represented accordingly.

In addition, geographical comparative data for Europe and Middle East and North Africa have been re-presented to reflect the management oversight provided by our Middle East and North Africa region following the management services agreement entered between HSBC Bank plc and HSBC Bank Middle East Limited in 2016 in respect of HSBC Bank A.S. (Turkey).

### Basis of preparation

Following the changes in internal reporting to the CODM, analysis by global business is considered more prominent than the geographical region view in the way the CODM assesses performance and allocates resources. The global businesses are therefore considered our reportable segments under IFRS 8.

Global business results are assessed by the CODM on the basis of adjusted performance that removes the effects of significant items and currency translation from reported results. We therefore present these results on an adjusted basis as required by IFRSs. The 2015 and 2014 adjusted performance comparative information is presented on a constant currency basis as described on page 45.

As required by IFRS 8, reconciliations of the total adjusted global business results of the Group reported results are presented on page 46. Supplementary reconciliations from reported to adjusted results by global business are presented on pages 47 to 51 for information purposes.

Our operations are closely integrated and, accordingly, the presentation of data includes internal allocations of certain items of income and expense. These allocations include the costs of certain support services and global functions to the extent that they can be meaningfully attributed to operational business lines and geographical regions. While such allocations have been made on a systematic and consistent basis, they necessarily involve a degree of subjectivity. Costs which are not allocated to global businesses are included in the Corporate Centre.

Where relevant, income and expense amounts presented include the results of inter-segment funding along with inter-company and inter-business line transactions. All such transactions are undertaken on arm's length terms. The intra-Group elimination items for the global businesses are presented in the Corporate Centre.

The expense of the UK bank levy is included in the Europe geographical region as HSBC regards the levy as a cost of being headquartered in the UK. For the purposes of the presentation by global business, the cost of the levy is included in the Corporate Centre.

The results of geographical regions are presented on a reported basis.

*A description of the global businesses is provided in the Strategic Report, pages 3, 18 and 19.*

## Analysis of adjusted results by global business

(Audited)

### HSBC adjusted profit before tax and balance sheet data

	Footnotes	2016					
		Retail Banking and Wealth Management	Commercial Banking	Global Banking and Markets	Global Private Banking	Corporate Centre	Total
		\$m	\$m	\$m	\$m	\$m	\$m
<b>Profit before tax</b>							
Net interest income		13,198	8,689	4,923	809	1,243	28,862
Net fee income/(expense)		4,839	3,627	3,392	749	(63)	12,544
Net trading income	21	435	447	6,327	183	2,542	9,934
Other income/(expenses)	34	453	124	277	16	(2,057)	(1,187)
<b>Net operating income before loan impairment charges and other credit risk provisions</b>	22	18,925	12,887	14,919	1,757	1,665	50,153
- external		16,319	12,953	17,798	1,498	1,585	50,153
- inter-segment		2,606	(66)	(2,879)	259	80	-
Loan impairment (charges)/recoveries and other credit risk provisions		(1,171)	(1,000)	(457)	1	(25)	(2,652)
<b>Net operating income</b>		17,754	11,887	14,462	1,758	1,640	47,501
Total operating expenses		(12,441)	(5,835)	(8,865)	(1,469)	(1,946)	(30,556)
<b>Operating profit/(loss)</b>		5,313	6,052	5,597	289	(306)	16,945
Share of profit in associates and joint ventures		20	-	-	-	2,335	2,355
<b>Adjusted profit before tax</b>		5,333	6,052	5,597	289	2,029	19,300
		%	%	%	%	%	%
Share of HSBC's adjusted profit before tax		27.6	31.4	29.0	1.5	10.5	100.0
Adjusted cost efficiency ratio		65.7	45.3	59.4	83.6	116.9	60.9
<b>Adjusted balance sheet data</b>		\$m	\$m	\$m	\$m	\$m	\$m
Loans and advances to customers (net)		306,056	281,930	225,855	35,456	12,207	861,504
Interests in associates and joint ventures		395	-	-	-	19,634	20,029
Total external assets		413,287	306,256	925,187	41,459	688,797	2,374,986
Customer accounts		590,502	341,729	256,095	69,850	14,210	1,272,386
Adjusted risk-weighted assets (unaudited)	37	111,899	274,893	299,629	15,213	150,327	851,961
		2015 <sup>35</sup>					
<b>Profit before tax</b>							
Net interest income		12,579	8,461	4,514	824	2,241	28,619
Net fee income/(expense)		5,545	3,739	3,500	933	(119)	13,598
Net trading income	21	443	462	6,175	204	655	7,939
Other income	34	675	91	377	4	116	1,263
Net operating income before loan impairment charges and other credit risk provisions	22	19,242	12,753	14,566	1,965	2,893	51,419
- external		16,763	12,863	17,055	1,690	3,048	51,419
- inter-segment		2,479	(110)	(2,489)	275	(155)	-
Loan impairment charges and other credit risk provisions		(1,060)	(1,434)	(74)	(11)	(25)	(2,604)
Net operating income		18,182	11,319	14,492	1,954	2,868	48,815
Total operating expenses		(12,514)	(5,896)	(8,958)	(1,567)	(2,795)	(31,730)
Operating profit		5,668	5,423	5,534	387	73	17,085
Share of profit in associates and joint ventures	22	-	-	-	-	2,421	2,443
Adjusted profit before tax		5,690	5,423	5,534	387	2,494	19,528
		%	%	%	%	%	%
Share of HSBC's adjusted profit before tax		29.1	27.8	28.3	2.0	12.8	100.0
Adjusted cost efficiency ratio		65.0	46.2	61.5	79.7	96.6	61.7
Adjusted balance sheet data		\$m	\$m	\$m	\$m	\$m	\$m
Loans and advances to customers (net)		296,607	269,758	231,215	41,161	23,451	862,192
Interests in associates and joint ventures		393	-	-	-	18,080	18,473
Total external assets		399,866	296,380	842,437	49,241	625,813	2,213,737
Customer accounts		548,835	327,285	240,971	78,318	13,337	1,208,746
Adjusted risk-weighted assets (unaudited)	37	113,268	270,915	308,189	17,121	305,691	1,015,184

**HSBC adjusted profit before tax and balance sheet data (continued)**

Footnotes	2014 <sup>35</sup>						\$m
	Retail Banking and Wealth Management	Commercial Banking	Global Banking and Markets	Global Private Banking	Corporate Centre	Total	
Profit before tax							
Net interest income	12,400	8,094	4,148	861	3,103	28,606	
Net fee income/(expense)	5,572	3,809	3,412	971	(115)	13,649	
Net trading income/(expense)	21	380	479	5,261	243	(18)	6,345
Other income	34	623	216	757	4	929	2,529
Net operating income before loan impairment charges and other credit risk provisions	22	18,975	12,598	13,578	2,079	3,899	51,129
– external		17,050	13,103	15,406	1,799	3,771	51,129
– inter-segment		1,925	(505)	(1,828)	280	128	–
Loan impairment (charges)/recoveries and other credit risk provisions		(901)	(894)	(408)	11	291	(1,901)
Net operating income	18,074	11,704	13,170	2,090	4,190	49,228	
Total operating expenses	(11,964)	(5,576)	(8,246)	(1,551)	(2,723)	(30,060)	
Operating profit	6,110	6,128	4,924	539	1,467	19,168	
Share of profit in associates and joint ventures	40	—	—	—	2,342	2,382	
Adjusted profit before tax	6,150	6,128	4,924	539	3,809	21,550	
	%	%	%	%	%	%	%
Share of HSBC's adjusted profit before tax	28.6	28.4	22.8	2.5	17.7	100.0	
Adjusted cost efficiency ratio	63.1	44.3	60.7	74.6	69.8	58.8	
Adjusted balance sheet data	\$m	\$m	\$m	\$m	\$m	\$m	
Loans and advances to customers (net)	287,496	259,053	228,323	40,928	28,844	844,644	
Interests in associates and joint ventures	383	—	—	—	16,801	17,184	
Total external assets	385,926	288,755	928,215	51,283	640,404	2,294,583	
Customer accounts	514,074	309,152	261,110	78,592	23,681	1,186,609	
Adjusted risk-weighted assets (unaudited)	37	109,526	262,634	349,661	17,660	343,882	1,083,363

For footnotes, see page 63.

## Reconciliation of reported and adjusted items

(Audited)

### Adjusted results reconciliation

Footnote	2016			2015			2014		
	Adjusted	Significant items	Reported	Adjusted	Currency translation	Significant items	Reported	Adjusted	Currency translation
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Revenue 22	50,153	(2,187)	47,966	51,419	3,001	5,380	59,800	51,129	7,612
LICs	(2,652)	(748)	(3,400)	(2,604)	(184)	(933)	(3,721)	(1,901)	(918)
Operating expenses	(30,556)	(9,252)	(39,808)	(31,730)	(2,091)	(5,947)	(39,768)	(30,060)	(5,433)
Share of profit in associates and joint ventures	2,355	(1)	2,354	2,443	114	(1)	2,556	2,382	150
<b>Profit/(loss) before tax</b>	<b>19,300</b>	<b>(12,188)</b>	<b>7,112</b>	<b>19,528</b>	<b>840</b>	<b>(1,501)</b>	<b>18,867</b>	<b>21,550</b>	<b>1,411</b>

### Adjusted balance sheet reconciliation

	2016			2015			2014		
	Adjusted	Brazil operations	Reported	Adjusted	Currency translation	Brazil operations	Reported	Adjusted	Currency translation
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Loans and advances to customers (net)	861,504	—	861,504	862,192	62,262	—	924,454	844,644	110,001
Interests in associates and joint ventures	20,029	—	20,029	18,473	666	—	19,139	17,184	990
Total external assets	2,374,986	—	2,374,986	2,213,737	145,747	50,172	2,409,656	2,294,583	289,936
Customer accounts	1,272,386	—	1,272,386	1,208,746	80,840	—	1,289,586	1,186,609	145,084

### Adjusted profit reconciliation

Footnotes	2016			2015			2014		
				\$m			\$m		\$m
<b>For the year ended 31 Dec</b>									
<b>Adjusted profit before tax</b>				<b>19,300</b>			19,528		21,550
DVA on derivative contracts				26			230		(332)
Fair value movements on non-qualifying hedges				23	(687)		(327)		(541)
Gain on disposal of our membership interest in Visa – Europe				584			—		—
Gain on disposal of our membership interest in Visa – US				116			—		—
Gain on sale of shareholding in Bank of Shanghai				—			—		428
Gain on the partial sale of shareholding in Industrial Bank				—			1,372		—
(Loss)/gain and trading results from disposals and changes in ownership levels				(2,081)			(78)		(163)
Impairment of our investment in Industrial Bank				—			—		(271)
Own credit spread				24	(1,792)		1,002		417
Portfolio disposals				—	(163)		(214)		168
Releases/(provisions) arising from the ongoing review of compliance with the UK Consumer Credit Act				2			(10)		(632)
Charge in relation to the settlement agreement with the Federal Housing Finance Authority				—			—		(550)
Costs associated with portfolio disposals				(28)			—		—
Costs to achieve				—	(3,118)		(908)		—
Costs to establish UK ring-fenced bank				—	(223)		(89)		—
Impairment of GPB – Europe goodwill				—	(3,240)		—		—
Regulatory provisions in GPB				—	(344)		(172)		(65)
Restructuring and other related costs				—	—		(117)		(278)
Settlements and provisions in connection with legal matters				—	(681)		(1,649)		(1,187)
UK customer redress programmes				—	(559)		(541)		(1,275)
Currency translation				—	—		840		1,411
<b>Reported profit before tax</b>				<b>7,112</b>			<b>18,867</b>		<b>18,680</b>

For footnotes, see page 63.

### Reconciliation of reported and adjusted items – global businesses

Supplementary unaudited analysis of significant items by global business is presented below.

2016 compared with 2015 and 2014

	2016					
	Retail Banking and Wealth Management	Commercial Banking	Global Banking and Markets	Global Private Banking	Corporate Centre	Total
Footnotes	\$m	\$m	\$m	\$m	\$m	\$m
<b>Revenue</b>	22					
Reported	20,338	13,405	15,213	1,745	(2,735)	47,966
Significant items	(1,413)	(518)	(294)	12	4,400	2,187
– DVA on derivative contracts	–	–	(26)	–	–	(26)
– fair value movements on non-qualifying hedges	–	–	–	–	687	687
– gain on disposal of our membership interest in Visa – Europe	(354)	(230)	–	–	–	(584)
– gain on disposal of our membership interest in Visa – US	(72)	–	–	–	(44)	(116)
– own credit spread	–	–	–	–	1,792	1,792
– portfolio disposals	–	–	–	26	137	163
– releases arising from the ongoing review of compliance with the UK Consumer Credit Act	–	–	–	(2)	–	(2)
– loss and trading results from disposed-of operations in Brazil	(987)	(288)	(268)	(12)	1,828	273
Adjusted	18,925	12,887	14,919	1,757	1,665	50,153
<b>Loan impairment charge and other credit risk provisions ('LICs')</b>						
Reported	(1,633)	(1,272)	(471)	1	(25)	(3,400)
Significant items	462	272	14	–	–	748
– trading results from disposed-of operations in Brazil	462	272	14	–	–	748
Adjusted	(1,171)	(1,000)	(457)	1	(25)	(2,652)
<b>Operating expenses</b>						
Reported	(14,138)	(6,087)	(9,302)	(5,074)	(5,207)	(39,808)
Significant items	1,697	252	437	3,605	3,261	9,252
– costs associated with portfolio disposals	–	–	–	10	18	28
– costs to achieve	393	62	233	6	2,424	3,118
– costs to establish UK ring-fenced bank	2	1	–	–	220	223
– impairment of GPB – Europe goodwill	–	–	–	3,240	–	3,240
– regulatory provisions in GPB	–	–	–	341	3	344
– settlements and provisions in connection with legal matters	–	–	94	–	587	681
– UK customer redress programmes	497	34	28	–	–	559
– trading results from disposed-of operations in Brazil	805	155	82	8	9	1,059
Adjusted	(12,441)	(5,835)	(8,865)	(1,469)	(1,946)	(30,556)
<b>Share of profit in associates and joint ventures</b>						
Reported	20	–	–	–	2,334	2,354
Significant items	–	–	–	–	1	1
– trading results from disposed-of operations in Brazil	–	–	–	–	1	1
Adjusted	20	–	–	–	2,335	2,355
<b>Profit/(loss) before tax</b>						
Reported	4,587	6,046	5,440	(3,328)	(5,633)	7,112
Significant items	746	6	157	3,617	7,662	12,188
– revenue	(1,413)	(518)	(294)	12	4,400	2,187
– LICs	462	272	14	–	–	748
– operating expenses	1,697	252	437	3,605	3,261	9,252
– share of profit in associates and joint ventures	–	–	–	–	1	1
Adjusted	5,333	6,052	5,597	289	2,029	19,300

### Reconciliation of reported and adjusted items (continued)

	<i>Footnotes</i>	2015 <sup>35</sup>					
		Retail Banking and Wealth Management	Commercial Banking	Global Banking and Markets	Global Private Banking	Corporate Centre	Total
		\$m	\$m	\$m	\$m	\$m	\$m
Revenue	22						
Reported		22,624	14,198	15,972	2,076	4,930	59,800
Currency translation		(1,288)	(790)	(724)	(54)	(145)	(3,001)
Significant items		(2,094)	(655)	(682)	(57)	(1,892)	(5,380)
– DVA on derivative contracts		—	—	(230)	—	—	(230)
– fair value movements on non-qualifying hedges	23	—	—	—	—	327	327
– gain on the partial sale of shareholding in Industrial		—	—	—	—	(1,372)	(1,372)
– own credit spread	24	—	—	—	—	(1,002)	(1,002)
– portfolio disposals		—	—	—	—	214	214
– provisions/(releases) arising from the ongoing review of compliance with the UK Consumer Credit Act		22	18	—	(30)	—	10
– trading results from disposed-of operations in Brazil		(2,116)	(673)	(452)	(27)	(59)	(3,327)
Adjusted		19,242	12,753	14,566	1,965	2,893	51,419
LICs							
Reported		(1,878)	(1,761)	(47)	(13)	(22)	(3,721)
Currency translation		105	76	4	2	(3)	184
Significant items		713	251	(31)	—	—	933
– trading results from disposed-of operations in Brazil		713	251	(31)	—	—	933
Adjusted		(1,060)	(1,434)	(74)	(11)	(25)	(2,604)
Operating expenses							
Reported		(15,970)	(6,852)	(10,767)	(1,840)	(4,339)	(39,768)
Currency translation		1,015	352	573	46	105	2,091
Significant items		2,441	604	1,236	227	1,439	5,947
– costs to achieve		153	163	69	16	507	908
– costs to establish UK ring-fenced bank		—	—	—	—	89	89
– regulatory provisions in GBP		—	—	—	171	1	172
– restructuring and other related costs		9	5	22	18	63	117
– settlements and provisions in connection with legal matters		—	—	949	—	700	1,649
– UK customer redress programmes		541	18	(19)	—	1	541
– trading results from disposed-of operations in Brazil		1,738	418	215	22	78	2,471
Adjusted		(12,514)	(5,896)	(8,958)	(1,567)	(2,795)	(31,730)
Share of profit in associates and joint ventures							
Reported		23	—	—	—	2,533	2,556
Currency translation		(1)	—	—	—	(113)	(114)
Significant items		—	—	—	—	1	1
– trading results from disposed-of operations in Brazil		—	—	—	—	1	1
Adjusted		22	—	—	—	2,421	2,443
Profit/(loss) before tax							
Reported		4,799	5,585	5,158	223	3,102	18,867
Currency translation		(169)	(362)	(147)	(6)	(156)	(840)
Significant items		1,060	200	523	170	(452)	1,501
– revenue		(2,094)	(655)	(682)	(57)	(1,892)	(5,380)
– LICs		713	251	(31)	—	—	933
– operating expenses		2,441	604	1,236	227	1,439	5,947
– share of profit in associates and joint ventures		—	—	—	—	1	1
Adjusted		5,690	5,423	5,534	387	2,494	19,528

Reconciliation of reported and adjusted items (continued)

		2014 <sup>35</sup>					
		Retail Banking and Wealth Management	Commercial Banking	Global Banking and Markets	Global Private Banking	Corporate Centre	Total
	Footnotes	\$m	\$m	\$m	\$m	\$m	\$m
Revenue	22						
Reported		24,056	15,197	15,392	2,248	4,355	61,248
Currency translation		(3,490)	(1,967)	(1,725)	(185)	(245)	(7,612)
Significant items		(1,591)	(632)	(89)	16	(211)	(2,507)
– DVA on derivative contracts		—	—	332	—	—	332
– fair value movements on non-qualifying hedges	23	—	—	—	—	541	541
– gain on sale of shareholding in Bank of Shanghai		—	—	—	—	(428)	(428)
– impairment of our investment in Industrial Bank		—	—	—	—	271	271
– own credit spread	24	—	—	—	—	(417)	(417)
– portfolio disposals		—	—	—	—	(168)	(168)
– provisions arising from the ongoing review of compliance with the UK Consumer Credit Act		568	24	—	40	—	632
– (gain)/loss and trading results from disposals and changes in ownership levels		(2,159)	(656)	(421)	(24)	(10)	(3,270)
Adjusted		18,975	12,598	13,578	2,079	3,899	51,129
LICs							
Reported		(1,905)	(1,551)	(721)	8	318	(3,851)
Currency translation		488	318	139	—	(27)	918
Significant items		516	339	174	3	—	1,032
– trading results from disposals and changes in ownership levels		516	339	174	3	—	1,032
Adjusted		(901)	(894)	(408)	11	291	(1,901)
Operating expenses							
Reported		(17,670)	(7,115)	(11,257)	(1,780)	(3,427)	(41,249)
Currency translation		2,869	976	1,455	136	(3)	5,433
Significant items		2,837	563	1,556	93	707	5,756
– charge in relation to the settlement agreement with the Federal Housing Finance Authority		—	—	—	—	550	550
– regulatory provisions in GPB		—	—	—	65	—	65
– restructuring and other related costs		86	37	27	6	122	278
– settlements and provisions in connection with legal matters		—	—	1,187	—	—	1,187
– UK customer redress programmes		992	138	145	—	—	1,275
– trading results from disposals and changes in ownership levels		1,759	388	197	22	35	2,401
Adjusted		(11,964)	(5,576)	(8,246)	(1,551)	(2,723)	(30,060)
Share of profit in associates and joint ventures							
Reported		41	—	—	—	2,491	2,532
Currency translation		(1)	—	—	—	(149)	(150)
Significant items		—	—	—	—	—	—
– trading results from disposals and changes in ownership levels		—	—	—	—	—	—
Adjusted		40	—	—	—	2,342	2,382
Profit/(loss) before tax							
Reported		4,522	6,531	3,414	476	3,737	18,680
Currency translation		(134)	(673)	(131)	(49)	(424)	(1,411)
Significant items		1,762	270	1,641	112	496	4,281
– revenue		(1,591)	(632)	(89)	16	(211)	(2,507)
– LICs		516	339	174	3	—	1,032
– operating expenses		2,837	563	1,556	93	707	5,756
– share of profit in associates and joint ventures		—	—	—	—	—	—
Adjusted		6,150	6,128	4,924	539	3,809	21,550

For footnotes, see page 63.

### Reconciliation of reported and adjusted risk-weighted assets

	2016					
	Retail Banking and Wealth Management \$bn	Commercial Banking \$bn	Global Banking and Markets \$bn	Global Private Banking \$bn	Corporate Centre \$bn	Total \$bn
<b>Risk-weighted assets</b>						
Reported	<b>115.1</b>	<b>275.9</b>	<b>300.4</b>	<b>15.3</b>	<b>150.5</b>	<b>857.2</b>
Brazil operations	(3.2)	(1.0)	(0.8)	—	(0.2)	(5.2)
Adjusted	<b>111.9</b>	<b>274.9</b>	<b>299.6</b>	<b>15.3</b>	<b>150.3</b>	<b>852.0</b>
Risk-weighted assets						
Reported	130.7	302.2	330.3	18.0	321.8	1,103.0
Currency translation	(3.8)	(14.9)	(9.0)	(0.7)	(13.0)	(41.4)
Brazil operations	(13.6)	(16.4)	(13.1)	(0.2)	(3.1)	(46.4)
Adjusted	113.3	270.9	308.2	17.1	305.7	1,015.2
Risk-weighted assets						
Reported	133.7	312.1	385.8	18.9	369.3	1,219.8
Currency translation	(12.0)	(32.6)	(23.2)	(1.1)	(24.2)	(93.1)
Brazil operations	(12.2)	(16.9)	(12.9)	(0.1)	(1.2)	(43.3)
Adjusted	109.5	262.6	349.7	17.7	343.9	1,083.4

For footnote, see page 63.

### Management view of adjusted revenue

The tables below provide a breakdown of revenue by major products for RBWM, CMB, GB&M and Corporate Centre. These reflect the basis on which revenue performance of the businesses is assessed and managed.

For GPB, the key measure of business performance is client assets, which is presented below.

Adjusted return on risk-weighted assets ('RoRWA') is used to measure performance of RBWM, CMB, GB&M and GPB and is presented below.

Further information on the global businesses can be found in the Strategic Report on pages 18 to 19.

A reconciliation of changes in the global businesses is available in the re-segmentation data pack which can be found online at [www.hsbc.com/investor-relations](http://www.hsbc.com/investor-relations).

### Retail Banking and Wealth Management

#### Management view of adjusted revenue

	Footnotes	2016 \$m	2015 \$m	2014 \$m
<b>Net operating income</b>	22			
<b>Retail Banking</b>		<b>12,979</b>	12,806	13,041
Current accounts, savings and deposits		<b>5,359</b>	4,941	4,881
Personal lending		<b>7,620</b>	7,865	8,160
– mortgages		<b>2,590</b>	2,694	2,758
– credit cards		<b>3,111</b>	3,312	3,438
– other personal lending	26	<b>1,919</b>	1,859	1,964
<b>Wealth Management</b>		<b>5,288</b>	5,799	5,331
– investment distribution	25	<b>2,926</b>	3,262	3,030
– life insurance manufacturing		<b>1,404</b>	1,553	1,384
– asset management		<b>958</b>	984	917
Other	27	<b>658</b>	637	603
<b>Year ended 31 Dec</b>		<b>18,925</b>	19,242	18,975
		%	%	%
RoRWA	38	<b>4.6</b>	4.9	5.4

For footnotes, see page 63.

**RBWM – summary**

	Footnote	<b>Consists of</b>			
		Total RBWM \$m	Banking operations \$m	Insurance manufacturing \$m	Asset management \$m
<b>Year ended 31 Dec 2016</b>					
Net operating income before loan impairment charges and other credit risk provisions	22	<b>18,925</b>	<b>16,437</b>	<b>1,531</b>	<b>957</b>
– net interest income		13,198	11,292	1,898	8
– net fee income/(expense)		4,839	4,474	(539)	904
– other income/(loss)		888	671	172	45
LICs		(1,171)	(1,171)	–	–
<b>Net operating income</b>		<b>17,754</b>	<b>15,266</b>	<b>1,531</b>	<b>957</b>
Total operating expenses		(12,441)	(11,415)	(380)	(646)
<b>Operating profit/(loss)</b>		<b>5,313</b>	<b>3,851</b>	<b>1,151</b>	<b>311</b>
Income from associates		20	–	20	–
<b>Profit/(loss) before tax</b>		<b>5,333</b>	<b>3,851</b>	<b>1,171</b>	<b>311</b>
<b>Year ended 31 Dec 2015</b>					
Net operating income before loan impairment charges and other credit risk provisions	22	19,242	16,548	1,709	985
– net interest income		12,579	10,807	1,763	9
– net fee income/(expense)		5,545	5,081	(493)	957
– other income		1,118	660	439	19
LICs		(1,060)	(1,060)	–	–
Net operating income		18,182	15,488	1,709	985
Total operating expenses		(12,514)	(11,484)	(364)	(666)
Operating profit/(loss)		5,668	4,004	1,345	319
Income from associates		22	–	22	–
<b>Profit/(loss) before tax</b>		<b>5,690</b>	<b>4,004</b>	<b>1,367</b>	<b>319</b>

For footnote, see page 63.

Insurance manufacturing for RBWM excluded other global businesses which contributed net operating income of \$167m (2015: \$171m) and profit before tax of \$117m (2015: \$108m) to overall insurance manufacturing. In 2016 insurance manufacturing net operating income for RBWM included \$1,404m within Wealth Management (2015: \$1,553m) and \$127m within other products (2015: \$156m).

In total insurance manufacturing generated \$2,634m of annualised new business premiums (2015: \$2,349m) of which \$2,519m (2015: \$2,230m) related to RBWM.

Distribution of insurance products by HSBC channels contributed \$1,048m of net fee income (2015: \$994m) of which RBWM channels earned \$922m (2015: \$896m). Of this total income, \$615m was in respect of HSBC manufactured products (2015: \$568m) and a corresponding fee expense is therefore recognised within the Insurance manufacturing.

## Commercial Banking

### Management view of adjusted revenue

	Footnotes	2016 \$m	2015 \$m	2014 \$m
<b>Net operating income</b>	22			
Global Trade and Receivables Finance		<b>1,879</b>	2,077	2,125
Credit and Lending		<b>5,102</b>	5,019	4,688
Global Liquidity and Cash Management		<b>4,345</b>	4,164	4,014
Markets products, Insurance and Investments and Other	30	<b>1,561</b>	1,493	1,771
<b>Year ended 31 Dec</b>		<b>12,887</b>	12,753	12,598
		%	%	%
RoRWA	38	<b>2.1</b>	1.9	2.4

## Global Banking and Markets

### Management view of adjusted revenue

	Footnotes	2016 \$m	2015 \$m	2014 \$m
<b>Net operating income</b>	22			
Global Markets		<b>6,775</b>	6,140	5,488
– Credit		<b>803</b>	631	669
– Rates		<b>2,149</b>	1,391	1,172
– Foreign Exchange		<b>2,813</b>	2,714	2,519
– Equities		<b>1,010</b>	1,404	1,128
Global Banking		<b>3,820</b>	3,801	3,521
Global Liquidity and Cash Management		<b>1,951</b>	1,798	1,699
Securities Services		<b>1,585</b>	1,620	1,508
Global Trade and Receivables Finance		<b>702</b>	691	693
Principal Investments		<b>218</b>	226	467
Credit and funding valuation adjustments	28	<b>(70)</b>	227	127
Other	29	<b>(62)</b>	63	75
<b>Year ended 31 Dec</b>		<b>14,919</b>	14,566	13,578
		%	%	%
RoRWA	38	<b>1.8</b>	1.6	1.5

The table above has been re-presented. In 2016, 'Credit and funding valuation adjustments' of \$(70)m is a separate line previously included within 'Markets' (2015: \$227m).

## Global Private Banking

### Management view of adjusted revenue

	2016 \$m	2015 \$m	2014 \$m
<b>Net operating income</b>			
Investment Revenue	<b>725</b>	899	954
Lending	<b>414</b>	416	425
Deposit	<b>343</b>	355	381
Other	<b>275</b>	295	319
<b>Year ended 31 Dec</b>	<b>1,757</b>	1,965	2,079

### Reported client assets<sup>31</sup>

	2016 \$bn	2015 \$bn	2014 \$bn
<i>Footnote</i>			
<b>At 1 Jan</b>	<b>349</b>	365	382
Net new money	(17)	1	(3)
- of which: areas targeted	2	14	14
Value change	1	1	8
Disposals	(24)	—	(11)
Exchange and other	(11)	(18)	(11)
<b>At 31 Dec</b>	<b>298</b>	349	365
	%	%	%
RoRWA	38	<b>1.7</b>	2.1
			2.9

### Reported client assets by geography

	2016 \$bn	2015 \$bn	2014 \$bn
<i>Footnote</i>			
Europe	<b>147</b>	167	177
Asia	<b>108</b>	112	112
North America	<b>40</b>	61	63
Latin America	<b>3</b>	8	11
Middle East	40	—	2
<b>At 31 Dec</b>	<b>298</b>	349	365

For footnotes, see page 63.

## Corporate Centre

### Management view of adjusted revenue

	2016 \$m	2015 \$m	2014 \$m
<i>Footnotes</i>			
<b>Net operating income</b>	22		
Central Treasury	42	<b>1,504</b>	1,905
Legacy portfolios		<b>715</b>	1,234
- US run-off portfolio		<b>692</b>	1,164
- Legacy credit		<b>23</b>	70
Other	43	(554)	(246)
<b>Year ended 31 Dec</b>	<b>1,665</b>	2,893	3,899

## Analysis of reported results by geographical regions

HSBC reported profit/(loss) before tax and balance sheet data

Footnotes	2016						
	Europe <sup>35</sup>	Asia	MENA <sup>35</sup>	North America	Latin America	Intra-HSBC items	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Profit/(loss) before tax</b>							
Net interest income	8,346	12,490	1,831	4,220	3,006	(80)	29,813
Net fee income/(expense)	4,247	5,200	709	1,898	723	—	12,777
Net trading income/(expense)	21	4,949	3,127	385	462	449	9,452
Other income/(expense)	34	(2,026)	2,503	44	485	(1,492)	(4,076)
<b>Net operating income before loan impairment charges and other credit risk provisions</b>	22	15,516	23,320	2,969	7,065	2,686	(3,590)
Loan impairment charges and other credit risk provisions		(446)	(677)	(316)	(732)	(1,229)	(3,400)
<b>Net operating income</b>		15,070	22,643	2,653	6,333	1,457	(3,590)
Total operating expenses		(21,845)	(10,785)	(1,584)	(6,147)	(3,037)	(39,808)
<b>Operating profit/(loss)</b>		(6,775)	11,858	1,069	186	(1,580)	—
Share of profit/(loss) in associates and joint ventures		1	1,921	434	(1)	(1)	—
<b>Profit/(loss) before tax</b>		(6,774)	13,779	1,503	185	(1,581)	—
	%	%	%	%	%	%	%
Share of HSBC's profit before tax		(95.2)	193.7	21.1	2.6	(22.2)	100.0
Cost efficiency ratio		140.8	46.2	53.4	87.0	113.1	83.0
<b>Balance sheet data</b>	20	\$m	\$m	\$m	\$m	\$m	\$m
Loans and advances to customers (net)		336,670	365,430	30,740	111,710	16,954	—
– reported in held for sale		1,057	—	474	2,092	—	—
Total external assets		1,068,446	965,730	60,472	409,021	43,137	(171,820)
Customer accounts		446,615	631,723	34,766	138,790	20,492	—
– reported in held for sale		2,012	—	701	—	—	2,713
Risk-weighted assets (unaudited)	33	298,384	333,987	59,065	150,714	34,341	—
							857,181
2015							
<b>Profit/(loss) before tax</b>							
Net interest income		9,686	12,184	1,849	4,532	4,318	(38)
Net fee income/(expense)		4,702	6,032	822	2,018	1,131	—
Net trading income/(expense)	21	3,968	3,090	418	545	664	38
Other income/(expense)	34	2,116	3,997	90	562	479	(3,403)
Net operating income before loan impairment charges and other credit risk provisions	22	20,472	25,303	3,179	7,657	6,592	(3,403)
Loan impairment charges and other credit risk provisions		(519)	(693)	(470)	(544)	(1,495)	—
Net operating income		19,953	24,610	2,709	7,113	5,097	(3,403)
Total operating expenses		(19,274)	(10,889)	(1,721)	(6,501)	(4,786)	3,403
Operating profit/(loss)		679	13,721	988	612	311	—
Share of profit/(loss) in associates and joint ventures		9	2,042	504	2	(1)	—
<b>Profit/(loss) before tax</b>		688	15,763	1,492	614	310	—
	%	%	%	%	%	%	%
Share of HSBC's profit before tax		3.6	83.5	7.9	3.3	1.7	100.0
Cost efficiency ratio		94.1	43.0	54.1	84.9	72.6	66.5
<b>Balance sheet data</b>	20	\$m	\$m	\$m	\$m	\$m	\$m
Loans and advances to customers (net)		385,037	356,375	36,898	128,851	17,293	—
– reported in held for sale		—	—	—	2,020	17,001	—
Total external assets		1,121,401	889,747	70,157	393,960	86,262	(151,871)
Customer accounts		491,520	598,620	42,824	135,152	21,470	—
– reported in held for sale		—	—	—	1,588	15,094	—
Risk-weighted assets (unaudited)	33	327,219	459,680	70,585	191,611	73,425	—
							1,102,995

Footnotes	2014						
	Europe	Asia	MENA	North America	Latin America	Intra-HSBC items	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Net interest income	10,115	12,273	2,014	5,015	5,310	(22)	34,705
Net fee income	5,738	5,910	954	1,940	1,415	—	15,957
Net trading income/(expense)	21	2,557	2,622	292	411	856	22
Other income/(expense)	34	2,394	2,872	79	786	691	(2,996)
Net operating income before loan impairment charges and other credit risk provisions	22	20,804	23,677	3,339	8,152	8,272	(2,996)
Loan impairment charges and other credit risk provisions		(518)	(647)	(240)	(322)	(2,124)	—
Net operating income		20,286	23,030	3,099	7,830	6,148	(2,996)
Total operating expenses		(19,633)	(10,427)	(1,824)	(6,429)	(5,932)	2,996
Operating profit/(loss)		653	12,603	1,275	1,401	216	—
Share of profit in associates and joint ventures		6	2,022	488	16	—	—
Profit/(loss) before tax		659	14,625	1,763	1,417	216	—
	%	%	%	%	%	%	%
Share of HSBC's profit before tax	3.6	78.3	9.4	7.6	1.1	—	100.0
Cost efficiency ratio	94.4	44.0	54.6	78.9	71.7	—	67.3
Balance sheet data	20	\$m	\$m	\$m	\$m	\$m	\$m
Loans and advances to customers (net)		401,642	362,955	37,154	129,787	43,122	—
– reported in held for sale		91	—	—	486	—	—
Total external assets		1,279,817	878,723	76,609	436,859	115,354	(153,223)
Customer accounts		538,104	577,491	47,575	138,884	48,588	—
– reported in held for sale		145	—	—	—	—	145
Risk-weighted assets (unaudited)	33	363,473	499,846	74,785	221,378	88,781	—
							1,219,765

For footnotes, see page 63.

**Reconciliation of reported and adjusted items – geographical regions**

2016 compared with 2015 and 2014

Footnotes	2016								
	Europe	Asia	MENA	North America	Latin America	Total	UK	Hong Kong	
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	
<b>Revenue</b>	22								
Reported	32	15,516	23,320	2,969	7,065	2,686	47,966	10,893	14,014
Significant items		1,740	(6)	(11)	155	309	2,187	1,795	(1)
– DVA on derivative contracts		(56)	(15)	–	9	36	(26)	(63)	(22)
– fair value movements on non-qualifying hedges	23	563	17	–	107	–	687	532	26
– gain on disposal of our membership interest in Visa – Europe		(573)	–	(11)	–	–	(584)	(441)	–
– gain on disposal of our membership interest in Visa – US		–	–	–	(116)	–	(116)	–	–
– own credit spread	24	1,782	(8)	–	18	–	1,792	1,769	(5)
– portfolio disposals		26	–	–	137	–	163	–	–
– releases arising from the ongoing review of compliance with the UK Consumer Credit Act		(2)	–	–	–	–	(2)	(2)	–
– loss and trading results from disposed-of operations in Brazil		–	–	–	–	273	273	–	–
Adjusted	32	17,256	23,314	2,958	7,220	2,995	50,153	12,688	14,013
<b>LICs</b>									
Reported		(446)	(677)	(316)	(732)	(1,229)	(3,400)	(245)	(321)
Significant items		–	–	–	–	748	748	–	–
– trading results from disposed-of operations in Brazil		–	–	–	–	748	748	–	–
Adjusted		(446)	(677)	(316)	(732)	(481)	(2,652)	(245)	(321)
<b>Operating expenses</b>									
Reported	32	(21,845)	(10,785)	(1,584)	(6,147)	(3,037)	(39,808)	(14,562)	(5,646)
Significant items		6,632	430	103	989	1,098	9,252	2,670	183
– costs associated with portfolio disposals		28	–	–	–	–	28	–	–
– costs to achieve		2,098	476	103	402	39	3,118	1,838	229
– costs to establish UK ring-fenced bank		223	–	–	–	–	223	223	–
– impairment of GPB – Europe goodwill		3,240	–	–	–	–	3,240	–	–
– regulatory provisions in GPB		390	(46)	–	–	–	344	–	(46)
– settlements and provisions in connection with legal matters		94	–	–	587	–	681	50	–
– UK customer redress programmes		559	–	–	–	–	559	559	–
– trading results from disposed-of operations in Brazil		–	–	–	–	1,059	1,059	–	–
Adjusted	32	(15,213)	(10,355)	(1,481)	(5,158)	(1,939)	(30,556)	(11,892)	(5,463)
<b>Share of profit in associates and joint ventures</b>									
Reported		1	1,921	434	(1)	(1)	2,354	1	22
Significant items		–	–	–	–	1	1	–	–
– trading results from disposed-of operations in Brazil		–	–	–	–	1	1	–	–
Adjusted		1	1,921	434	(1)	–	2,355	1	22
<b>Profit/(loss) before tax</b>									
Reported		(6,774)	13,779	1,503	185	(1,581)	7,112	(3,913)	8,069
Significant items		8,372	424	92	1,144	2,156	12,188	4,465	182
– revenue		1,740	(6)	(11)	155	309	2,187	1,795	(1)
– LICs		–	–	–	–	748	748	–	–
– operating expenses		6,632	430	103	989	1,098	9,252	2,670	183
– share of profit in associates and joint ventures		–	–	–	–	1	1	–	–
Adjusted		1,598	14,203	1,595	1,329	575	19,300	552	8,251

### Reconciliation of reported and adjusted items (continued)

	<i>Footnotes</i>	2015							
		Europe	Asia	MENA	North America	Latin America	Total	UK	Hong Kong
		\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Revenue</b>	22								
Reported	32	20,472	25,303	3,179	7,657	6,592	59,800	15,493	15,616
Currency translation	32	(1,613)	(305)	(182)	(60)	(896)	(3,001)	(1,577)	(20)
<b>Significant items</b>		(656)	(1,431)	(10)	98	(3,381)	(5,380)	(595)	(1,383)
– DVA on derivative contracts		(95)	(58)	(1)	(21)	(55)	(230)	(78)	(13)
– fair value movements on non-qualifying hedges	23	200	2	—	124	1	327	204	6
– gain on the partial sale of shareholding in Industrial Bank		—	(1,372)	—	—	—	(1,372)	—	(1,372)
– own credit spread	24	(771)	(3)	(9)	(219)	—	(1,002)	(731)	(4)
– portfolio disposals		—	—	—	214	—	214	—	—
– provisions arising from the ongoing review of compliance with the UK Consumer Credit Act		10	—	—	—	—	10	10	—
– trading results from disposed-of operations in Brazil		—	—	—	—	(3,327)	(3,327)	—	—
<b>Adjusted</b>	32	18,203	23,567	2,987	7,695	2,315	51,419	13,321	14,213
<b>LICs</b>									
Reported		(519)	(693)	(470)	(544)	(1,495)	(3,721)	(248)	(155)
Currency translation	36	6	19	3	120	184	39	—	—
<b>Significant items</b>		—	—	—	—	933	933	—	—
– trading results from disposed-of operations in Brazil		—	—	—	—	933	933	—	—
<b>Adjusted</b>		(483)	(687)	(451)	(541)	(442)	(2,604)	(209)	(155)
<b>Operating expenses</b>									
Reported	32	(19,274)	(10,889)	(1,721)	(6,501)	(4,786)	(39,768)	(15,555)	(5,686)
Currency translation	32	1,287	177	83	32	567	2,091	1,253	7
<b>Significant items</b>		2,405	130	15	851	2,546	5,947	2,151	49
– costs to achieve		600	122	14	103	69	908	536	43
– costs to establish UK ring-fenced bank		89	—	—	—	—	89	89	—
– regulatory provisions in GBP		172	—	—	—	—	172	—	—
– restructuring and other related costs		68	8	1	34	6	117	50	6
– settlements and provisions in connection with legal matters		935	—	—	714	—	1,649	935	—
– UK customer redress programmes		541	—	—	—	—	541	541	—
– trading results from disposed-of operations in Brazil		—	—	—	—	2,471	2,471	—	—
<b>Adjusted</b>	32	(15,582)	(10,582)	(1,623)	(5,618)	(1,673)	(31,730)	(12,151)	(5,630)
<b>Share of profit in associates and joint ventures</b>									
Reported	9	2,042	504	2	(1)	2,556	10	31	
Currency translation	—	(113)	—	(1)	—	(114)	(1)	—	
<b>Significant items</b>		—	—	—	—	1	1	—	
– trading results from disposed-of operations in Brazil		—	—	—	—	1	1	—	—
<b>Adjusted</b>	9	1,929	504	1	—	2,443	9	31	
<b>Profit/(loss) before tax</b>									
Reported		688	15,763	1,492	614	310	18,867	(300)	9,806
Currency translation		(290)	(235)	(80)	(26)	(209)	(840)	(286)	(13)
<b>Significant items</b>		1,749	(1,301)	5	949	99	1,501	1,556	(1,334)
– revenue		(656)	(1,431)	(10)	98	(3,381)	(5,380)	(595)	(1,383)
– LICs		—	—	—	—	933	933	—	—
– operating expenses		2,405	130	15	851	2,546	5,947	2,151	49
– share of profit in associates and joint ventures		—	—	—	—	1	1	—	—
<b>Adjusted</b>		2,147	14,227	1,417	1,537	200	19,528	970	8,459

**Reconciliation of reported and adjusted items (continued)**

		2014							
	Footnotes	Europe	Asia	MENA	North America	Latin America	Total	UK	Hong Kong
		\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Revenue</b>	22								
Reported	32	20,804	23,677	3,339	8,152	8,272	61,248	15,727	13,844
Currency translation	32	(3,404)	(964)	(367)	(311)	(2,703)	(7,612)	(2,574)	(17)
<b>Significant items</b>		708	(48)	(3)	116	(3,280)	(2,507)	353	(119)
– DVA on derivative contracts		234	69	5	16	8	332	203	26
– fair value movements on non-qualifying hedges	23	235	4	—	302	—	541	(8)	11
– gain on sale of shareholding in Bank of Shanghai		—	(428)	—	—	—	(428)	—	(428)
– impairment of our investment in Industrial Bank		—	271	—	—	—	271	—	271
– own credit spread	24	(393)	4	6	(34)	—	(417)	(474)	1
– portfolio disposals		—	—	—	(168)	—	(168)	—	—
– provisions arising from the ongoing review of compliance with the UK Consumer Credit Act		632	—	—	—	—	632	632	—
– (gain)/loss and trading results from disposals and changes in ownership levels		—	32	(14)	—	(3,288)	(3,270)	—	—
<b>Adjusted</b>	32	18,108	22,665	2,969	7,957	2,289	51,129	13,506	13,708
<b>LICs</b>									
Reported		(518)	(647)	(240)	(322)	(2,124)	(3,851)	(214)	(320)
Currency translation		137	38	71	16	656	918	81	1
<b>Significant items</b>		—	—	(2)	—	1,034	1,032	—	—
– trading results from disposals and changes in ownership levels		—	—	(2)	—	1,034	1,032	—	—
<b>Adjusted</b>		(381)	(609)	(171)	(306)	(434)	(1,901)	(133)	(319)
<b>Operating expenses</b>									
Reported	32	(19,633)	(10,427)	(1,824)	(6,429)	(5,932)	(41,249)	(15,576)	(5,424)
Currency translation	32	2,797	509	212	158	1,894	5,433	2,165	6
<b>Significant items</b>		2,600	58	34	578	2,486	5,756	2,553	56
– charge in relation to the settlement agreement with the Federal Housing Finance Authority		—	—	—	550	—	550	—	—
– regulatory provisions in GBP		16	49	—	—	—	65	—	49
– restructuring and other related costs		122	9	3	28	116	278	91	7
– settlements and provisions in connection with legal matters		1,187	—	—	—	—	1,187	1,187	—
– UK customer redress programmes		1,275	—	—	—	—	1,275	1,275	—
– trading results from disposals and changes in ownership levels		—	—	31	—	2,370	2,401	—	—
<b>Adjusted</b>	32	(14,236)	(9,860)	(1,578)	(5,693)	(1,552)	(30,060)	(10,858)	(5,362)
<b>Share of profit in associates and joint ventures</b>									
Reported		6	2,022	488	16	—	2,532	7	42
Currency translation		(1)	(147)	—	(2)	—	(150)	(1)	1
<b>Significant items</b>		—	—	—	—	—	—	—	—
– trading results from disposals and changes in ownership levels		—	—	—	—	—	—	—	—
<b>Adjusted</b>		5	1,875	488	14	—	2,382	6	43
<b>Profit/(loss) before tax</b>									
Reported		659	14,625	1,763	1,417	216	18,680	(56)	8,142
Currency translation		(471)	(564)	(84)	(139)	(153)	(1,411)	(329)	(9)
<b>Significant items</b>		3,308	10	29	694	240	4,281	2,906	(63)
– revenue		708	(48)	(3)	116	(3,280)	(2,507)	353	(119)
– LICs		—	—	(2)	—	1,034	1,032	—	—
– operating expenses		2,600	58	34	578	2,486	5,756	2,553	56
– share of profit in associates and joint ventures		—	—	—	—	—	—	—	—
<b>Adjusted</b>		3,496	14,071	1,708	1,972	303	21,550	2,521	8,070

For footnotes, see page 63.

## Analysis of reported results by country

Profit/(loss) before tax by priority markets within global businesses

Footnotes	Retail Banking and Wealth Management	Commercial Banking	Global Banking and Markets	Global Private Banking	Corporate Centre	Total
	\$m	\$m	\$m	\$m	\$m	\$m
Europe	524	2,129	1,009	(3,695)	(6,741)	(6,774)
- UK	338	1,834	385	86	(6,556)	(3,913)
- of which: HSBC Holdings	(676)	(379)	(425)	(63)	(3,748)	(5,291)
- France	147	198	289	9	(53)	590
- Germany	23	68	142	7	13	253
- Switzerland	-	9	-	(493)	(7)	(491)
- other	16	20	193	(3,304)	(138)	(3,213)
Asia	4,115	2,920	3,211	268	3,265	13,779
- Hong Kong	3,796	2,191	1,298	221	563	8,069
- Australia	108	74	156	-	31	369
- India	15	123	355	10	240	743
- Indonesia	(9)	66	110	-	11	178
- Mainland China	(72)	68	456	(3)	2,158	2,607
- Malaysia	65	65	172	-	53	355
- Singapore	107	43	170	42	77	439
- Taiwan	24	10	102	(1)	13	148
- other	81	280	392	(1)	119	871
Middle East and North Africa	20	290	652	-	541	1,503
- Egypt	58	104	213	-	79	454
- UAE	83	94	298	-	5	480
- Saudi Arabia	1	-	-	-	434	435
- other	(122)	92	141	-	23	134
North America	64	648	259	90	(876)	185
- US	(28)	336	86	67	(932)	(471)
- Canada	46	292	155	-	47	540
- other	46	20	18	23	9	116
Latin America	(136)	59	309	9	(1,822)	(1,581)
- Mexico	94	84	79	5	(15)	247
- other	(230)	(25)	230	4	(1,807)	(1,828)
- of which: Brazil	(281)	(139)	176	4	(1,836)	(2,076)
<b>Year ended 31 Dec 2016</b>	<b>4,587</b>	<b>6,046</b>	<b>5,440</b>	<b>(3,328)</b>	<b>(5,633)</b>	<b>7,112</b>

**Profit/(loss) before tax by priority markets within global businesses (continued)**

	Retail Banking and Wealth Management	Commercial Banking	Global Banking and Markets	Global Private Banking	Corporate Centre	Total
	\$m	\$m	\$m	\$m	\$m	\$m
Europe	914	1,953	122	(93)	(2,208)	688
– UK	560	1,722	(361)	126	(2,347)	(300)
– of which: HSBC Holdings	36, 41	(530)	(399)	(274)	(91)	(2,892)
– France	357	130	84	14	54	639
– Germany	23	66	137	20	(7)	239
– Switzerland	–	8	–	(267)	43	(216)
– other	(26)	27	262	14	49	326
Asia	4,154	2,843	3,653	252	4,861	15,763
– Hong Kong	3,811	2,317	1,629	177	1,872	9,806
– Australia	60	51	232	–	30	373
– India	(25)	79	321	14	217	606
– Indonesia	(6)	(128)	76	–	51	(7)
– Mainland China	32	97	574	(3)	2,360	3,060
– Malaysia	118	78	196	–	50	442
– Singapore	105	81	193	65	63	507
– Taiwan	10	17	113	–	15	155
– other	49	251	319	(1)	203	821
Middle East and North Africa						
– Egypt	50	92	179	–	89	410
– UAE	85	(24)	270	–	36	367
– Saudi Arabia	2	–	–	–	498	500
– other	(138)	120	161	2	70	215
North America	(23)	445	444	59	(311)	614
– US	(112)	194	319	64	(424)	41
– Canada	57	240	101	–	87	485
– other	32	11	24	(5)	26	88
Latin America	(245)	156	329	3	67	310
– Mexico	70	(8)	(70)	(2)	42	32
– other	(315)	164	399	5	25	278
– of which: Brazil	(344)	13	341	6	(11)	5
Year ended 31 Dec 2015	4,799	5,585	5,158	223	3,102	18,867
Europe	352	2,238	(1,010)	181	(1,102)	659
– UK	283	1,917	(1,655)	154	(755)	(56)
– of which: HSBC Holdings	36, 41	(335)	(321)	(22)	(1,965)	(2,849)
– France	6	215	319	–	(326)	214
– Germany	28	70	139	26	15	278
– Switzerland	–	5	2	(46)	81	42
– other	35	31	185	47	(117)	181
Asia	4,239	3,123	3,102	212	3,949	14,625
– Hong Kong	3,727	2,217	1,163	145	890	8,142
– Australia	78	99	222	–	33	432
– India	4	101	378	11	206	700
– Indonesia	10	42	101	–	45	198
– Mainland China	31	86	449	(3)	2,388	2,951
– Malaysia	155	108	165	–	68	496
– Singapore	162	120	181	57	69	589
– Taiwan	18	29	130	–	44	221
– other	54	321	313	2	206	896
Middle East and North Africa	84	379	695	–	605	1,763
– Egypt	64	84	136	–	51	335
– UAE	162	158	363	–	(21)	662
– Saudi Arabia	1	–	–	–	485	486
– other	(143)	137	196	–	90	280
North America	19	799	388	87	124	1,417
– US	(99)	323	215	84	9	532
– Canada	95	479	140	–	115	829
– other	23	(3)	33	3	–	56
Latin America	(172)	(8)	239	(4)	161	216
– Mexico	4	(27)	11	(2)	65	51
– other	(176)	19	228	(2)	96	165
– of which: Brazil	(230)	(97)	79	(2)	3	(247)
Year ended 31 Dec 2014	4,522	6,531	3,414	476	3,737	18,680

For footnotes, see page 63.

## Other information

	Page
Funds under management and assets held in custody	<b>61</b>
Taxes paid by region and country	<b>61</b>
Conduct-related matters	<b>62</b>
Carbon dioxide emissions	<b>62</b>

### Funds under management and assets held in custody

#### Funds under management

	Footnote	2016 \$bn	2015 \$bn
<b>Funds under management</b>	<b>44</b>		
<b>At 1 Jan</b>		<b>896</b>	954
Net new money		(8)	(3)
Value change		25	2
Exchange and other		(40)	(57)
Disposals		(42)	–
<b>At 31 Dec</b>		<b>831</b>	896
<b>Funds under management by business</b>			
Global Asset Management		<b>410</b>	419
Global Private Banking		<b>222</b>	261
Affiliates		2	4
Other		197	212
<b>At 31 Dec</b>		<b>831</b>	896

For footnote, see page 63.

Funds under management ('FuM') represents assets managed, either actively or passively, on behalf of our customers. At 31 December 2016, FuM amounted to \$831bn, a decrease of 7% as a result of adverse foreign exchange movements and disposals, which included our sale of operations in Brazil, partly offset by favourable market performance.

Global Asset Management FuM decreased by 2% to \$410bn compared with 31 December 2015. Excluding currency translation, FuM increased by 3% primarily as a result of positive market performance, with net new money from our retail and institutional customers in Asia into fixed income products being offset by outflows from our customers in Europe and the Americas.

GPB FuM decreased by 15% to \$222bn compared with 31 December 2015. Excluding currency translation, FuM decreased by 13%, reflecting the ongoing repositioning of our client base. This was partly offset by positive net new money in areas targeted for growth, notably in the UK, the Channel Islands and Hong Kong.

Other FuM, of which the main element is a corporate trust business in Asia, decreased by 7% to \$197bn.

#### Assets held in custody<sup>44</sup> and under administration

Custody is the safekeeping and servicing of securities and other financial assets on behalf of clients. At 31 December 2016, we held assets as custodian of \$6.3tn, 1% higher than the \$6.2tn held at 31 December 2015. The increase was driven by favourable foreign exchange movements in Asia, together with the onboarding of new clients in Europe and Asia. This was partly offset by adverse foreign exchange movements in the UK.

Our Assets Under Administration business, which includes the provision of bond and loan administration services and the valuation of portfolios of securities and other financial assets on behalf of clients, complements the Custody business. At 31 December 2016, the value of assets held under administration by the Group amounted to \$2.9tn. This was 7% lower than the \$3.1tn held at 31 December 2015. The decrease primarily reflected net asset outflows in the Corporate Trust and Loan Agency business in North America, together with adverse foreign exchange movements in the UK.

### Taxes paid by region and country

The following tables reflect a geographical view of HSBC's operations.

Taxes paid by HSBC relate to HSBC's own tax liabilities including tax on profits earned, employer taxes, bank levy and other duties/levies such as stamp duty. Numbers are reported on a cash flow basis.

#### Taxes paid by country

	Footnote	2016 \$m	2015 \$m	2014 \$m
<b>Europe</b>	<b>45</b>	<b>3,151</b>	3,644	3,550
Home and priority markets		<b>3,096</b>	3,346	3,391
– UK		<b>2,385</b>	2,526	2,363
– France		<b>553</b>	620	790
– Germany		<b>124</b>	108	131
– Switzerland		<b>34</b>	92	107
Other markets		<b>55</b>	298	159
<b>Asia</b>		<b>2,755</b>	2,780	2,687
Home and priority markets		<b>2,470</b>	2,458	2,418
– Hong Kong		<b>1,488</b>	1,415	1,273
– Mainland China		<b>241</b>	277	278
– India		<b>315</b>	285	290
– Australia		<b>147</b>	173	204
– Malaysia		<b>99</b>	92	133
– Indonesia		<b>46</b>	70	76
– Singapore		<b>85</b>	80	101
– Taiwan		<b>35</b>	53	44
– Japan		<b>14</b>	13	19
Other markets		<b>285</b>	322	269
<b>Middle East and North</b>		<b>293</b>	449	369
Priority markets		<b>267</b>	407	246
– Saudi Arabia		<b>60</b>	151	84
– UAE		<b>89</b>	120	102
– Egypt		<b>97</b>	136	60
– Turkey		<b>21</b>	16	75
Other markets		<b>26</b>	26	48
<b>North America</b>		<b>276</b>	353	(108)
Priority markets		<b>276</b>	353	(108)
– US		<b>135</b>	127	(377)
– Canada		<b>141</b>	226	269
Other markets		—	—	—
<b>Latin America</b>		<b>965</b>	1,184	1,384
Priority markets		<b>303</b>	431	534
– Argentina		<b>224</b>	340	333
– Mexico		<b>79</b>	91	201
Brazil		<b>658</b>	735	804
Other markets		<b>4</b>	18	46
<b>Total</b>		<b>7,440</b>	8,410	7,882

For footnote, see page 63.

## Conduct-related matters

Conduct-related costs included in significant items			
	2016 \$m	2015 \$m	2014 \$m
<b>Income statement</b>			
Net interest income/(expense)	<b>2</b>	(10)	(632)
provisions arising from the ongoing review of compliance with the UK Consumer Credit Act	<b>2</b>	(10)	(632)
<b>Operating expenses</b>			
Comprising:			
Legal proceedings and regulatory matters	<b>1,025</b>	1,821	1,802
– charge in relation to the settlement agreement with the Federal Housing Finance Authority	–	–	550
– regulatory provisions in GBP	<b>344</b>	172	65
– settlements and provisions in connection with legal matters	<b>681</b>	1,649	1,187
Customer remediation	<b>559</b>	541	1,275
<b>Total operating expenses</b>	<b>1,584</b>	2,362	3,077
<b>Total charge for the year relating to significant items</b>	<b>1,582</b>	2,372	3,709
– of which:			
total provisions charge for the year	<b>1,584</b>	2,362	2,500
total provisions utilised during the year	<b>2,265</b>	1,021	2,503
<b>Balance sheet at 31 Dec</b>			
Total provisions	<b>3,056</b>	3,926	2,545
– legal proceedings and regulatory matters	<b>2,060</b>	2,729	1,154
– customer remediation	<b>996</b>	1,197	1,391
Accruals, deferred income and other liabilities	<b>106</b>	168	379

The table above provides a summary of conduct-related costs incurred and included within significant items (see pages 33 and 39).

The HSBC approach to conduct is designed to ensure that through our actions and behaviours we deliver fair outcomes for our customers and do not disrupt the orderly and transparent operation of financial markets. The Board places a strong emphasis on conduct, requiring adherence to high behavioural standards and adhering to the HSBC Values. Board oversight of conduct matters is provided by the Conduct & Values Committee, which oversees the embedding of HSBC Values and our required global conduct outcomes, and the Remuneration Committee, which considers conduct and compliance-related matters relevant to remuneration. These committees' reports may be found on pages 143 to 145.

The management of business conduct and the steps taken to raise standards are described on page 81. 'Regulatory focus on conduct of business and financial crime' is one of the Group's top and emerging risks and is discussed on page 66.

Provisions relating to significant items raised for conduct costs in 2016 resulted from the ongoing consequences of a small number of historical events.

Operating expenses included significant items related to conduct matters in respect of legal proceedings and regulatory matters of \$1.0bn and customer remediation costs in respect of the mis-selling of payment protection insurance of \$0.5bn. These are discussed in Note 27 and Note 35 of the Financial Statements.

## Carbon dioxide emissions

To report carbon emissions, we use the revised edition of the Greenhouse Gas Protocol's *A Corporate Accounting and Reporting Standard* guideline for disclosure that incorporates the Scope 2 market-based methodology.

We report carbon dioxide emissions resulting from energy use in our buildings and employees' business travel.

For 29 countries where we operated in 2016, which accounted for approximately 92% of our full-time employees ('FTEs'), we collect data on energy use and business travel. For the other countries where we have financial control and a small presence, we estimate emissions by scaling up from 92% to 100% of FTEs.

We then apply emission uplift rates to reflect uncertainty concerning the quality and coverage of emission measurement and estimation. The rates are 4% for electricity, 10% for other energy and 6% for business travel. This is consistent both with the Intergovernmental Panel on Climate Change's *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories* and our internal analysis of data coverage and quality.

Figures for 2016 and the previous year are in the following tables.

### Carbon dioxide emissions in tonnes

Footnote 46	2016	2015
<b>Total</b>	<b>617,000</b>	771,000
From energy	<b>529,000</b>	662,000
From travel	<b>88,000</b>	109,000

### Carbon dioxide emissions in tonnes per FTE

Footnote 46	2016	2015
<b>Total</b>	<b>2.63</b>	2.97
From energy	<b>2.25</b>	2.54
From travel	<b>0.38</b>	0.42

For footnote, see page 63.

Our greenhouse gas reporting year runs from October to September. For the year from 1 October 2015 to 30 September 2016, carbon dioxide emissions from our global operations were 617,000 tonnes. Independent assurance of our carbon dioxide emissions will be available in the first half of 2017 on our website.

## Footnotes to financial summary and other information

### Consolidated income statement

#### Group performance by income and expense item

- 1 Dividends recorded in the financial statements are dividends per ordinary share declared in a year and are not dividends in respect of, or for, that year.
- 2 Dividends per ordinary share expressed as a percentage of basic earnings per share.
- 3 Return on risk-weighted assets ('RoRWA') is calculated using pre-tax return and reported average RWAs.
- 4 Net interest income includes the cost of internally funding trading assets, while the related external revenues are reported in 'Trading income'. In our global business results, the cost of funding trading assets is included within Global Banking and Market's net trading income as interest expense.
- 5 Gross interest yield is the average annualised interest rate earned on average interest-earning assets ('AIEA').
- 6 Net interest spread is the difference between the average annualised interest rate earned on AIEA, net of amortised premiums and loan fees, and the average annualised interest rate paid on average interest-bearing funds.
- 7 Net interest margin is net interest income expressed as an annualised percentage of AIEA.
- 8 Interest income on trading assets is reported as 'Net trading income' in the consolidated income statement.
- 9 Interest income on financial assets designated at fair value is reported as 'Net income/(expense)' from financial instruments designated at fair value' in the consolidated income statement.
- 10 Including interest-bearing bank deposits only.
- 11 Interest expense on financial liabilities designated at fair value is reported as 'Net income on financial instruments designated at fair value' in the consolidated income statement, other than interest on own debt, which is reported in 'Interest expense'.
- 12 Including interest-bearing customer accounts only.
- 13 Trading income also includes movements on non-qualifying hedges. These hedges are derivatives entered into as part of a documented interest rate management strategy for which hedge accounting was not, nor could be, applied. They are principally cross-currency and interest rate swaps used to economically hedge fixed rate debt issued by HSBC Holdings and floating rate debt issued by HSBC Finance. The size and direction of the changes in the fair value of non-qualifying hedges that are recognised in the income statement can be volatile from year-to-year, but do not alter the cash flows expected as part of the documented interest rate management strategy for both the instruments and the underlying economically hedged assets and liabilities if the derivative is held to maturity.
- 14 Net insurance claims and benefits paid and movement in liabilities to policyholders arise from both life and non-life insurance business. For non-life business, amounts reported represent the cost of claims paid during the year and the estimated cost of incurred claims. For life business, the main element of claims is the liability to policyholders created on the initial underwriting of the policy and any subsequent movement in the liability that arises, primarily from the attribution of investment performance to savings-related policies. Consequently, claims rise in line with increases in sales of savings-related business and with investment market growth.

### Consolidated balance sheet

- 15 Net of impairment allowances.
- 16 On 1 January 2014, CRD IV came into force and the calculation of capital resources and RWAs for 2014 to 2016 are calculated and presented on this basis. 2012 and 2013 comparatives are on a Basel 2.5 basis.
- 17 Capital resources are regulatory capital, the calculation of which is set out on page 127.
- 18 Including perpetual preferred securities, details of which can be found in Note 28 on the Financial Statements.
- 19 The definition of net asset value per ordinary share is total shareholders' equity, less non-cumulative preference shares and capital securities, divided by the number of ordinary shares in issue excluding shares the company has purchased and are held in treasury.
- 20 In the first half of 2015 our operations in Brazil were classified as held for sale. As a result, balance sheet accounts were classified as 'Assets held for sale' and 'Liabilities of disposal groups held for sale'. There was no separate income statement classification. The sale completed on 1 July 2016.

### Global businesses and geographical regions

- 21 Net interest income includes the cost of internally funding trading assets, while the related revenues are reported in net trading income. In our global business results, the total cost of funding trading assets is included within Corporate Centre net trading income as an interest expense. In the statutory presentation, internal interest income and expense are eliminated.
- 22 Net operating income before loan impairment charges and other credit risk provisions, also referred to as revenue.
- 23 Excludes items where there are substantial offsets in the income statement for the same year.

- 24 'Own credit spread' includes the fair value movements on our long-term debt attributable to credit spread where the net result of such movements will be zero upon maturity of the debt. This does not include fair value changes due to own credit risk in respect of trading liabilities or derivative liabilities.
- 25 'Investment distribution' includes Investments, which comprises mutual funds (HSBC manufactured and third party), structured products and securities trading, and Wealth Insurance distribution, consisting of HSBC manufactured and third-party life, pension and investment insurance products.
- 26 'Other personal lending' includes personal non-residential closed-end loans and personal overdrafts.
- 27 'Other' mainly includes the distribution and manufacturing (where applicable) of retail and credit protection insurance.
- 28 In 2016, credit and funding valuation adjustments included an adverse fair value movement of \$110m on the widening of own credit spreads on structured liabilities (2015: favourable fair value movement of \$179m; 2014: favourable fair value movement of \$12m).
- 29 'Other' in GB&M includes net interest earned on free capital held in the global business not assigned to products, allocated funding costs and gains resulting from business disposals. Within the management view of total operating income, notional tax credits are allocated to the businesses to reflect the economic benefit generated by certain activities which is not reflected within operating income; for example, notional credits on income earned from tax-exempt investments where the economic benefit of the activity is reflected in tax expense. In order to reflect the total operating income on an IFRS basis, the offset to these tax credits are included within 'Other'.
- 30 'Markets products, Insurance and Investments and Other' includes revenue from Foreign Exchange, insurance manufacturing and distribution, interest rate management and GCF products.
- 31 'Client assets' are translated at the rates of exchange applicable for their respective period-ends, with the effects of currency translation reported separately. The main components of client assets were funds under management (\$222bn at 31 December 2016) which were not reported on the Group's balance sheet, and customer deposits (\$76bn at 31 December 2016), of which \$70bn was reported on the Group's balance sheet and \$6bn were off-balance sheet deposits.
- 32 Amounts are non-additive across geographical regions due to inter-company transactions within the Group.
- 33 Risk-weighted assets are non-additive across geographical regions due to market risk diversification effects within the Group.
- 34 Other income in this context comprises where applicable net income/expense from other financial instruments designated at fair value, gains less losses from financial investments, dividend income, net insurance premium income and other operating income less net insurance claims and benefits paid and movement in liabilities to policyholders.
- 35 2015 and 2014 figures are restated for the changes explained on page 44.
- 36 For the purposes of the analysis of reported results by country table, HSBC Holdings profit/(loss) is presented excluding the effect of the early adoption of the requirements of IFRS 9 'Financial Instruments' relating to the presentation of gains and losses on financial liabilities designated at fair value', which was early adopted in the separate financial statements of HSBC Holdings but not in the consolidated financial statements of HSBC.
- 37 Adjusted RWAs are calculated using reported RWAs adjusted for the effects of currency translation differences and significant items.
- 38 Adjusted RoRWA is calculated using adjusted profit before tax and adjusted average risk-weighted assets.
- 39 Includes Head Office costs attributable to Global Business operations.
- 40 Client assets related to our Middle East clients are booked across to various other regions, primarily in Europe.
- 41 Excludes intra-Group dividend income.
- 42 Central Treasury includes revenue relating to BSM of \$3,060m (2015: \$2,885m; 2014: \$2,794m), interest expense of \$948m (2015: \$710m; 2014: \$484m) and adverse valuation differences on issued long-term debt and associated swaps of \$278m (2015: loss of \$64m; 2014: gain of \$33m). Revenue relating to BSM includes other internal allocations, including notional tax credits to reflect the economic benefit generated by certain activities which is not reflected within operating income, for example notional credits on income earned from tax-exempt investments where the economic benefit of the activity is reflected in tax expense. In order to reflect the total operating income on an IFRS basis, the offset to these tax credits are included in other Central Treasury.
- 43 Other miscellaneous items in Corporate Centre includes internal allocations relating to Legacy Credit.

### Other information

- 44 Funds under management and assets held in custody are not reported on the Group's balance sheet, except where it is deemed that we are acting as principal rather than agent in our role as investment manager, and these assets are consolidated as Structured entities (see Note 19 on the Financial Statements).
- 45 Taxes paid by HSBC relate to HSBC's own tax liabilities, including tax on profits earned, employer taxes, bank levy and other duties/levies such as stamp duty. Numbers are reported on a cash flow basis.
- 46 In the Annual Report and Accounts 2015, we applied our own internal methodology which did not contain the Greenhouse Gas Protocol's Scope 2 quality criteria verification and the residual mix factors which are recommended in the Scope 2 market-based methodology.

## Risk

	Page
<b>Our conservative risk appetite</b>	<b>64</b>
<b>Top and emerging risks</b>	<b>64</b>
Externally driven	64
Internally driven	66
<b>Areas of special interest</b>	<b>67</b>
Process of UK withdrawal from the European Union	67
Oil and gas prices	68
<b>Risk management</b>	<b>68</b>
Our risk management framework	68
Our material banking and insurance risks	71
Credit risk management	73
Liquidity and funding risk management	75
Market risk management	77
Operational risk management	80
Regulatory compliance risk management	81
Financial crime risk management	81
Insurance manufacturing operations risk management	82
Other material risks	
– Reputational risk management	83
– Sustainability risk management	84
– Pension risk management	84
<b>Key developments and risk profile in 2016</b>	<b>85</b>
Key developments in 2016	85
Credit risk profile	85
Liquidity and funding risk profile	106
Market risk profile	114
Operational risk profile	121
Insurance manufacturing operations risk profile	121

### Our conservative risk appetite

Throughout its history, HSBC has maintained a conservative risk profile. This is central to our business and strategy.

The following principles guide the Group's overarching risk appetite and determine how its businesses and risks are managed.

#### Financial position

- Strong capital position, defined by regulatory and internal capital ratios.
- Liquidity and funding management for each operating entity, on a stand-alone basis.

#### Operating model

- Returns generated in line with risk taken.
- Sustainable and diversified earnings mix, delivering consistent returns for shareholders.

#### Business practice

- Zero tolerance for knowingly engaging in any business, activity or association where foreseeable reputational risk or damage has not been considered and/or mitigated.
- No appetite for deliberately or knowingly causing detriment to consumers arising from our products and services or incurring a breach of the letter or spirit of regulatory requirements.
- No appetite for inappropriate market conduct by a member of staff or by any Group business.

## Top and emerging risks

Our approach to identifying and monitoring top and emerging risks is described on page 70. During 2016, we made a number of changes to our top and emerging risks to reflect our assessment of the issues facing HSBC and their effect on the Group, which are described on page 27.

Our current top and emerging risks are as follows.

### Externally driven

#### Economic outlook and capital flows

Global economic growth remained muted in 2016, with headwinds adversely affecting both developed and emerging markets.

The UK electorate's vote to leave the European Union ('EU') caused significant market volatility in its immediate aftermath, and since then sterling has depreciated against major currencies. Uncertainty regarding the terms of the UK's exit agreement, its future relationship with the EU and its trading relationship with the rest of the world may lead to economic uncertainty and market volatility, which could affect both the Group and its customers.

Following robust policy action during the course of 2016, market concerns have eased over the extent of the slowdown of the mainland Chinese economy, and the potential for further renminbi depreciation. However, a prolonged or severe slowdown cannot be ruled out, which would have wider ramifications for regional and global economic growth, and global trade and capital flows, as a consequence.

While oil and gas prices have partly recovered from the lows of 2015, global supply and demand imbalances continue to place considerable financial strain on some producers and exporters. A continuation of low oil prices, particularly in conjunction with a low inflation environment and/or low or negative interest rates, would adversely affect global growth prospects and, as a consequence, our results.

### Mitigating actions

- We actively assess the impact of economic developments in key markets on specific customers, customer segments or portfolios and take appropriate mitigating action – that may include revising risk appetite or limits – as circumstances evolve.
- We use internal stress testing and scenario analysis, as well as regulatory stress test programmes, to evaluate the potential impact of macroeconomic shocks on our businesses and portfolios. Analysis undertaken on our oil and gas lending portfolios are described on page 68, and our wider approach to stress testing is described on page 70.
- We have carried out detailed reviews of our wholesale credit portfolios, particularly across those sectors most affected by the UK referendum result. We have also run a number of stress tests on our wholesale and trading portfolios to examine potential impacts under a range of possible exit scenarios and develop a suite of possible mitigating actions.

### Geopolitical risk

Our operations and portfolios are exposed to risks arising from political instability, civil unrest and military conflict in many parts of the world. These may include physical risk to our staff and/or physical damage to our assets, disruption to our operations and a curtailment in global trade flows.

The outcome of the US election has added to concerns about a rise in protectionism. This has been accentuated in many parts of the world by rapid technological change and income inequality. Any amplification of this trend could cause a curtailment in global trade, and thus impact HSBC's traditional lines of business.

European states are experiencing heightened political tension, reflecting concerns over migration, fears of terrorism, increased tension with Russia, and uncertainty about the future relationship between the UK and the EU. Elections in France, Germany, the Netherlands and possibly Italy in 2017 are adding to the uncertainty.

In the Middle East, the terrorist group Daesh has come under increasing pressure as an international coalition recaptured territory across Syria and Iraq. Despite this, Daesh has proved capable of carrying out terrorist attacks both in neighbouring countries and further afield.

In Asia, ongoing territorial disputes in the South China Sea and a region-wide build-up in military capability have strained diplomatic relations, and are testing the resolve of the US to defend freedom of navigation.

#### Mitigating actions

- We continually monitor the geopolitical outlook, in particular in countries where we have material exposures and/or a physical presence. We established a new dedicated forum to monitor and advise senior management on global developments, including analysis on how the Group's strategy could be affected by geopolitical events.
- We have taken steps to increase the physical security of our premises and have enhanced our major incident response capabilities, particularly in those geographical areas deemed to be at a higher risk from terrorism and military conflicts.
- Our internal credit risk ratings of sovereign counterparties take geopolitical factors into account and drive our appetite for conducting business in those countries. Where necessary, we adjust our country limits and exposures to reflect our risk appetite and mitigate risks as appropriate.
- We incorporate geopolitical scenarios, such as conflicts in countries where we have a significant presence or political developments that could disrupt our operations, into our internal stress tests to assess their potential effect on our portfolios and businesses.

#### Turning of the credit cycle

Although the credit environment has stabilised in the latter part of the year, due in part to further monetary loosening, there is a risk that the credit cycle could turn sharply in 2017 if economic and/or geopolitical shocks unfold.

Stress could appear across a wide array of credit segments, particularly given the substantial amounts of external refinancing due in emerging markets in 2017 and 2018.

Sentiment towards mainland China could also deteriorate amid concerns over its increasing debt burden, or political events in the US, UK and EU could deliver negative economic outcomes. Impairment allowances could increase if the credit quality of our customers is affected by less favourable global economic conditions in some markets. Should oil prices remain low or fall, our oil and gas portfolios would come under further pressure.

#### Mitigating actions

- We closely monitor economic developments in key markets and sectors, taking portfolio actions where necessary, including enhanced monitoring, amending our risk appetite and/or reducing limits and exposures.
- We stress test portfolios of particular concern to identify sensitivity to loss under a range of scenarios, with management actions being taken to manage risk appetite where necessary.
- Reviews of key portfolios are undertaken regularly to ensure that individual customer or portfolio risks are understood and that the level of facilities offered and our ability to manage these through any downturn are appropriate.

#### Cyber threat and unauthorised access to systems

HSBC and other public and private organisations continue to be the targets of increasing and more sophisticated cyber attacks that may disrupt customer services.

#### Mitigating actions

- We continue to strengthen and significantly invest in our ability to prevent, detect and respond to the ever-increasing and sophisticated threat of cyber attacks. Specifically, we continue to enhance our capabilities to protect against increasingly sophisticated malware, denial of service attacks and data leakage prevention, as well as enhancing our security event detection and incident response processes.
- Cyber risk is a priority area for the Board and is regularly reported at Board level to ensure appropriate visibility, governance and executive support for our ongoing cybersecurity programme.
- We participate in intelligence sharing with both law enforcement and industry schemes to help improve our understanding of, and ability to respond to, the evolving threats faced by us and our peers within our industry.

#### Regulatory and technological developments with adverse impact on business model and profitability

Financial service providers continue to face stringent regulatory and supervisory requirements, particularly in the areas of capital and liquidity management, conduct of business, financial crime, operational structures, the use of models and the integrity of financial services delivery. The competitive landscape in which the Group operates may be significantly altered by future regulatory changes and government intervention, which could be introduced with different, potentially conflicting requirements and to differing timetables by different regulatory regimes. Regulatory changes may affect the activities of the Group as a whole, or of some or all of its principal subsidiaries.

While the rise of financial technology ('fintech') presents a number of opportunities that we are actively engaging in, there is also a risk that it could disrupt financial institutions' traditional business model.

#### Mitigating actions

- We are engaged closely with governments and regulators in the countries in which we operate to help ensure that new requirements are considered properly by regulatory authorities and the financial sector and can be implemented effectively.
- We have strengthened governance and resourcing around regulatory change management. Significant regulatory programmes, such as the implementation of International Financial Reporting Standard 9, are overseen by the Group Change Committee (see 'Execution risk' on page 67).
- We are actively pursuing opportunities in the fintech space, and have established HSBC Digital Solutions, a specialist team to design, build and run digital services. We have also established a technology advisory board to help ensure we are fully aware of, and respond to, industry developments as they arise.

#### Regulatory focus on conduct of business and financial crime

Financial institutions remain under considerable scrutiny regarding conduct of business, particularly in relation to fair outcomes for customers and orderly and transparent operations in financial markets, as well as financial crime. Regulators, prosecutors, the media and the public all have heightened expectations as to the behaviour and conduct of financial institutions, and any shortcomings or failure to demonstrate adequate controls are in place to mitigate such risks could result in regulatory sanctions or fines. This could also lead to

an increase in civil litigation arising from or relating to issues which are subject to regulatory investigation, sanction or fine.

**Mitigating actions**

- We have created a new function, Financial Crime Risk, which brings together all areas of financial crime risk management at HSBC. For further details, see 'Financial crime risk management' on page 81.
- We have also continued to enhance our management of conduct in areas including the treatment of potentially vulnerable customers, market surveillance, employee training and performance management (see 'Regulatory compliance risk management' on page 81).

**US deferred prosecution agreement and related agreements and consent orders**

HSBC is subject to a five-year deferred prosecution agreement ('US DPA') with the US DoJ and related agreements and consent orders with the FRB, the OCC and the FCA. Under the agreements entered into with the DoJ and the FCA in 2012, an independent compliance monitor (the 'Monitor') was appointed in July 2013 for an expected five-year period to produce annual assessments of the effectiveness of the Group's anti-money laundering ('AML') and sanctions compliance programme.

The design and execution of the AML and sanctions remediation plans to address the findings of the US DPA and the Monitor are complex and require major investments in people, systems and other infrastructure. This complexity creates significant execution risk that could affect our ability to effectively identify and manage financial crime risk and remedy AML and sanctions compliance deficiencies in a timely manner. This, in turn, could impact our ability to satisfy the Monitor or comply with the terms of the US DPA and related agreements and consent orders, and may require us to take additional remedial measures in the future. These risks could be further heightened if the Monitor's reports were to become public.

In February 2017, the Monitor delivered his third annual follow-up review report as required by the US DPA. In his report, which is discussed on page 82, the Monitor concluded that, in 2016, HSBC continued to make progress in enhancing its financial crime compliance controls, including improvements to our global AML policies and procedures. However, the Monitor also expressed significant concerns about the pace of that progress, instances of potential financial crime that the DoJ and HSBC are reviewing further and on-going systems and control deficiencies that in his view raised questions as to whether HSBC is adhering to all its obligations under the US DPA. The Monitor also found that there remain substantial challenges for HSBC to meet its goal of developing a reasonably effective and sustainable AML and sanctions compliance programme. In addition, the Monitor did not certify as to HSBC's implementation of and adherence to remedial measures specified in the US DPA.

Potential consequences of breaching the US DPA could include the imposition of additional terms and conditions on HSBC, an extension of the agreement, including its monitorship, or the criminal prosecution of HSBC that could, in turn, entail further financial penalties and collateral consequences.

Moreover, HSBC Bank USA, as the primary US dollar correspondent bank for the Group, is subject to heightened financial crime risk arising from business conducted on behalf of clients as well as its non-US HSBC affiliates. If HSBC Bank USA fails to conduct adequate due diligence on clients, including its affiliates, or otherwise inappropriately processes US dollar payments on behalf of non-US HSBC affiliates, it could be in breach of applicable US AML and sanctions laws and regulations, become subject to legal or regulatory enforcement actions by OFAC or other US agencies and be required to pay substantial fines or penalties. In addition, any such breaches of US legislation could constitute a breach of the US DPA.

Under the terms of the US DPA, upon notice and an opportunity to be heard, the DoJ has sole discretion to determine whether HSBC has breached the US DPA.

**Mitigating actions**

- We continued to make progress during 2016 toward putting in place an effective and sustainable AML and sanctions compliance programme, including through the creation of a new Financial Crime Risk function and improvements in technology and systems to manage financial crime risk.
- We are working to implement the agreed recommendations flowing from the Monitor's previous reviews, and to implement the agreed recommendations from the 2016 review.

**Internally driven****IT systems infrastructure and resilience**

HSBC continues to invest in the reliability and resilience of our IT Systems, to help ensure that disruption to customer services resulting in reputational and regulatory damage does not occur.

**Mitigating actions**

- We are part-way through a multi-year investment programme that is transforming how technology is developed, delivered and maintained, with a particular focus on providing high-quality, stable and secure services. As part of this, we are simplifying our service provision and replacing older IT infrastructure and applications. These investments are designed to improve IT systems resilience.
- During 2016, we continued to upgrade our IT Systems, improve disruption free change, and materially reduce the number of incidents relating to our critical business services. These enhancements led to a material improvement in service availability during the year and helped reduce impact to our customers and colleagues by 45% (when compared with the same period in 2015).

**Impact of organisational change and regulatory demands on employees**

The cumulative workload arising from our regulatory reform and remediation programmes, together with those related to the delivery of our strategy, continues to place increasingly complex and conflicting demands on a workforce that operates in an employment market where expertise in key markets is often in short supply and mobile. The scale of organisational change, including the establishment of the ring-fenced bank in the UK, has increased pressure on employees and requires us to ensure that key skills and experience are retained. Furthermore, the outcome of the UK referendum on EU membership has led to some uncertainties regarding movement of labour.

**Mitigating actions**

- We have enhanced our wellbeing programme to support our employees, particularly those affected by the Group's considerable change agenda.
- Risks related to organisational change are subject to close management oversight. A range of actions are being developed to address the risks associated with the Group's major change initiatives, including recruitment and extensive relocation support to existing employees in the UK ring-fenced bank.
- We continue to increase the level of specialist resource in key areas, and to engage with our regulators as they finalise new regulations. We use a broad array of talent-sourcing channels, succession planning for key management roles, and heightened promotion of opportunities internally, with particular attention in our more challenging markets.

## Execution risk

Execution risk remained heightened during 2016 as we continued to work towards delivering the strategic actions announced at the Investor Update in June 2015 (see page 12). These, along with the regulatory reform agenda and our commitments under the US DPA, require the management of significant projects that are resource intensive and time sensitive. Risks arising from the volume, magnitude and complexity of the projects underway to meet these demands may include regulatory censure, reputational damage or financial losses.

### Mitigating actions

- We have strengthened our prioritisation and governance processes for significant projects. The Group Change Committee ('GCC'), chaired by the Group Chief Operating Officer, oversees the most significant programmes and provides regular updates to the Risk Management Meeting of the GMB.
- The GCC monitors the concentration of deliverables to ensure that potential resource constraints over the medium term are understood and addressed.

## Third-party risk management

We utilise third parties for the provision of a range of goods and services, in common with other financial services providers. Global regulators have increased their scrutiny of these arrangements and expect firms to be able to demonstrate adequate control over the selection, governance and oversight of their third parties, including affiliates. Any deficiency in our management of third-party risk could affect our ability to meet strategic, regulatory or client expectations. This may, in turn, lead to a range of consequences, including regulatory censure or reputational damage.

### Mitigating actions

- We are part-way through a multi-year strategic programme to enhance our third-party risk management capability. This is designed to enable the consistent risk assessment of any third-party service against key criteria, along with associated control monitoring, testing and assurance throughout the third-party life cycle.
- A new Group policy and supporting framework was published in December 2016. The supporting delivery model and technology will be developed and will start to deploy in the second half of 2017.

## Enhanced model risk management expectations

We use models for a range of purposes in managing our business, including regulatory capital calculations, stress testing, credit approvals, financial crime and fraud risk management, and financial reporting. Regulatory requirements for models are rapidly increasing and often fast-moving. The scale and scope of model development expected by regulators pose significant execution challenges, especially where the breadth and scope are beyond what has previously been expected of the Group.

Regulatory scrutiny and supervisory concerns over banks' use of models is considerable, particularly the internal models and assumptions used by banks in the calculation of regulatory capital. If regulatory approval for key capital models is not achieved in a timely manner, we could be required to hold additional capital.

### Mitigating actions

- We have strengthened our model risk governance framework by establishing additional global model oversight committees and implementing policies and standards in accordance with key regulatory requirements.
- We have strengthened our governance over the development, usage and validation of models including

the creation of centralised global analytical functions with necessary subject matter expertise.

- We have hired additional subject matter experts within our Independent Model Review sub-function and empowered the team to ensure appropriate challenge and feedback are given to models prior to and as part of their ongoing use.
- We have strengthened the model risk policy and introduced a Group-wide single model inventory system detailing key metrics on all models, and an assessment of their relative importance to the organisation.

## Data management

The Group currently uses a large number of systems and applications to support business processes and operations. Multiple data sources, including customer data sources, introduce the need for reconciliation to reduce the risk of error. Strong data governance and enhanced data quality are required to meet our regulatory obligations relating to risk data aggregation and risk reporting as set out by the Basel Committee and our obligations under the US DPA, as well as to service our customers more effectively and improve our product offering.

### Mitigating actions

- The Chief Information Officer continues to drive the Group's efforts to enhance data governance, quality and architecture. These services underpin key programmes and initiatives, such as our Global Standards programme.
- We are significantly reducing the number of systems and applications that support key business processes, which will streamline the number of data sources across the Group, particularly data used in our customer and transaction screening processes.
- We continue to make progress on key initiatives and projects to implement our data strategy and work towards meeting our Basel Committee data obligations.

## Areas of special interest

During 2016, we considered a number of particular areas because of the effect they may have on the Group. While these areas have been identified as part of our top and emerging risks, further details of the actions taken during the year are provided below.

### Process of UK withdrawal from the European Union

The period of uncertainty and market volatility that followed the UK's decision to leave the EU is likely to continue until the UK's future relationship with the EU and the rest of the world is clearer. Given the time-frame and the complex negotiations involved, and assuming Article 50 is invoked by the end of March 2017, a clearer picture is not expected to emerge for some time. HSBC is working with clients as they adapt to this new environment and plan for what might follow.

Meeting our customers' needs following the UK's departure from the EU will likely require adjustments to our cross-border banking model. However, with Article 50 not yet invoked and formal negotiations not yet initiated, it is too early to determine precisely what will be required or what the likely effects on HSBC might be. Despite this uncertainty, use of HSBC's existing subsidiaries in France, Germany, Malta and Poland should help us more quickly and seamlessly adapt our banking model to this new landscape. Such changes could, among other things, increase our operating costs and require us to relocate staff and businesses outside the UK to other jurisdictions.

Through this period of uncertainty, our priorities are to continue to support our clients, take appropriate actions to mitigate risks and maintain stability, and deliver on our strategy. We are actively monitoring our portfolio to identify areas of stress, with

vulnerable sectors subject to management review to determine if any adjustment to our risk policy or appetite is required. As the UK's negotiating priorities and likelihood of achieving them become clearer, we will continue to monitor developments and take actions required to meet these priorities.

### **Oil and gas prices**

Oil prices improved throughout 2016 and in early 2017, particularly after Opec agreed to cut supply levels. The improved oil prices resulted in a decline in new loan impairments in the second half of the year. The medium- to long-term outlook remains uncertain as technological change impacts the supply side through cheaper methods of extraction and the demand side through the development of renewable energy sources. At 31 December 2016, HSBC's overall portfolio directly exposed to oil and gas sector had drawn risk exposure of \$28bn (2015: \$29bn). The portfolio has the following credit quality distribution: 'strong' and 'good' 53% (2015: 56%), 'satisfactory' 28% (2015: 35%), 'sub-standard' 15% (2015: 7%) and 'impaired' 4% (2015: 2%), with the majority of the exposures located in North America, Asia and Europe. Loan impairment charges in 2016 were approximately \$0.3bn. The sector remains under enhanced monitoring with risk appetite and new lending significantly curtailed.

### **Key components of our risk management framework**

<b>HSBC Values and risk culture</b>			
<b>Governance and structure</b>	<b>The Board and its sub-committees</b>	The Board approves the Group's risk appetite, plans and performance targets. It sets the 'tone from the top' and is advised by the Group Risk Committee, the Financial System Vulnerabilities Committee, and the Conduct & Values Committee (see page 132).	
	<b>The Risk Management Meeting of the Group Management Board and its sub-committees</b>	Responsible for the enterprise-wide management of all risks, including key policies and frameworks for the management of risk within the Group (see page 69). The Global Standards Steering Meeting is responsible for the management of financial crime risk (see page 81).	
	<b>Risk governance framework</b>	Ensures appropriate oversight of and accountability for the management of risk (see page 68).	
<b>Responsibilities</b>	<b>Three lines of defence model</b>	Our three lines of defence model defines roles and responsibilities for risk management (see page 69).	
	<b>Global Risk function</b>	An independent function to help ensure the necessary balance in risk/return decisions (see page 69).	
<b>Processes</b>	<b>Enterprise-wide risk management tools</b>	Processes to identify, monitor, mitigate and report risks to ensure we remain within our risk appetite (see pages 70 to 71).	
	<b>Risk appetite</b>		
	<b>Top and emerging risks</b>		
<b>Controls</b>	<b>Risk map</b>		
	<b>Stress testing</b>	Material risks arising from our business activities that are measured, monitored and managed (see pages 71 to 72).	
	<b>Banking and insurance risks</b>	Set by risk stewards for each of our material banking and insurance risks (see pages 68 to 73).	
<b>Risk Policies and Practices</b>		The operational risk management framework defines minimum standards and processes for managing operational risks and internal controls (see page 80).	
<b>Systems and tools</b>			

### **Our risk culture**

Risk culture refers to HSBC's norms, attitudes and behaviours related to risk awareness, risk taking and risk management.

HSBC has long recognised the importance of a strong risk culture, the fostering of which is a key responsibility of senior executives. Our risk culture is reinforced by HSBC Values and our Global Standards programme. It is instrumental in aligning the behaviours of individuals with our attitude to assuming and

### **Risk management**

This section describes the enterprise-wide risk management framework, and the significant policies and practices employed by HSBC in managing its material risks.

### **Our risk management framework**

We use an enterprise-wide risk management framework across the organisation and across all risk types. It is underpinned by our risk culture and is reinforced by the HSBC Values and our Global Standards programme.

The framework fosters continuous monitoring of the risk environment, and an integrated evaluation of risks and their interactions. It also ensures a consistent approach to monitoring, managing and mitigating the risks we accept and incur in our activities.

The following diagram and descriptions summarise key aspects of the framework, including governance and structure, our risk management tools and our risk culture, which together help align employee behaviour with our risk appetite.

managing risk, which helps to ensure that our risk profile remains in line with our risk appetite.

We use clear and consistent employee communication on risk to convey strategic messages and set the tone from senior management. We also deploy mandatory training on risk and compliance topics to embed skills and understanding in order to strengthen our risk culture and reinforce the attitude to risk in the behaviour expected of employees, as described in our risk policies. Mandatory training materials are updated regularly,

describing technical, cultural and ethical aspects of the various risks assumed by the Group and how they should be managed effectively. We operate a global whistleblowing platform, HSBC Confidential, allowing staff to report matters of concern confidentially. We also maintain an external email address for concerns about accounting and internal financial controls or auditing matters (accountingdisclosures@hsbc.com). The Group has a strict policy prohibiting retaliation against those who raise concerns by this route. All allegations of retaliation reported are escalated to senior management. For details on the governance of our whistleblowing policy, see pages 140 and 144.

Our risk culture is also reinforced by our approach to remuneration. Individual awards, including those for senior executives, are based on compliance with HSBC Values and the achievement of financial and non-financial objectives, which are aligned to our risk appetite and global strategy.

*For further information on remuneration, see the Directors' Remuneration Report on page 153.*

### Governance and structure

The Board has ultimate responsibility for the effective management of risk and approves HSBC's risk appetite. It is advised on risk-related matters by the Group Risk Committee

('GRC'), the Financial System Vulnerabilities Committee ('FSVC'), and the Conduct & Values Committee ('CVC') (see page 82).

Executive accountability for the monitoring, assessment and management of risk resides with the Group Chief Risk Officer. He is supported by the Risk Management Meeting of the Group Management Board ('RMM').

In the second half of 2016, we established a Financial Crime Risk ('FCR') function and appointed a Group Head of FCR, who reports to the Group Chief Executive and chairs the Global Standards Steering Meeting. The FCR function is dedicated to implementing the most effective global standards to combat financial crime, as described under 'Financial crime risk management' on page 81.

Day-to-day responsibility for risk management is delegated to senior managers with individual accountability for decision making. These managers are supported by global functions as described under 'Three lines of defence' below.

We use a defined executive risk governance structure to help ensure appropriate oversight and accountability of risk, which facilitates the reporting and escalation to the RMM. This structure is summarised below.

#### Governance structure for the management of risk

Authority	Membership	Responsibilities include:
<b>Risk Management Meeting of the Group Management Board</b>	Group Chief Risk Officer Chief Legal Officer Group Chief Executive Group Finance Director All other Group Managing Directors	<ul style="list-style-type: none"> <li>Supporting the Group Chief Risk Officer in exercising Board-delegated risk management authority</li> <li>Overseeing the implementation of risk appetite and the enterprise-wide risk management framework</li> <li>Forward-looking assessment of the risk environment, analysing the possible risk impact and taking appropriate action</li> <li>Monitoring all categories of risk and determining appropriate mitigating action</li> <li>Promoting a supportive Group culture in relation to risk management and conduct</li> </ul>
<b>Global Risk Management Board</b>	Group Chief Risk Officer Chief Risk Officers of HSBC's global businesses and regions Heads of Global Risk sub-functions	<ul style="list-style-type: none"> <li>Supporting the Group Chief Risk Officer in providing strategic direction for the Global Risk function, setting priorities and providing oversight</li> <li>Overseeing a consistent approach to accountability for, and mitigation of, risk across the Global Risk function</li> </ul>
<b>Global business/regional risk management meetings</b>	Global Business/Regional Chief Risk Officer Global Business/Regional Chief Executive Global Business/Regional Chief Financial Officer Global Business/Regional Heads of global functions	<ul style="list-style-type: none"> <li>Supporting the Chief Risk Officer in exercising Board-delegated risk management authority</li> <li>Forward-looking assessment of the risk environment, analysing the possible risk impact and taking appropriate action</li> <li>Implementation of risk appetite and the enterprise-wide risk management framework</li> <li>Monitoring all categories of risk and determining appropriate mitigating actions</li> <li>Embedding a supportive culture in relation to risk management and controls</li> </ul>

*The Board committees with responsibility for oversight of risk-related matters are set out on page 140.*

### Our responsibilities

All employees are responsible for identifying and managing risk within the scope of their role as part of the three lines of defence model.

### Three lines of defence

We use an activity-based three lines of defence model to delineate management accountabilities and responsibilities for risk management and the control environment. This creates a robust control environment to manage risks.

The model underpins our approach to risk management by clarifying responsibility, encouraging collaboration, and enabling efficient coordination of risk and control activities. The three lines of defence are summarised below:

- The first line of defence owns the risks and is responsible for identifying, recording, reporting and managing them,

and ensuring that the right controls and assessments are in place to mitigate them.

- The second line of defence sets the policy and guidelines for managing specific risk areas, provides advice and guidance in relation to the risk, and challenges the first line of defence on effective risk management.
- The third line of defence is our Internal Audit function, which provides independent and objective assurance of the adequacy of the design and operational effectiveness of the Group's risk management framework and control governance process.

### Global Risk function

We have a Global Risk function, headed by the Group Chief Risk Officer, which is responsible for the Group's risk management framework. This responsibility includes establishing global policy, monitoring risk profiles, and forward-looking risk

identification and management. Global Risk is made up of sub-functions covering all risks to our operations. Global Risk forms part of the second line of defence. It is independent from the global businesses, including sales and trading functions, to provide challenge, appropriate oversight, and balance in risk/return decisions.

#### **Enterprise-wide risk management tools**

The Group uses a range of tools to identify, monitor and manage risk. The key enterprise-wide risk tools are summarised below.

#### **Risk appetite**

The Group's risk appetite defines its desired forward-looking risk profile, and informs the strategic and financial planning process. Furthermore, it is integrated with other key risk management tools, such as stress testing and our top and emerging risk reports, to help ensure consistency in risk management practices.

The Group sets out the aggregated level and risk types it accepts in order to achieve its business objectives in a risk appetite statement ('RAS'). This is reviewed on an ongoing basis, and formally approved by the Board every six months on the recommendation of the GRC.

The Group's actual performance is reported monthly against the approved RAS to the RMM, enabling senior management to monitor the risk profile and guide business activity to balance risk and return. This reporting allows risks to be promptly identified and mitigated, and informs risk-adjusted remuneration to drive a strong risk culture.

Global businesses, regions and strategically important countries are required to have their own RASs, which are monitored to ensure they remain aligned with the Group's. All RASs and business activities are guided and underpinned by qualitative principles (see page 143). Additionally, quantitative metrics are defined along with appetite and tolerance thresholds for key risk areas.

#### **Risk map**

The Group risk map provides a point-in-time view of the risk profiles of countries, regions and global businesses across all risk categories. It assesses the potential for these risks to have a material impact on the Group's financial results, reputation and the sustainability of its business. Risk stewards assign 'current' and 'projected' risk ratings, supported by commentary. Risks that have an 'amber' or 'red' risk rating require monitoring and mitigating action plans to be either in place or initiated to manage the risk down to acceptable levels.

*Descriptions of our material banking and insurance risks are set out on page 71.*

#### **Top and emerging risks**

We use a top and emerging risks process to provide a forward-looking view of issues with the potential to threaten the execution of our strategy or operations over the medium to long term.

We proactively assess the internal and external risk environment, as well as review the themes identified across our regions and global businesses, for any risks that may require global escalation, updating our top and emerging risks as necessary.

We define a 'top risk' as a thematic issue that may form and crystallise in between six months and one year, and that has the potential to materially affect the Group's financial results, reputation or business model. It may arise across any combination of risk types, regions or global businesses. The impact may be well understood by senior management and some mitigating actions may already be in place. Stress tests of varying granularity may also have been carried out to assess the impact.

An 'emerging risk' is a thematic issue with large unknown components that may form and crystallise beyond a one-year time horizon. If it were to materialise, it could have a material effect on the Group's long-term strategy, profitability and/or reputation. Existing mitigation plans are likely to be minimal, reflecting the uncertain nature of these risks at this stage. Some high-level analysis and/or stress testing may have been carried out to assess the potential impact.

*Our current top and emerging risks are discussed on page 64.*

#### **Stress testing**

HSBC operates a comprehensive stress testing programme that supports our risk management and capital planning. It includes execution of stress tests mandated by our regulators. Our stress testing is supported by dedicated teams and infrastructure, and is overseen at the most senior levels of the Group.

Our stress testing programme demonstrates our capital strength and enhances our resilience against external shocks. It also helps us understand and mitigate risks, and informs our decisions about capital levels. As well as taking part in regulators' stress tests, we conduct our own internal stress tests.

Many of our regulators – especially the Bank of England ('BoE'), the Federal Reserve and the HKMA – utilise stress testing as an essential prudential regulatory tool and the Group has focused significant governance attention and resourcing to meet their requirements. We place particular emphasis on the global enterprise-wide stress test run on the Group by the BoE, our lead regulator.

In 2016, the results for HSBC as published by the BoE showed that our capital ratios after taking account of CRD IV restrictions and strategic management actions exceeded the BoE's requirements. The results for HSBC included an assumed dividend payment in the first year of the severe stress projection period.

This outcome reflected our conservative risk appetite, and diversified geographical and business mix. It also reflected our ongoing strategic actions, including the sale of operations in Brazil, RWA reductions in GB&M and continued sales from our US CML run-off portfolio. These actions have materially reduced our RWAs, strengthened our capital position and made us even more robust under stress.

#### *Bank of England stress test results for 2016*

The BoE's stress test in 2016 specified a global downturn with severe effects in the UK, US, Hong Kong and China, which accounted for approximately two-thirds of HSBC's RWAs at the end of 2015. The assumed GDP growth rates are detailed in the following table. We estimated that the impact on global GDP in this scenario was about as severe as the global financial crisis of 2007 to 2009, but with a much greater focus on emerging markets. This made it particularly severe for HSBC, given its priority markets in these areas.

**Assumed GDP growth rates in the 2016 Bank of England stress test scenario**

	<b>2015</b> %	<b>2016</b> %	<b>2017</b> %	<b>2018</b> %
UK	2.2	(4.3)	1.1	1.7
USA	1.8	(3.0)	0.8	1.6
China	6.7	(0.5)	4.2	5.6
Hong Kong	1.9	(7.4)	1.5	2.7

*Source: Bank of England.*

*PRA assumed GDP growth rates are shown in terms of fourth quarter on fourth quarter annual changes.*

The following table shows the results of the stress test for the past three years, and reflects HSBC's resilience. From a starting CET1 ratio of 11.9% at the end of 2015, the BoE showed projected minimum stressed CET1 ratios of 7.6% and 9.1% before and after the impact of strategic management actions.

### Results of Bank of England stress tests for the past three years

	2016 %	2015 %	2014 %
CET1 ratio at scenario start point	<b>11.9</b>	10.9	10.8
Minimum stressed CET1 ratio after strategic management actions	<b>9.1</b>	7.7	8.7
Fall in CET1 ratio	<b>2.8</b>	3.2	2.1

Source: Bank of England.

Data is presented in terms of the minimum CET1 ratio reached net of strategic management actions as per the results published by the PRA.

Internal stress tests are used intensively in our enterprise-wide risk management and capital management frameworks. Risks to our capital plan are assessed through a range of scenarios which explore risks that management needs to consider under stress. They include potential adverse macroeconomic, geopolitical and operational risk events, and potential events that are specific to HSBC. The selection of scenarios reflects our risk appetite relating to metrics such as profitability, capital or liquidity. Stress testing analysis helps management understand the nature and extent of any vulnerability. Using this information, management decides whether risks can or should be mitigated through management actions or, if they were to crystallise, should be absorbed through capital. This in turn informs decisions about preferred capital levels.

We conduct reverse stress tests each year at Group and, where required, subsidiary entity level in order to understand which potential extreme conditions would make our business model non-viable. Reverse stress testing identifies potential stresses and vulnerabilities we might face, and helps inform early warning triggers, management actions and contingency plans designed to mitigate risks.

In addition to the Group-wide stress testing scenarios, each major HSBC subsidiary conducts regular macroeconomic and event-driven scenario analyses specific to its region. They also participate as required in the regulatory stress testing programmes of the jurisdictions in which they operate, such as the Comprehensive Capital Analysis and Review and Dodd-Frank Act Stress Test programmes in the US, and the stress tests of the Hong Kong Monetary Authority. Global functions and businesses also perform bespoke stress testing to inform their assessment of risks in potential scenarios.

The Group stress testing programme is overseen by the GRC and results are reported, where appropriate, to the RMM and GRC.

### Our material banking and insurance risks

The material risk types associated with our banking and insurance manufacturing operations are described in the following tables:

#### Description of risks – banking operations

Risks	Arising from	Measurement, monitoring and management of risk
<b>Credit risk (see page 73)</b>		
Credit risk is the risk of financial loss if a customer or counterparty fails to meet an obligation under a contract.	Credit risk arises principally from direct lending, trade finance and leasing business, but also from certain other products such as guarantees and derivatives.	Credit risk is: <ul style="list-style-type: none"><li>• <b>measured</b> as the amount which could be lost if a customer or counterparty fails to make repayments;</li><li>• <b>monitored</b> using various internal risk management measures and within limits approved by individuals within a framework of delegated authorities; and</li><li>• <b>managed</b> through a robust risk control framework which outlines clear and consistent policies, principles and guidance for risk managers.</li></ul>
<b>Liquidity and funding risk (see page 75)</b>		
Liquidity risk is the risk that we do not have sufficient financial resources to meet our obligations as they fall due or that we can only do so at an excessive cost.  Funding risk is the risk that funding considered to be sustainable, and therefore used to fund assets, is not sustainable over time.	Liquidity risk arises from mismatches in the timing of cash flows.  Funding risk arises when illiquid asset positions cannot be funded at the expected terms and when required.	Liquidity and funding risk is: <ul style="list-style-type: none"><li>• <b>measured</b> using a range of metrics including liquidity coverage ratio and net stable funding ratio;</li><li>• <b>monitored</b> against the Group's liquidity and funding risk framework; and</li><li>• <b>managed</b> on a stand-alone basis with no reliance on any Group entity (unless pre-committed) or central bank unless this represents routine established business-as-usual market practice.</li></ul>
<b>Market risk (see page 77)</b>		
Market risk is the risk that movements in market factors, such as foreign exchange rates, interest rates, credit spreads, equity prices and commodity prices, will reduce our income or the value of our portfolios.	Exposure to market risk is separated into two portfolios: <ul style="list-style-type: none"><li>• trading portfolios; and</li><li>• non-trading portfolios.</li></ul> Market risk exposures arising from our insurance operations are discussed on page 123.	Market risk is: <ul style="list-style-type: none"><li>• <b>measured</b> in terms of value at risk ('VaR'), which measures the potential losses on risk positions over a specified time horizon for a given level of confidence, and assessed using stress testing;</li><li>• <b>monitored</b> using VaR, stress testing and other measures including the sensitivity of net interest income and the sensitivity of structural foreign exchange; and</li><li>• <b>managed</b> using risk limits approved by the RMM and the risk management meeting in various global businesses.</li></ul>
<b>Operational risk (see page 80)</b>		
Operational risk is the risk to achieving our strategy or objectives as a result of inadequate or failed internal processes, people and systems or from external events.	Operational risk arises from day-to-day operations or external events, and is relevant to every aspect of our business.  Regulatory compliance risk and financial crime compliance risk are discussed below.	Operational risk is: <ul style="list-style-type: none"><li>• <b>measured</b> using the risk and control assessment process, which assesses the level of risk and effectiveness of controls;</li><li>• <b>monitored</b> using key indicators and other internal control activities; and</li><li>• <b>managed</b> primarily by global business and functional managers that identify and assess risks, implement controls to manage them and monitor the effectiveness of these controls using the operational risk management framework.</li></ul>

**Description of risks – banking operations**

Risks	Arising from	Measurement, monitoring and management of risk
<b>Regulatory compliance risk (see page 81)</b>		
Regulatory compliance risk is the risk that we fail to observe the letter and spirit of all relevant laws, codes, rules, regulations and standards of good market practice, and incur fines and penalties and suffer damage to our business as a consequence.	Regulatory compliance risk is part of operational risk, and arises from the risks associated with breaching our duty to clients and other counter-parties, inappropriate market conduct and breaching other regulatory requirements.	<p>Regulatory compliance risk is:</p> <ul style="list-style-type: none"> <li>• <b>measured</b> by reference to identified metrics, incident assessments, regulatory feedback and the judgement and assessment of our Regulatory Compliance teams;</li> <li>• <b>monitored</b> against our regulatory compliance risk assessments and metrics, the results of the monitoring and control activities of the second line of defence functions, and the results of internal and external audits and regulatory inspections; and</li> <li>• <b>managed</b> by establishing and communicating appropriate policies and procedures, training employees in them, and monitoring activity to help ensure their observance. Proactive risk control and/or remediation work is undertaken where required.</li> </ul>
<b>Financial crime risk (see page 81)</b>		
Financial crime risk is the risk that we knowingly or unknowingly help parties to commit or to further potentially illegal activity through HSBC.	Financial crime risk is part of operational risk and arises from day-to-day banking operations.	<p>Financial crime risk is:</p> <ul style="list-style-type: none"> <li>• <b>measured</b> by reference to identified metrics, incident assessments, regulatory feedback and the judgement and assessment of our Financial Crime Risk teams;</li> <li>• <b>monitored</b> against our financial crime compliance risk appetite statement and metrics, the results of the monitoring and control activities of the second line of defence functions, and the results of internal and external audits and regulatory inspections; and</li> <li>• <b>managed</b> by establishing and communicating appropriate policies and procedures, training employees in them, and monitoring activity to help ensure their observance. Proactive risk control and/or remediation work is undertaken where required.</li> </ul>
<b>Other material risks</b>		
<b>Reputational risk (see page 83)</b>		
Reputational risk is the risk of failure to meet stakeholder expectations as a result of any event, behaviour, action or inaction, either by HSBC itself, our employees or those with whom we are associated, that might cause stakeholders to form a negative view of the Group.	Primary reputational risks arise directly from an action or inaction by HSBC, its employees or associated parties that are not the consequence of another type of risk. Secondary reputational risks are those arising indirectly and are a result of a failure to control any other risks.	<p>Reputational risk is:</p> <ul style="list-style-type: none"> <li>• <b>measured</b> by reference to our reputation as indicated by our dealings with all relevant stakeholders, including media, regulators, customers and employees;</li> <li>• <b>monitored</b> through a reputational risk management framework that is integrated into the Group's broader risk management framework; and</li> <li>• <b>managed</b> by every member of staff, and covered by a number of policies and guidelines. There is a clear structure of committees and individuals charged with mitigating reputational risk.</li> </ul>
<b>Pension risk (see page 84)</b>		
Pension risk is the risk of increased costs to HSBC from the post-employment benefit plans that HSBC has established for its employees.	Pension risk arises from investments delivering an inadequate return, adverse changes in interest rates or inflation, or members living longer than expected. Pension risk also includes operational and reputational risk of sponsoring pension plans.	<p>Pension risk is:</p> <ul style="list-style-type: none"> <li>• <b>measured</b> in terms of the scheme's ability to generate sufficient funds to meet the cost of their accrued benefits;</li> <li>• <b>monitored</b> through the specific risk appetite that has been developed at both Group and regional levels; and</li> <li>• <b>managed</b> locally through the appropriate pension risk governance structure and globally through the Global Pensions Oversight Committee and ultimately the RMM.</li> </ul>
<b>Sustainability risk (see page 84)</b>		
Sustainability risk is the risk that financial services provided to customers by the Group indirectly result in unacceptable impacts on people or the environment.	Sustainability risk arises from the provision of financial services to companies or projects which indirectly result in unacceptable impacts on people or on the environment.	<p>Sustainability risk is:</p> <ul style="list-style-type: none"> <li>• <b>measured</b> by assessing the potential sustainability effect of a customer's activities and assigning a Sustainability Risk Rating to all high risk transactions;</li> <li>• <b>monitored</b> quarterly by the RMM and monthly by the Group's Sustainability Risk function; and</li> <li>• <b>managed</b> using sustainability risk policies covering project finance lending and sector-based sustainability policies for sectors and themes with potentially large environmental or social impacts.</li> </ul>
Our insurance manufacturing subsidiaries are regulated separately from our banking operations. Risks in our insurance entities are managed using methodologies and processes that are subject to Group oversight. Our insurance operations are		
also subject to some of the same risks as our banking operations, which are covered by the Group's risk management processes.		

## Description of risks – insurance manufacturing operations

Risks	Arising from	Measurement, monitoring and management of risk
<b>Financial risk (see page 123)</b>		
Our ability to effectively match liabilities arising under insurance contracts with the asset portfolios that back them is contingent on the management of financial risks and the extent to which these are borne by policyholders.	Exposure to financial risk arises from: <ul style="list-style-type: none"> <li>• market risk affecting the fair values of financial assets or their future cash flows;</li> <li>• credit risk; and</li> <li>• liquidity risk of entities not being able to make payments to policyholders as they fall due.</li> </ul>	Financial risk is: <ul style="list-style-type: none"> <li>• <b>measured</b> (i) for credit risk, in terms of economic capital and the amount that could be lost if a counterparty fails to make repayments; (ii) for market risk, in terms of economic capital, internal metrics and fluctuations in key financial variables; and (iii) for liquidity risk, in terms of internal metrics including stressed operational cash flow projections;</li> <li>• <b>monitored</b> through a framework of approved limits and delegated authorities; and</li> <li>• <b>managed</b> through a robust risk control framework which outlines clear and consistent policies, principles and guidance. This includes using product design, asset liability matching and bonus rates.</li> </ul>
<b>Insurance risk (see page 125)</b>	The cost of claims and benefits can be influenced by many factors, including mortality and morbidity experience, as well as lapse and surrender rates.	Insurance risk is: <ul style="list-style-type: none"> <li>• <b>measured</b> in terms of life insurance liabilities and economic capital allocated to insurance underwriting risk;</li> <li>• <b>monitored</b> through a framework of approved limits and delegated authorities; and</li> <li>• <b>managed</b> through a robust risk control framework which outlines clear and consistent policies, principles and guidance. This includes using product design, underwriting, reinsurance and claims-handling procedures.</li> </ul>

## Credit risk management

*Details of changes in our credit risk profile in 2016 can be found on page 85, in 'Key developments and risk profile in 2016'.*

There were no material changes to the policies and practices for the management of credit risk in 2016.

### Credit risk sub-function

(Audited)

Credit approval authorities are delegated by the Board to the Group Chief Executive together with the authority to sub-delegate them. The Credit Risk sub-function in Global Risk is responsible for the key policies and processes for managing credit risk, which include formulating Group credit policies and risk rating frameworks, guiding the Group's appetite for credit risk exposures, undertaking independent reviews and objective assessment of credit risk, and monitoring performance and management of portfolios.

The principal objectives of our credit risk management are:

- to maintain across HSBC a strong culture of responsible lending, and robust risk policies and control frameworks;
- to both partner and challenge our businesses in defining, implementing and continually re-evaluating our risk appetite under actual and scenario conditions; and
- to ensure there is independent, expert scrutiny of credit risks, their costs and their mitigation.

### Concentration of exposure

(Audited)

Concentrations of credit risk arise when a number of counterparties or exposures have comparable economic characteristics, or such counterparties are engaged in similar activities or operate in the same geographical areas or industry sectors so that their collective ability to meet contractual obligations is uniformly affected by changes in economic, political or other conditions. We use a number of controls and measures to minimise undue concentration of exposure in our portfolios across industries, countries and global businesses. These include portfolio and counterparty limits, approval and review controls, and stress testing.

## Credit quality of financial instruments

(Audited)

Our risk rating system facilitates the internal ratings-based approach under the Basel framework adopted by the Group to support calculation of our minimum credit regulatory capital requirement.

The customer risk rating ('CRR') 10-grade scale summarises a more granular underlying 23-grade scale of obligor probability of default ('PD'). All corporate customers are rated using the 10- or 23-grade scale, depending on the degree of sophistication of the Basel II approach adopted for the exposure.

Each CRR band is associated with an external rating grade by reference to long-run default rates for that grade, represented by the average of issuer-weighted historical default rates. This mapping between internal and external ratings is indicative and may vary over time.

The expected loss ('EL') 10-grade scale for retail business summarises a more granular underlying EL scale for this customer segment. This combines obligor and facility/product risk factors in a composite measure.

For the five credit quality classifications defined, each encompasses a range of granular internal credit rating grades assigned to wholesale and retail lending businesses, and the external ratings attributed by external agencies to debt securities.

For debt securities and certain other financial instruments, external ratings have been aligned to the five quality classifications based upon the mapping of related CRR to external credit rating. The mapping is reviewed on a regular basis and the most recent review resulted in sovereign BBB+ and BBB exposures previously mapped to Credit Quality band 'Good' being mapped to Credit Quality Band 'Strong'. Sovereign BB+ and BB exposures previously mapped to Credit Quality band 'Satisfactory' being mapped to Credit Quality Band 'Good'. This represents a change in disclosure mapping unrelated to changes in counterparty creditworthiness. Had this mapping been applied in 2015, sovereign exposures would be changed as follows: 'Satisfactory' \$1.4bn decrease, 'Good' \$4.3bn decrease and \$5.7bn 'Strong' increase.

### Credit quality classification

	Footnotes	Sovereign debt securities and bills	Other debt securities and bills	Wholesale lending and derivatives		Retail lending	
		External credit rating	External credit rating	Internal credit rating	12-month probability of default %	Internal credit rating	Expected loss %
<b>Quality classification</b>							
Strong	1, 2	<b>BBB and above</b>	<b>A- and above</b>	<b>CRR1 to CRR2</b>	<b>0 – 0.169</b>	<b>EL1 to EL2</b>	<b>0 – 0.999</b>
Good		<b>BB to BBB-</b>	<b>BBB+ to BBB-</b>	<b>CRR3</b>	<b>0.170 – 0.740</b>	<b>EL3</b>	<b>1.000 – 4.999</b>
Satisfactory		<b>BB- to B and unrated</b>	<b>BB+ to B and unrated</b>	<b>CRR4 to CRR5</b>	<b>0.741 – 4.914</b>	<b>EL4 to EL5</b>	<b>5.000 – 19.999</b>
Sub-standard		<b>B- to C</b>	<b>B- to C</b>	<b>CRR6 to CRR8</b>	<b>4.915 – 99.999</b>	<b>EL6 to EL8</b>	<b>20.000 – 99.999</b>
Impaired	3	<b>Default</b>	<b>Default</b>	<b>CRR9 to CRR10</b>	<b>100</b>	<b>EL9 to EL10</b>	<b>100+ or defaulted</b>

1 Customer risk rating.

2 Expected loss ('EL').

3 The EL percentage is derived through a combination of probability of default ('PD') and loss given default ('LGD'), and may exceed 100% in circumstances where the LGD is above 100% reflecting the cost of recoveries.

### Quality classification definitions

- 'Strong' exposures demonstrate a strong capacity to meet financial commitments, with negligible or low probability of default and/or low levels of expected loss.
- 'Good' exposures require closer monitoring and demonstrate a good capacity to meet financial commitments, with low default risk.
- 'Satisfactory' exposures require closer monitoring and demonstrate an average to fair capacity to meet financial commitments, with moderate default risk.
- 'Sub-standard' exposures require varying degrees of special attention and default risk is of greater concern.
- 'Impaired' exposures have been assessed as impaired, as described on page 90. These also include retail accounts classified as EL1 to EL8 that are delinquent by more than 90 days, unless individually they have been assessed as not impaired; and renegotiated loans that have met the requirements to be disclosed as impaired and have not yet met the criteria to be returned to the unimpaired portfolio (see below).

### Renegotiated loans and forbearance

(Audited)

Where a loan is modified due to significant concerns about the borrower's ability to meet contractual payments when due, a range of forbearance strategies is employed in order to improve the management of customer relationships, maximise collection opportunities and, if possible, avoid default, foreclosure or repossession.

### Identifying renegotiated loans

Loans are identified as renegotiated loans when we modify the contractual payment terms due to significant credit distress of the borrower. 'Forbearance' describes concessions made on the contractual terms of a loan in response to an obligor's financial difficulties. We classify and report loans on which concessions have been granted under conditions of credit distress as 'renegotiated loans' when their contractual payment terms have been modified because we have significant concerns about the borrowers' ability to meet contractual payments when due. When considering modification terms, the borrower's continued ability to repay is assessed and where they are unrelated to payment arrangements, whilst potential indicators of impairment, these loans are not considered as renegotiated loans. In HSBC Finance, loan modification and re-age policies, renegotiated real estate loans are not eligible for a subsequent renegotiation for six or 12 months depending upon the action, with a maximum of five renegotiations permitted within a five-year period. Loans that have been identified as renegotiated retain this designation until maturity or derecognition. A loan that is renegotiated is derecognised if the existing agreement is cancelled and a new agreement is made on substantially different terms or if the terms of an existing agreement are modified such that the renegotiated loan is substantially a different financial instrument. Any new loans that arise following derecognition events will continue to be disclosed as renegotiated loans.

### Credit quality of renegotiated loans

On execution of the renegotiation, the loan will also be classified as impaired if it is not already so classified. In wholesale lending, all of the facilities with a customer, including loans which have not been modified, are considered impaired

following the provision of a renegotiated loan. In our US CML run-off portfolio in HSBC Finance, loans which are in the early stages of delinquency (less than 60 days delinquent) and typically have the equivalent of two payments deferred for the first time are not considered impaired, as the contractual payment deferrals are deemed to be insignificant compared with payments due on the loan as a whole.

Those loans that are considered impaired retain the impaired classification for a minimum of one year. Renegotiated loans will continue to be disclosed as impaired until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows (the evidence typically comprises a history of payment performance against the original or revised terms), and there are no other indicators of impairment. In our US CML run-off portfolio in HSBC Finance, all modified loans with terms of more than two years are considered to be permanently impaired.

### Renegotiated loans and recognition of impairment allowances

(Audited)

For retail lending, renegotiated loans are segregated from other parts of the loan portfolio for collective impairment assessment to reflect the higher rates of losses often encountered in these segments.

For wholesale lending, renegotiated loans are typically assessed individually. Credit risk ratings are intrinsic to the impairment assessment. The individual impairment assessment takes into account the higher risk of the non-payment of future cash flows inherent in renegotiated loans.

### Impairment assessment

(Audited)

For details of our impairment policies on loans and advances and financial investments, see Note 1 to the Financial Statements.

### Write-off of loans and advances

(Audited)

For details of our policy on the write-off of loans and advances, see Note 1 to the Financial Statements.

In HSBC Finance, the carrying amounts of residential mortgages and second lien loans in excess of net realisable value are written off at or before the time foreclosure is completed or settlement is reached with the borrower. If there is no reasonable expectation of recovery, and foreclosure is pursued, the loan is normally written off no later than the end of the month in which the loan becomes 180 days contractually past due.

Unsecured personal facilities, including credit cards, are generally written off at between 150 and 210 days past due. The standard period runs until the end of the month in which the account becomes 180 days contractually delinquent. Write-off periods may be extended, generally to no more than 360 days past due but, in very exceptional circumstances, to longer in a few countries where local regulation or legislation constrain earlier write-off, or where the realisation of collateral for secured real estate lending takes this time.

For secured personal facilities, final write-off should generally occur within 60 months of the default at the latest.

In the event of bankruptcy or analogous proceedings, write-off may occur earlier than the periods stated above. Collection procedures may continue after write-off.

### **Impairment methodologies for available-for-sale asset-backed securities ('ABSs')**

(Audited)

To identify objective evidence of impairment for available-for-sale ABSs, an industry standard valuation model is normally applied which uses data with reference to the underlying asset pools and models their projected future cash flows. The estimated future cash flows of the securities are assessed at the specific financial asset level to determine whether any of them are unlikely to be recovered as a result of loss events occurring on or before the reporting date.

The principal assumptions and inputs to the models are typically the delinquency status of the underlying loans, the probability of delinquent loans progressing to default, the prepayment profiles of the underlying assets and the loss severity in the event of default. However, the models utilise other variables relevant to specific classes of collateral to forecast future defaults and recovery rates. Management uses externally available data and applies judgement when determining the appropriate assumptions in respect of these factors. We use a modelling approach which incorporates historically observed progression rates to default to determine if the decline in aggregate projected cash flows from the underlying collateral will lead to a shortfall in contractual cash flows. In such cases, the security is considered to be impaired.

In respect of collateralised debt obligations ('CDOs'), expected future cash flows for the underlying collateral are assessed to determine whether there is likely to be a shortfall in the contractual cash flows of the CDO.

When a security benefits from a contract provided by a monoline insurer that insures payments of principal and interest, the expected recovery on the contract is assessed in determining the total expected credit support available to the ABS.

### **Liquidity and funding risk management**

*Details of changes in our liquidity and funding risk profile in 2016 can be found on page 85, in 'Key developments and risk profile in 2016'.*

#### **Liquidity and funding risk management framework**

HSBC has an internal liquidity and funding risk management framework ('LFRF') which aims to allow it to withstand very severe liquidity stresses. It is designed to be adaptable to changing business models, markets and regulations.

The management of liquidity and funding is primarily undertaken locally (by country) in our operating entities in compliance with the Group's LFRF, and with practices and

limits set by the GMB through the RMM and approved by the Board. Our general policy is that each defined operating entity should be self-sufficient in funding its own activities. Where transactions exist between operating entities, they are reflected symmetrically in both entities.

As part of our asset, liability and capital management ('ALCM') structure, we have established asset and liability committees ('ALCO') at Group level, in the regions and in operating entities. The terms of reference of all ALCOs include the monitoring and control of liquidity and funding.

The primary responsibility for managing liquidity and funding within the Group's framework and risk appetite resides with the local operating entities' ALCOs, Holdings ALCO and the RMM. The remaining smaller operating entities are overseen by regional ALCOs, with appropriate escalation of significant issues to Holdings ALCO and the RMM.

Operating entities are predominantly defined on a country basis to reflect our local management of liquidity and funding. Typically, an operating entity will be defined as a single legal entity. However, to take account of the situation where operations in a country are booked across multiple subsidiaries or branches:

- an operating entity may be defined as a wider sub-consolidated group of legal entities if they are incorporated in the same country, liquidity and funding are freely fungible between the entities and permitted by local regulation, and the definition reflects how liquidity and funding are managed locally; or
- an operating entity may be defined more narrowly as a principal office (branch) of a wider legal entity operating in multiple countries, reflecting the local country management of liquidity and funding.

The RMM reviews and agrees annually the list of entities it directly oversees and the composition of these entities.

#### **Key developments in 2016**

On 1 January 2016, the Group implemented a new LFRF. It uses the liquidity coverage ratio ('LCR') and net stable funding ratio ('NSFR') regulatory framework as a foundation, but adds extra metrics, limits and overlays to address firm-specific risks:

The LFRF is delivered using the following key aspects:

- stand-alone management of liquidity and funding by operating entity;
- operating entity classification by inherent liquidity risk ('ILR') categorisation;
- minimum LCR requirement depending on ILR categorisation;
- minimum NSFR requirement depending on ILR categorisation;
- legal entity depositor concentration limit;
- three-month and 12-month cumulative rolling term contractual maturity limits covering deposits from banks, deposits from non-bank financial institutions and securities issued;
- annual individual liquidity adequacy assessment by principal operating entity;
- minimum LCR requirement by currency;
- intra-day liquidity; and
- forward-looking funding assessments.

The new internal LFRF and the risk tolerance limits were approved by the Board on the basis of recommendations made by the Group Risk Committee.

Our annual individual liquidity adequacy assessment process aims to:

- identify risks that are not reflected in the LFRF, and, where required, to assess additional limits required locally; and
- validate the risk tolerance at the operating entity level by demonstrating that reverse stress testing scenarios are acceptably remote and ensuring vulnerabilities have been assessed through the use of severe stress scenarios.

### Management of liquidity and funding risk

#### Liquidity coverage ratio

The HSBC application of the LCR metric involves the following two key assumptions about the definition of operational deposits and the ability to transfer liquidity from non-EU legal entities:

- we define operational deposits as transactional (current) accounts arising from the provision of custody services by HSBC Security Services or Global Liquidity and Cash Management, where the operational component is assessed to be the lower of the current balance and the separate notional values of debits and credits across the account in the previous calculation period; and
- we assume no transferability of liquidity from non-EU entities other than to the extent currently permitted.

#### Net stable funding ratio

HSBC uses the NSFR as a basis for establishing stable funding around the Group.

#### Liquid assets of HSBC's principal operating entities

Liquid assets are held and managed on a stand-alone operating entity basis. Most are held directly by each operating entity's Balance Sheet Management ('BSM') department, primarily for the purpose of managing liquidity risk in line with the LFRF.

The liquid asset buffer may also include securities in held-to-maturity portfolios. To qualify as part of the liquid asset buffer, held-to-maturity portfolios must have a deep and liquid repo market in the underlying security.

Liquid assets also include any unencumbered liquid assets held outside BSM departments for any other purpose. The LFRF gives ultimate control of all unencumbered assets and sources of liquidity to BSM.

#### Sources of funding

Customer deposits in the form of current accounts and savings deposits payable on demand or at short notice form the significant part of our stable funding, and we place considerable importance on maintaining their stability. For deposits, stability depends upon maintaining depositor confidence in our capital strength and liquidity, and on competitive and transparent pricing.

We also access wholesale funding markets by issuing senior secured and unsecured debt securities (publicly and privately) and borrowing from the secured repo markets against high-quality collateral, in order to obtain funding for non-banking subsidiaries that do not accept deposits, to align asset and liability maturities and currencies, and to maintain a presence in local wholesale markets.

Ordinary share capital and retained reserves, non-core capital instruments and total loss-absorbing capacity ('TLAC') eligible debt securities are also a source of stable funding.

#### Analysis of on-balance sheet encumbered and unencumbered assets and off-balance sheet collateral

An asset is defined as encumbered if it has been pledged as collateral against an existing liability and, as a result, is no longer available to the Group to secure funding, satisfy collateral needs or be sold to reduce the funding requirement. An asset is therefore categorised as unencumbered if it has not been pledged against an existing liability. Unencumbered assets are further segmented into four separate sub-categories: 'Readily realisable assets', 'Other realisable assets', 'Reverse repo/stock

borrowing receivables and derivative assets' and 'Cannot be pledged as collateral'.

#### Liquidity behaviouralisation

All stable deposits are assumed under the Group's frameworks to have a liquidity behaviouralised life beyond one year and to represent a homogeneous source of stable funding. The behaviouralisation of assets is far more granular and seeks to differentiate the period for which we must assume that we will need stable funding for the asset.

#### Funds transfer pricing

Our funds transfer pricing policies give rise to a two-stage funds transfer pricing approach, reflecting the fact that we separately manage interest rate risk and liquidity and funding risk under different assumptions. They have been developed to be consistent with our risk management frameworks. Each operating entity is required to apply the Group's transfer pricing policy framework to determine for each material currency the most appropriate interest rate risk transfer pricing curve, a liquidity premium curve (which is the spread over the interest rate risk transfer pricing curve) and a liquidity recharge assessment (which is the spread under or over the interest rate risk transfer pricing curve).

#### Repos and stock lending

GB&M provides collateralised security financing services to its clients, providing them with cash financing or specific securities. When cash is provided to clients against collateral in the form of securities, the cash provided is recognised on the balance sheet as a reverse repo. When securities are provided to clients against cash collateral, the cash received is recognised on the balance sheet as a repo or, if the securities are equity securities, as stock lending.

Each operating entity manages its collateral through a central collateral pool, in line with the LFRF. When specific securities need to be delivered and the entity does not have them currently available within the central collateral pool, the securities are borrowed on a collateralised basis. When securities are borrowed against cash collateral, the cash provided is recognised on the balance sheet as a reverse repo or, if the securities are equity securities, as stock borrowing.

Operating entities may also borrow cash against collateral in the form of securities, using the securities available in the central collateral pool. Repos and stock lending can be used in this way to fund the cash requirement arising from securities owned outright by Markets to facilitate client business, and the net cash requirement arising from financing client securities activity.

Reverse repos, stock borrowing, repos and stock lending are reported net when the IFRS offsetting criteria are met. In some cases, transactions to borrow or lend securities are collateralised using securities. These transactions are off-balance sheet.

Any security accepted as collateral for a reverse repo or stock borrowing transaction must be of very high quality and its value subject to an appropriate haircut. Securities borrowed under reverse repo or stock borrowing transactions can only be recognised as part of the liquidity asset buffer for the duration of the transactions and only if the security received is eligible under the liquid asset policy within the LFRF.

Credit controls are in place to ensure that the fair value of any collateral received remains appropriate to collateralise the cash or fair value of securities given.

#### HSBC Holdings

HSBC Holdings' primary sources of cash are dividends received from subsidiaries, interest on and repayment of intra-group loans and securities, and interest earned on its own liquid funds. HSBC Holdings also raises ancillary funds in the debt capital markets through subordinated and senior debt

issuances. Cash is primarily used for the provision of capital and subordinated funding to subsidiaries, interest payments to debt holders and dividend payments to shareholders.

HSBC Holdings is also subject to contingent liquidity risk by virtue of credit-related commitments and guarantees and similar contracts issued. Such commitments and guarantees are only issued after due consideration of HSBC Holdings' ability to finance the commitments and guarantees and the likelihood of the need arising.

HSBC Holdings actively manages the cash flows from its subsidiaries to optimise the amount of cash held at the holding company level. During 2016, consistent with the Group's capital plan, the Group's subsidiaries did not experience any significant restrictions on paying dividends or repaying loans and advances. Also, there are no foreseen restrictions envisaged with regard to planned dividends or payments. However, the ability of subsidiaries to pay dividends or advance monies to HSBC Holdings depends on, among other things, their respective local regulatory capital and banking requirements, exchange controls, statutory reserves, and financial and operating performance.

None of the subsidiaries that are excluded from our regulatory consolidation has capital resources below its minimum regulatory requirement.

## Market risk management

*Details of changes in our market risk profile in 2016 can be found on page 85, in 'Key developments and risk profile in 2016'.*

There were no material changes to our policies and practices for the management of market risk in 2016.

### Market risk in global businesses

The diagram below summarises the main business areas where trading and non-trading market risks reside, and the market risk

measures used to monitor and limit exposures.

Risk types	Trading risk	Non-trading risk
	<ul style="list-style-type: none"> <li>Foreign exchange and commodities</li> <li>Interest rates</li> <li>Credit spreads</li> <li>Equities</li> </ul>	<ul style="list-style-type: none"> <li>Structural foreign exchange</li> <li>Interest rates<sup>1</sup></li> <li>Credit spreads</li> </ul>
Global business	GB&M and BSM <sup>2</sup>	GB&M, BSM <sup>2</sup> , GPB, CMB and RBWM
Risk measure	VaR   Sensitivity   Stress Testing	VaR   Sensitivity   Stress Testing

<sup>1</sup> The interest rate risk on the fixed-rate securities issued by HSBC Holdings is not included in the Group VaR. The management of this risk is described on page 106.

<sup>2</sup> BSM, for external reporting purposes, forms part of Corporate Centre while daily operations and risk are managed within GB&M.

Where appropriate, we apply similar risk management policies and measurement techniques to both trading and non-trading portfolios. Our objective is to manage and control market risk exposures to optimise return on risk while maintaining a market profile consistent with our established risk appetite.

The nature of the hedging and risk mitigation strategies performed across the Group corresponds to the market risk management instruments available within each operating jurisdiction. These strategies range from the use of traditional market instruments, such as interest rate swaps, to more sophisticated hedging strategies to address a combination of risk factors arising at the portfolio level.

### Market risk governance

(Audited)

Market risk is managed and controlled through limits approved by the RMM for HSBC Holdings. These limits are allocated across business lines and to the Group's legal entities.



## Market risk measures

### Monitoring and limiting market risk exposures

Our objective is to manage and control market risk exposures while maintaining a market profile consistent with our risk appetite.

We use a range of tools to monitor and limit market risk exposures including sensitivity analysis, value at risk and stress testing.

### Sensitivity analysis

Sensitivity analysis measures the impact of individual market factor movements on specific instruments or portfolios, including interest rates, foreign exchange rates and equity prices, such as the effect of a one basis point change in yield. We use sensitivity measures to monitor the market risk positions within each risk type. Sensitivity limits are set for portfolios, products and risk types, with the depth of the market being a principal factor in determining the level.

### Value at risk

(Audited)

Value at risk ('VaR') is a technique for estimating potential losses on risk positions as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence. The use of VaR is integrated into market risk management and calculated for all trading positions regardless of how we capitalise them. Where there is not an approved internal model, we use the appropriate local rules to capitalise exposures. In addition, we calculate VaR for non-trading portfolios to have a complete picture of risk. Where we do not calculate VaR explicitly, we use alternative tools as summarised in the 'Stress testing' section below.

Our models are predominantly based on historical simulation which incorporate the following features:

- historical market rates and prices are calculated with reference to foreign exchange rates, commodity prices, interest rates, equity prices and the associated volatilities;
- potential market movements utilised for VaR are calculated with reference to data from the past two years; and
- VaR measures are calculated to a 99% confidence level and use a one-day holding period.

The models also incorporate the effect of option features on the underlying exposures. The nature of the VaR models means that an increase in observed market volatility will lead to an increase in VaR without any changes in the underlying positions.

### VaR model limitations

Although a valuable guide to risk, VaR should always be viewed in the context of its limitations. For example:

- the use of historical data as a proxy for estimating future events may not encompass all potential events, particularly extreme ones;
- the use of a holding period assumes that all positions can be liquidated or the risks offset during that period, which may not fully reflect the market risk arising at times of severe illiquidity, when the holding period may be insufficient to liquidate or hedge all positions fully;
- the use of a 99% confidence level does not take into account losses that might occur beyond this level of confidence; and
- VaR is calculated on the basis of exposures outstanding at the close of business and therefore does not necessarily reflect intra-day exposures.

### Risk not in VaR framework

The risks not in VaR ('RNIV') framework aims to capture and capitalise material market risks that are not adequately covered in the VaR model, such as the LIBOR tenor basis.

Risk factors are reviewed on a regular basis and either incorporated directly in the VaR models, where possible, or quantified through the VaR-based RNIV approach or a stress test approach within the RNIV framework. The outcome of the VaR-based RNIV is included in the VaR calculation and back-testing; a stressed VaR RNIV is also computed for the risk factors considered in the VaR-based RNIV approach.

Stress-type RNIVs include a gap risk exposure measure to capture risk on non-recourse margin loans and a de-peg risk measure to capture risk to pegged and heavily-managed currencies.

### Stress testing

Stress testing is an important procedure that is integrated into our market risk management framework to evaluate the potential impact on portfolio values of more extreme, although plausible, events or movements in a set of financial variables. In such scenarios, losses can be much greater than those predicted by VaR modelling.

Stress testing is implemented at legal entity, regional and overall Group levels. A set of scenarios is used consistently across all regions within the Group. Scenarios are tailored to capture the relevant potential events or market movements at each level. The risk appetite around potential stress losses for the Group is set and monitored against referral limits.

Market risk reverse stress tests are undertaken on the premise that there is a fixed loss. The stress testing process identifies which scenarios lead to this loss. The rationale behind the reverse stress test is to understand scenarios that are beyond normal business settings and could have contagion and systemic implications.

Stressed VaR and stress testing, together with reverse stress testing and the management of gap risk, provide management with insights regarding the 'tail risk' beyond VaR, for which HSBC's appetite is limited.

### Trading portfolios

#### Back-testing

We routinely validate the accuracy of our VaR models by back-testing them against both actual and hypothetical profit and loss against the corresponding VaR numbers. Hypothetical profit and loss excludes non-modelled items such as fees, commissions and revenues of intra-day transactions.

We would expect, on average, to see two or three profits and two or three losses in excess of VaR at the 99% confidence level over a one-year period. The actual number of profits or losses in excess of VaR over this period can therefore be used to gauge how well the models are performing.

We back-test our Group VaR at various levels that reflect a full legal entity scope of HSBC, including entities that do not have local permission to use VaR for regulatory purposes.

### Structural foreign exchange exposures

Structural foreign exchange exposures represent net investments in subsidiaries, branches and associates, the functional currencies of which are currencies other than the US dollar. An entity's functional currency is that of the primary economic environment in which the entity operates.

Exchange differences on structural exposures are recognised in 'Other comprehensive income'. We use the US dollar as our presentation currency in our consolidated financial statements because the US dollar and currencies linked to it form the major currency bloc in which we transact and fund our business. Our consolidated balance sheet is, therefore, affected by exchange differences between the US dollar and all the non-US dollar functional currencies of underlying subsidiaries.

We hedge structural foreign exchange exposures only in limited circumstances. Our structural foreign exchange exposures are managed with the primary objective of ensuring, where

practical, that our consolidated capital ratios and the capital ratios of individual banking subsidiaries are largely protected from the effect of changes in exchange rates.

### Interest rate risk in the banking book

The Asset, Liability and Capital Management ('ALCM') function is responsible for measuring and controlling interest rate risk in the banking book under the supervision of the RMM.

The component of the interest rate risk in the banking book outside Balance Sheet Management ('BSM') or Global Markets that can be economically neutralised by fixed-rate government bonds or interest rate derivatives is transfer priced to and managed by BSM. The banking book interest rate risk transferred to BSM is reflected in the Group's non-traded VaR measure.

BSM is overseen by the Market Risk and Product Control functions in exactly the same way as Global Markets.

The price at which interest rate risk is transferred to BSM is determined by the entity's prevailing interest rate risk transfer pricing curve defined by operating entities Asset and Liability Management Committee ('ALCO'), in accordance with the Group's funds transfer pricing policies. The transfer price seeks to reflect the price at which BSM could neutralise the risk in the market at the point of transfer.

The banking book interest rate risk within HSBC Holdings is not transferred to BSM and is managed as an ALCO book.

### Interest rate risk behaviouralisation

In assessing the banking book interest rate risk outside BSM and Global Markets, interest rate repricing behaviouralisation techniques are used where the interest repricing profile is uncertain due to customer/bank optionality or where non-interest bearing balances are withdrawable.

The maximum tenor to which any individual tranche of a non-interest bearing withdrawable/repayable customer balance or equity can be behaviouralised is 10 years. The maximum weighted average behaviouralised tenor for any portfolio is five years. Interest-bearing managed/administered rate balances are behaviouralised to tenors less than one year, typically one month or three months.

The maximum percentage of any portfolio that can be behaviouralised is 90% with the residual treated as contractual, meaning overnight.

Unlike liquidity risk, which is assessed on the basis of a very severe stress scenario, banking book interest rate risk is assessed and managed according to business-as-usual conditions. In many cases, the contractual profile of banking book assets/liabilities arising from assets/liabilities created outside Markets or BSM does not reflect the behaviour observed.

Where there is no certainty with regard to interest rate repricing profile, behaviouralisation is used to assess the market interest rate risk of banking book assets/liabilities and this assessed market risk is transferred to BSM, in accordance with the rules governing the transfer of interest rate risk from the global businesses to BSM.

Behaviouralisation is applied in three key areas:

- the assessed repricing frequency of managed rate balances;
- the assessed duration of non-interest bearing balances, typically capital and current accounts; and
- the base case expected prepayment behaviour or pipeline take-up rate for fixed-rate balances with embedded optionality.

Interest rate behaviouralisation policies have to be formulated in line with the Group's behaviouralisation policies and approved at least annually by local ALCOs.

The extent to which balances can be behaviouralised is driven by:

- the amount of the current balance that can be assessed as constant under business-as-usual conditions; and
- for managed rate balances, the historical market interest rate repricing behaviour observed; or
- for non-interest bearing balances, the duration for which the balance is expected to remain under business-as-usual conditions. This assessment is often driven by the re-investment tenors available to BSM to neutralise the risk through the use of fixed-rate government bonds or interest rate derivatives, and for derivatives the availability of cash flow hedging capacity.

### Measurement of interest rate risk in the banking book

Interest rate risk in the banking book is measured and controlled using three metrics:

- non-traded VaR;
- net interest income sensitivity; and
- economic value of equity.

Non-traded VaR excludes the non-traded interest rate risk not transferred to BSM and the non-traded interest rate risk of HSBC Holdings.

Net interest income ('NII') sensitivity captures the expected impact of changes in interest rates on base case projected net interest income.

Economic value of equity ('EVE') captures the expected impact of changes in interest rates on base case economic value. It captures all non-traded items irrespective of the profit and loss accounting treatment.

### Balance Sheet Management

Effective governance across BSM is supported by the dual reporting lines it has to the Chief Executive Officer of GB&M and to the Group Treasurer. In each operating entity, BSM is responsible for managing liquidity and funding under the supervision of the local ALCO (which usually meets on a monthly basis). It also manages the banking book interest rate positions transferred to it within a Markets limit structure.

In executing the management of the liquidity risk on behalf of ALCO, and managing the banking book interest rate positions transferred to it, BSM invests in highly rated liquid assets in line with the Group's liquid asset policy. The majority of the liquidity is invested in central bank deposits and government, supranational and agency securities, with most of the remainder held in short-term interbank and central bank loans.

Withdrawable central bank deposits are accounted for as cash balances. Interbank loans, statutory central bank reserves and loans to central banks are accounted for as loans and advances to banks. BSM's holdings of securities are accounted for as available-for-sale or, to a lesser extent, held-to-maturity assets.

Statutory central bank reserves are not recognised as liquid assets. The statutory reserves that would be released in line with the Group's stressed customer deposit outflow assumptions are reflected as stressed inflows.

BSM is permitted to use derivatives as part of its mandate to manage interest rate risk. Derivative activity is predominantly through the use of vanilla interest rate swaps which are part of cash flow hedging and fair value hedging relationships.

Credit risk in BSM is predominantly limited to short-term bank exposure created by interbank lending, exposure to central banks and high-quality sovereigns, supranationals or agencies which constitute the majority of BSM's liquidity portfolio. BSM does not manage the structural credit risk of any Group entity balance sheet.

BSM is permitted to enter into single name and index credit derivatives activity, but it does so to manage credit risk on the

exposure specific to its securities portfolio in limited circumstances only. The risk limits are extremely limited and closely monitored. At 31 December 2016, BSM had no open credit derivative index risk.

VaR is calculated on positions held in BSM and is calculated by applying the same methodology used for the Markets business and utilised as a tool for market risk control purposes.

The vast majority of BSM's VaR arises from banking book portfolios and is classified as non-traded VaR.

BSM is predominantly involved in managing liquidity in accordance with the LFRF, managing the daily cash position and managing the non-traded interest rate risk transferred to it, within non-traded market risk limits.

#### Net interest income sensitivity

A principal part of our management of non-traded interest rate risk is to monitor the sensitivity of expected net interest income under varying interest rate scenarios (simulation modelling), where all other economic variables are held constant. This monitoring is undertaken at an entity level by local ALCOs.

Entities apply a combination of scenarios and assumptions relevant to their local businesses, and standard scenarios which are required throughout HSBC. The latter are consolidated to illustrate the combined pro forma effect on our consolidated net interest income.

Projected net interest income sensitivity figures represent the effect of the pro forma movements in projected yield curves based on a static balance sheet size and structure assumption, other than instances where the size of the balances or repricing is deemed interest rate sensitive (non-interest bearing current account migration and fixed rate loan early prepayment) and where non-traded VaR is assumed to contractually run off. This effect, however, does not incorporate actions which would probably be taken by BSM or in the business units to mitigate the effect of interest rate risk. In reality, BSM proactively seeks to change the interest rate risk profile to optimise net revenues. The net interest income sensitivity calculations assume that interest rates of all maturities move by the same amount in the 'up-shock' scenario. Rates are not assumed to become negative in the 'down-shock' scenario unless the central bank rate is already negative and then not assumed to go further negative, which may, in certain currencies, effectively result in non-parallel shock. In addition, the net interest income sensitivity calculations take account of the effect on net interest income of anticipated differences in changes between interbank interest rates and interest rates over which the entity has discretion in terms of the timing and extent of rate changes.

#### Economic value of equity

An economic value of equity ('EVE value') represents the present value of future banking book cash flows that could be distributed to equity providers under a managed run-off scenario, which represents the current book value of equity plus the present value of future net interest income under a managed run-off scenario. The present value of net interest income under a managed run-off and under any interest rate scenario can therefore be assessed by deducting the book value of equity from the EVE value calculated.

An EVE sensitivity is the extent to which the EVE value will change due to a pre-specified movement in interest rates, where all other economic variables are held constant. The EVE sensitivity represents the sensitivity of discounted net interest income plus the sensitivity of the net present value of any transactions used to hedge the interest income earned on equity. If the EVE sensitivity is adjusted to remove the sensitivity in net present value of any transactions used to hedge the interest income earned on equity, the resulting adjusted EVE sensitivity represents the extent to which, under a managed run-off scenario, discounted net interest income is sensitive to a pre-specified movement in interest rates.

When assessing the sensitivity of economic value of equity to interest rate movements, the timing of principal cash flows can vary but the amount remains constant.

Operating entities are required to monitor EVE sensitivity as a percentage of total capital resources and adjusted EVE sensitivity as a percentage of the present value of future net interest income (base case EVE minus book value of equity) under a managed run-off assumption.

EVE can also be used for assessing the economic capital required to support interest rate risk in the banking book ('IRRBB'):

- Where EVE under any scenario is higher than the current balance sheet carrying value of equity, the banking book income stream is positive (i.e. profit) and therefore capital accretive under that scenario and no economic capital for IRRBB is required.
- Where EVE of any scenario is lower than the current balance sheet carrying value of equity, the banking book income stream is negative (i.e. loss) and therefore capital deductive under that scenario and economic capital for IRRBB should be held against this loss.

Where banking book assets/liabilities are fair valued through profit and loss or where the fair value changes impact capital resources (i.e. available for sale), economic capital for this interest rate sensitivity is additionally assessed using a stressed VaR approach.

#### HSBC Holdings

As a financial services holding company, HSBC Holdings has limited market risk activity. Its activities predominantly involve maintaining sufficient capital resources to support the Group's diverse activities; allocating these capital resources across our businesses; earning dividend and interest income on its investments in our businesses; providing dividend payments to its equity shareholders and interest payments to providers of debt capital; and maintaining a supply of short-term capital resources for deployment under extraordinary circumstances. It does not take proprietary trading positions.

The main market risks to which HSBC Holdings is exposed are banking book interest rate risk and foreign currency risk. Exposure to these risks arises from short-term cash balances, funding positions held, loans to subsidiaries, investments in long-term financial assets and financial liabilities including debt capital issued. The objective of HSBC Holdings' market risk management strategy is to reduce exposure to these risks and minimise volatility in capital resources, cash flows and distributable reserves. Market risk for HSBC Holdings is monitored by Holdings ALCO in accordance with its risk appetite statement.

HSBC Holdings uses interest rate swaps and cross-currency interest rate swaps to manage the interest rate risk and foreign currency risk arising from its long-term debt issues.

#### Operational risk management

*Details of our operational risk profile in 2016 can be found on page 121, in 'Operational risk exposures in 2016'.*

Responsibility for minimising operational risk lies with all HSBC's employees. Specifically, all staff are required to manage the operational risks of the business and operational activities for which they are responsible.

#### Overview

The objective of our operational risk management is to manage and control operational risk in a cost-effective manner within targeted levels of operational risk consistent with our risk appetite, as defined by the GMB.

## Key developments in 2016

HSBC's operational risk management framework ('ORMF') is our overarching approach for managing operational risk, the purpose of which is to:

- identify and manage our non-financial operational risks in an effective manner;
- remain within the Group's operational risk appetite, which helps the organisation understand the level of risk it is willing to accept; and
- drive forward-looking risk awareness and assist management focus during 2016.

Activity to strengthen our risk culture and better embed the use of the ORMF was further implemented in 2016, in particular the use of the activity-based three lines of defence model, which sets out roles and responsibilities for managing operational risks on a daily basis.

*Further information on the three lines of defence model can be found in the 'Our risk management framework' section on page 68.*

## Governance and structure

The ORMF defines minimum standards and processes, and the governance structure for the management of operational risk and internal control in our geographical regions, global businesses and global functions. The ORMF has been codified in a high-level standards manual, supplemented with detailed policies, which describes our approach to identifying, assessing, monitoring and controlling operational risk and gives guidance on mitigating action to be taken when weaknesses are identified.

Operational risk is organised as a specific risk discipline within Global Risk, and a formal governance structure provides oversight over its management. The Global Operational Risk sub-function supports the Group Chief Risk Officer and the Global Operational Risk Committee. It is responsible for leading the embedding of the ORMF and assurance of adherence to associated policies and processes across the first and second lines. It is also responsible for preparation of operational risk reporting at Group level, including reports for consideration by the RMM and the Group Risk Committee. The Global Operational Risk Committee meets at least quarterly to discuss key risk issues and review the effective implementation of the ORMF.

## Key risk management processes

Business managers throughout the Group are responsible for maintaining an acceptable level of internal control commensurate with the scale and nature of operations, and for identifying and assessing risks, designing controls and monitoring the effectiveness of these controls. The ORMF helps managers to fulfil these responsibilities by defining a standard risk assessment methodology and providing a tool for the systematic reporting of operational loss data.

A centralised database is used to record the results of the operational risk management process. Operational risk and control self-assessments are inputted and maintained by business units. Business and functional management and business risk and control managers monitor the progress of documented action plans to address shortcomings. To help ensure that operational risk losses are consistently reported and monitored at Group level, all Group companies are required to report individual losses when the net loss is expected to exceed \$10,000, and to aggregate all other operational risk losses under \$10,000. Losses are entered into the Group operational risk database and reported to the RMM on a monthly basis.

## Regulatory compliance risk management

### Overview

The Regulatory Compliance sub-function ('RC') provides independent, objective oversight and challenge and promotes a compliance-orientated culture, supporting the business in delivering fair outcomes for customers, maintaining the integrity of financial markets and achieving HSBC's strategic objectives.

## Key developments in 2016

In the second half of 2016, we restructured part of our Global Risk function. The Financial Crime Compliance sub-function became part of our new Financial Crime Risk function, which reports directly to the Group Chief Executive (see 'Financial crime risk management' below). The RC sub-function remains part of Global Risk, and continues to oversee management of regulatory compliance risk.

## Governance and structure

The Global Head of RC reports to the Group Chief Risk Officer. To align with our global business structure and help ensure coverage of local regulatory requirements, RC is structured as a global function with regional and country RC teams, which support and advise each global business and global function.

## Key risk management processes

We regularly review our policies and procedures. Global policies and procedures require the prompt identification and escalation of any actual or potential regulatory breach to RC. Reportable events are escalated to the RMM and the Group Risk Committee, as appropriate. Matters relating to the Group's regulatory conduct of business are reported to the Conduct & Values Committee.

## Conduct of business

In 2016, we continued to take steps to raise our standards relating to conduct, which included:

- designing further global mandatory conduct training for delivery to all employees in 2017;
- incorporating the assessment of expected values and behaviours as key determinants in recruitment, performance appraisal and remuneration processes;
- improving our Group-wide market surveillance capability;
- introducing policies and procedures to strengthen support for potentially vulnerable customers;
- enhancing the quality and depth of conduct management information and how it is used across the Group;
- implementing an assessment process to check the effectiveness of our conduct initiatives across the Group; and
- assessing conduct standards and practices within our key third-party suppliers and distributors.

The Board maintained oversight of conduct matters through the Conduct & Values Committee.

*Further information on our conduct is provided in the Strategic Report on page 22 and www.hsbc.com. For conduct-related costs relating to significant items, see page 62.*

## Financial crime risk management

### Overview

In the second half of 2016, we established a Financial Crime Risk ('FCR') function and appointed a Group Head of FCR, who reports to the Group Chief Executive and chairs the Global Standards Steering Meeting. FCR is a global function that brings together all areas of financial crime risk management at HSBC and is dedicated to implementing the most effective global standards to combat financial crime. The function has been set up to enable us to build on our achievements in managing financial crime risk effectively across the bank and

to continue to strengthen financial crime detection, and anti-money laundering ('AML'), sanctions and anti-bribery and corruption compliance.

### Key developments in 2016

The FCR function encompasses FCR Assurance, Financial Crime Compliance, Financial Crime Threat Mitigation, the Global Standards programme, the Monitor Liaison Office, FCR Strategy Implementation, FCR Chief of Staff and FCR COO.

The structure has been designed around the following key principles:

- FCR sets policy and standards, provides subject matter expertise and guidance, drives execution at country level via regions, and maintains line of business subject matter expertise in support of the global businesses.
- Country-level execution accountability is driven by a common set of global principles with material variations managed by exception.
- Sub-functions within FCR are leveraged across the global function, ensuring consistency and utilising expertise and resourcing.

### Key risk management processes

We continue to embed policies and procedures, introduce new technology solutions and support the cultural change needed to effectively manage financial crime risk. A key enhancement during 2016 was the deployment of our global customer due diligence system to 35 markets for RBWM, 52 for CMB, 36 for GB&M and two for GPB. This, along with the enhanced financial crime risk training that we have taken more than 3,500 senior leaders through globally, will help ensure our people have the guidance and tools that they need.

The Group Head of FCR attends the Financial System Vulnerabilities Committee ('FSVC'), which reports to the Board on matters relating to financial crime and financial system abuse and provides a forward-looking perspective on financial crime risk, as well as cyber and information security. In 2016, the FSVC assumed responsibility from the CVC for oversight of controls relating to anti-bribery and corruption.

Throughout the year the Committee received regular reports from country chief executives on the actions being taken by management to address local financial crime risk issues and vulnerabilities, and also received reports on specific issues.

### The Monitor

Under the agreements entered into with the DoJ and the FCA in 2012, including the five-year US DPA, the Monitor was appointed in July 2013 for an expected five-year period to produce annual assessments of the effectiveness of the Group's AML and sanctions compliance programme.

In February 2017, the Monitor delivered his third annual follow-up review report based on various thematic and country reviews he had conducted over the course of 2016. In his report, the Monitor concluded that, in 2016, HSBC continued to make progress in enhancing its financial crime compliance controls, including improvements to its Global AML policies and procedures. However, the Monitor also expressed significant concerns about the pace of that progress, instances of potential financial crime that the DoJ and HSBC are reviewing further and on-going systems and control deficiencies that in his view raised questions as to whether HSBC is adhering to its obligations under the US DPA - a matter that would be determined by the DoJ in its sole discretion. The Monitor also found that there remain substantial challenges for HSBC to meet its goal of developing a reasonably effective and sustainable AML and sanctions compliance programme. In addition, the Monitor did not certify as to HSBC's implementation of and adherence to remedial measures specified in the US DPA. The 'US deferred prosecution

agreement and related agreements and consent orders' are discussed in 'Top and emerging risks' on page 64.

Throughout 2016, the FSVC received regular reports on HSBC's relationship with the Monitor and its compliance with the US DPA. The FSVC received regular updates on the preliminary findings arising from the Monitor's third annual review, and has received the Monitor's third annual review report.

### Insurance manufacturing operations risk management

Details of changes in our insurance manufacturing operations risk profile in 2016 can be found on page 121, in 'Insurance manufacturing operations risk profile'.

There were no material changes to our policies and practices for the management of risks arising in our insurance manufacturing operations in 2016.

### Governance

(Audited)

Insurance risks are managed to a defined risk appetite, which is aligned to the Group risk appetite and risk management framework, including the Group three lines of defence model. For details of the Group's governance framework, see page 68. The Group Insurance Risk Management Meeting oversees the control framework globally and is accountable to the RBWM Risk Management Meeting on risk matters relating to the insurance business.

The monitoring of the risks within the insurance operations is carried out by insurance risk teams. Specific risk functions, including Wholesale Credit & Market Risk, Operational Risk, Information Security Risk and Financial Crime Risk, support Insurance Risk teams in their respective areas of expertise.

### Stress and scenario testing

(Audited)

Stress testing forms a key part of the risk management framework for the insurance business. We participate in local and Group-wide regulatory stress tests, including the Bank of England stress test of the banking system, the Hong Kong Monetary Authority stress test, the European Insurance and Occupational Pensions Authority stress test, and individual country insurance regulatory stress tests.

These have highlighted that a key risk scenario for the insurance business is a prolonged low interest rate environment. In order to mitigate the impact of this scenario, the insurance operations have a range of strategies that could be employed including the hedging of investment risk, repricing current products to reflect lower interest rates, improving risk diversification, moving towards less capital intensive products, and developing investment strategies to optimise the expected returns against the cost of economic capital.

### Management and mitigation of key risk types

#### Market risk

(Audited)

All our insurance manufacturing subsidiaries have market risk mandates which specify the investment instruments in which they are permitted to invest and the maximum quantum of market risk which they may retain. They manage market risk by using, among others, some or all of the techniques listed below, depending on the nature of the contracts written:

- For products with discretionary participating features ('DPF'), adjusting bonus rates to manage the liabilities to policyholders. The effect is that a significant portion of the market risk is borne by the policyholder.
- Asset and liability matching where asset portfolios are structured to support projected liability cash flows. The group manages its assets using an approach that considers asset quality, diversification, cash flow matching, liquidity,

volatility and target investment return. It is not always possible to match asset and liability durations due to uncertainty over the receipt of all future premiums and the timing of claims; and also because the forecast payment dates of liabilities may exceed the duration of the longest dated investments available. We use models to assess the effect of a range of future scenarios on the values of financial assets and associated liabilities, and ALCOs employ the outcomes in determining how to best structure asset holdings to support liabilities.

- Using derivatives to protect against adverse market movements or better match liability cash flows.
- For new products with investment guarantees, considering the cost when determining the level of premiums or the price structure.
- Periodically reviewing products identified as higher risk, which contain investment guarantees and embedded optionality features linked to savings and investment products.
- Designing new products to mitigate market risk, such as changing the investment return sharing portion between policyholders and the shareholder.
- Exiting, to the extent possible, investment portfolios whose risk is considered unacceptable.
- Repricing premiums charged to policyholders.

### Credit risk

(Audited)

Our insurance manufacturing subsidiaries are responsible for the credit risk, quality and performance of their investment portfolios. Our assessment of the creditworthiness of issuers and counterparties is based primarily upon internationally recognised credit ratings and other publicly available information.

Investment credit exposures are monitored against limits by our local insurance manufacturing subsidiaries, and are aggregated and reported to the Group Insurance Credit Risk and Group Credit Risk functions. Stress testing is performed by Group Insurance on the investment credit exposures using credit spread sensitivities and default probabilities.

We use a number of tools to manage and monitor credit risk. These include a credit report which contains a watch-list of investments with current credit concerns. The report is circulated monthly to senior management in Group Insurance and the individual country chief risk officers to identify investments which may be at risk of future impairment.

### Liquidity risk

(Audited)

Risk is managed by cash flow matching and maintaining sufficient cash resources, investing in high credit-quality investments with deep and liquid markets, monitoring investment concentrations and restricting them where appropriate, and establishing committed contingency borrowing facilities.

Insurance manufacturing subsidiaries are required to complete quarterly liquidity risk reports for the Group Insurance Risk function and an annual review of the liquidity risks to which they are exposed.

### Insurance risk

HSBC Insurance primarily uses the following techniques to manage and mitigate insurance risk:

- product design, pricing and overall proposition management (for example, management of lapses by introducing surrender charges);
- underwriting policy;
- claims management processes; and

- reinsurance which cedes risks above our acceptable thresholds to an external reinsurer thereby limiting our exposure.

### Reputational risk management

There were no material changes to our policies and practices for the management of reputational risk in 2016.

#### Overview

Reputational risk relates to stakeholders' perceptions, whether fact-based or otherwise. Stakeholders' expectations change constantly, and so reputational risk is dynamic and varies between geographical regions, groups and individuals. We have an unwavering commitment to operating at the high standards we set for ourselves in every jurisdiction. Any lapse in standards of integrity, compliance, customer service or operating efficiency represents a potential reputational risk.

#### Governance and structure

The development of policies, management and mitigation of reputational risk are coordinated through the Group Reputational Risk Policy Committee, which is chaired by the Group Chairman. In parallel, the Global Risk Resolution Committee, chaired by the Chief Risk Officer, is the highest decision-making forum in the Group for matters arising from clients or transactions that either present a serious potential reputational risk to the Group, or merit a Group-led decision to ensure a consistent risk management approach across our regions and global businesses. Both committees keep the RMM apprised of areas and activities presenting significant reputational risk and, where appropriate, make recommendations to the RMM to mitigate such risks. Significant issues posing reputational risk are also reported to the Board and the Conduct & Values Committee, where appropriate.

#### Key risk management processes

The External Affairs function maintains policies and gives policy advice for the issues that might affect HSBC's reputation and standing with customers, employees, opinion formers and the public. It oversees the identification, management and control of reputational risk for all HSBC Group entities in the areas of media relations and engagement with non-governmental organisations and other external stakeholders.

Our Reputational Risk and Client Selection ('RRCS') team, which is jointly managed by the Global Head of Financial Crime Compliance and the Global Head of Regulatory Compliance, oversees the identification, management and control of all other significant reputational risks across HSBC Group. It is responsible for setting policies to guide the Group's reputational risk management, devising strategies to protect against reputational risk, and advising the global businesses and global functions to help them identify, assess and mitigate such risks, where possible. It is led by a headquarters-based team. This is supported by teams in each business line and region, which help ensure that issues are directed to the appropriate forums, that decisions are made and implemented effectively, and that management information is generated to aid senior management in the businesses and regions in understanding where reputational risk exists. Each global business has established a governance process that empowers the RRCS's committees to address reputational risk issues at the right level, escalating decisions where appropriate. The global functions manage and escalate reputational risks within established operational risk frameworks.

Our policies set out our risk appetite and operational procedures for all areas of reputational risk, including financial crime prevention, regulatory compliance, conduct-related concerns, environmental impacts, human rights matters and employee relations.

We have taken, and are taking, measures to address the requirements of the US DPA and enhance our AML, sanctions

and other regulatory compliance frameworks. These measures should also enhance our reputational risk management in the future. For further details on our financial crime risk, see 'Financial crime risk management' on page 81.

*Further details can be found at [www.hsbc.com](http://www.hsbc.com).*

## Sustainability risk management

### Overview

Assessing the environmental and social impacts of providing finance to our customers is integral to our overall risk management processes.

### Key developments in 2016

In 2016, we issued a revised mining and metals policy. It replaced the one introduced in 2007, and responds to increasing concerns regarding climate change by addressing thermal coal mining, and provides more details on how we deal with human rights issues in the sector.

We also created a new training module for relevant relationship managers globally on our sustainability risk policies and their responsibilities, to ensure consistent implementation. Furthermore, we continued to improve the way sustainability risk is recorded in our information management system.

### Governance and structure

The Global Risk function, with input from the Global Corporate Sustainability function, is mandated to manage sustainability risk globally, working through local offices as appropriate. Sustainability risk managers have regional or national responsibilities for advising on and managing environmental and social risks.

### Key risk management processes

The Global Risk function's responsibilities in relation to sustainability risk include:

- Formulating sustainability risk policies. This includes work in several key areas: overseeing our sustainability risk standards; overseeing our application of the Equator Principles, which provide a framework for banks to assess and manage the social and environmental impact of large projects they provide finance to; overseeing our application of our sustainability policies, covering agricultural commodities, chemicals, defence, energy, forestry, freshwater infrastructure, mining and metals, UNESCO World Heritage Sites and the Ramsar Convention on Wetlands; undertaking independent reviews of transactions where sustainability risks are assessed to be high; and supporting our operating companies to assess similar risks of a lesser magnitude.
- Building and implementing systems-based processes to ensure consistent application of policies, reduce the costs of sustainability risk reviews, and capture management information to measure and report on the effect of our lending and investment activities on sustainable development.
- Providing training and capacity building within our operating companies to ensure sustainability risks are identified and mitigated consistently to appropriate standards.

## Pension risk management

There were no material changes to our policies and practices for the management of pension risk in 2016.

### Governance and structure

A global pension risk framework and accompanying global policies on the management of risks related to defined benefit and defined contribution plans is in place. Pension risk is managed by a network of local and regional pension risk forums. The Global Pensions Oversight Committee is responsible for the governance and oversight of all pension plans sponsored by HSBC around the world.

### Key risk management processes

Our global pensions strategy is to move from defined benefit to defined contribution plans, where local law allows and it is considered competitive to do so.

In defined contribution pension plans, the contributions that HSBC is required to make are known, while the ultimate pension benefit will vary, typically with investment returns achieved by investment choices made by the employee. While the market risk to HSBC of defined contribution plans is low, the Group is still exposed to operational and reputational risk.

In defined benefit pension plans, the level of pension benefit is known. Therefore, the level of contributions required by HSBC will vary due to a number of risks, including:

- investments delivering a return below that required to provide the projected plan benefits;
- the prevailing economic environment leading to corporate failures, thus triggering write-downs in asset values (both equity and debt);
- a change in either interest rates or inflation expectations, causing an increase in the value of plan liabilities; and
- plan members living longer than expected (known as longevity risk).

Pension risk is assessed using an economic capital model that takes into account potential variations in these factors. The impact of these variations on both pension assets and pension liabilities is assessed using a one-in-200-year stress test. Scenario analysis and other stress tests are also used to support pension risk management.

To fund the benefits associated with defined benefit plans, sponsoring Group companies, and in some instances employees, make regular contributions in accordance with advice from actuaries and in consultation with the plan's trustees where relevant. These contributions are normally set to ensure that there are sufficient funds to meet the cost of the accruing benefits for the future service of active members. However, higher contributions are required when plan assets are considered insufficient to cover the existing pension liabilities. Contribution rates are typically revised annually or once every three years, depending on the plan.

The defined benefit plans invest contributions in a range of investments designed to limit the risk of assets failing to meet a plan's liabilities. Any changes in expected returns from the investments may also change future contribution requirements. In pursuit of these long-term objectives, an overall target allocation of the defined benefit plan assets between asset classes is established. In addition, each permitted asset class has its own benchmarks, such as stock-market or property valuation indices. The benchmarks are reviewed at least once every three years and more frequently if required by local legislation or circumstances. The process generally involves an extensive asset and liability review.

## Key developments and risk profile in 2016

### Key developments in 2016

In 2016, HSBC undertook a number of initiatives to enhance its approach to the management of risk. These included:

- Implementing a new internal liquidity and funding risk management framework which uses the liquidity coverage ratio and net stable funding ratio regulatory framework as a foundation, as described on page 75 of the 'Liquidity and funding risk management' section.
- Undertaking activities to strengthen our risk culture and further embed the use of the operational risk management framework, as described on page 81 of the 'Operational risk management' section.
- Implementing a number of initiatives to raise our standards in relation to the conduct of our business, as described on page 81 of the 'Regulatory compliance risk management' section.
- Restructuring part of our Global Risk function. The Financial Crime Compliance sub-function became part of our new Financial Crime Risk ('FCR') function. The Regulatory Compliance sub-function remains part of Global Risk, and continues to oversee management of regulatory compliance risk.
- Establishing an FCR function and appointing a Group Head of FCR, who chairs the Global Standards Steering Meeting and reports to the Group Chief Executive, to oversee all areas of financial crime risk management at HSBC. The FCR function is dedicated to implementing the most effective global standards to combat financial crime, as described on page 81 of the 'Financial crime risk management' section.
- Issuing a revised mining and metals policy and creating a new training module for relevant relationship managers globally on our sustainability risk policies and their responsibilities, to ensure consistent implementation, as described on page 84 in the 'Sustainability risk management' section.

There were no material changes to our policies and practices for the management of credit risk, market risk, insurance manufacturing operations risk, reputational risk and sustainability risk in 2016.

### Credit risk profile

	Page
Credit risk in 2016	<b>85</b>
Credit exposure	<b>86</b>
Wholesale lending	<b>94</b>
Personal lending	<b>100</b>
HSBC Finance	<b>102</b>
Supplementary information	<b>104</b>
HSBC Holdings	<b>105</b>
Securitisation exposures and other structured products	<b>105</b>

### Credit risk in 2016

Credit risk is the risk of financial loss if a customer or counterparty fails to meet an obligation under a contract. It arises principally from direct lending, trade finance and leasing business, but also from other products, such as guarantees and credit derivatives and from holding assets in the form of debt securities.

A summary of our current policies and practices regarding the management of credit risk is set out on pages 73 to 75.

The effect of commodity price movements in the oil and gas sectors is provided in 'Areas of special interest' on page 67.

Gross loans and advances declined by \$67bn, mainly due to foreign exchange effects reducing balances by \$68bn.

Loan impairment charges and other credit provisions for the year were \$3.4bn.

In wholesale lending, balances declined by \$33bn mainly due to foreign exchange movements of \$41bn. Excluding foreign exchange movements, lending balances decreased in North America, and in Middle East and North Africa but were more than offset by increases in Asia and Latin America. Europe lending balances were broadly unchanged.

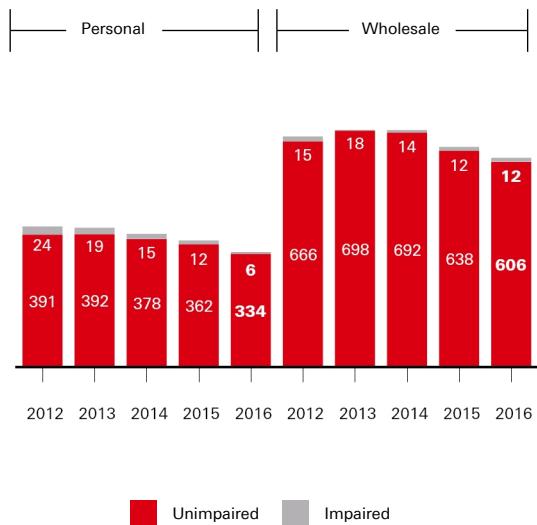
In personal lending, balances decreased by \$34bn, mainly due to foreign exchange movements of \$26bn and \$13bn in North America largely due to continued repayments and loan sales in the US CML run-off portfolio. Excluding foreign exchange movements and the US CML run-off portfolio, lending balances increased in Europe, Asia and Latin America and were offset by a decrease in Middle East and North Africa.

*Information on constant currency movements is provided on page 30.*

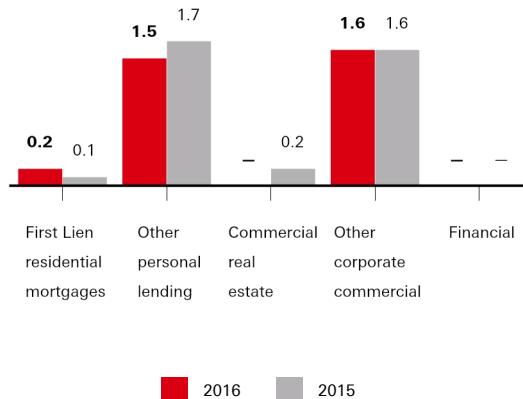
### Summary of credit risk

	2016 \$bn	2015 \$bn	Page
<b>At 31 Dec</b>			
Maximum exposure to credit risk	<b>2,898</b>	2,947	<b>86</b>
– total assets subject to credit risk	<b>2,205</b>	2,234	
– off-balance sheet commitments subject to credit risk	<b>693</b>	713	
Gross loans and advances	<b>958</b>	1,024	
– personal lending	<b>340</b>	374	<b>101</b>
– wholesale lending	<b>618</b>	650	<b>95</b>
Impaired loans	<b>18</b>	24	<b>90</b>
– personal lending	<b>6</b>	12	
– wholesale lending	<b>12</b>	12	
	%	%	
Impaired loans as a % of gross loans and advances			
– personal lending	<b>1.8</b>	3.1	
– wholesale lending	<b>1.9</b>	1.9	
– personal and wholesale lending	<b>1.9</b>	2.3	
	\$bn	\$bn	
Impairment allowances	<b>7.9</b>	9.6	<b>94</b>
– personal lending	<b>2.0</b>	2.9	<b>101</b>
– wholesale lending	<b>5.9</b>	6.7	<b>96</b>
Loans and advances net of impairment allowances	<b>950</b>	1,015	
<b>For year ended 31 Dec</b>			
Loan impairment charge	<b>3.3</b>	3.6	<b>92</b>
– personal lending	<b>1.7</b>	1.8	
– wholesale lending	<b>1.6</b>	1.8	
Other credit risk provisions	<b>0.1</b>	0.1	
	3.4	3.7	

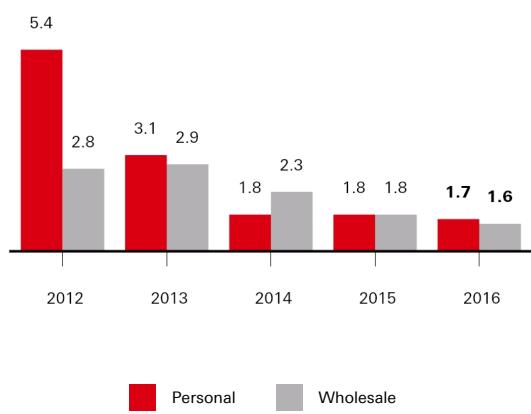
**Gross loans to customers and banks over five years (\$bn)**



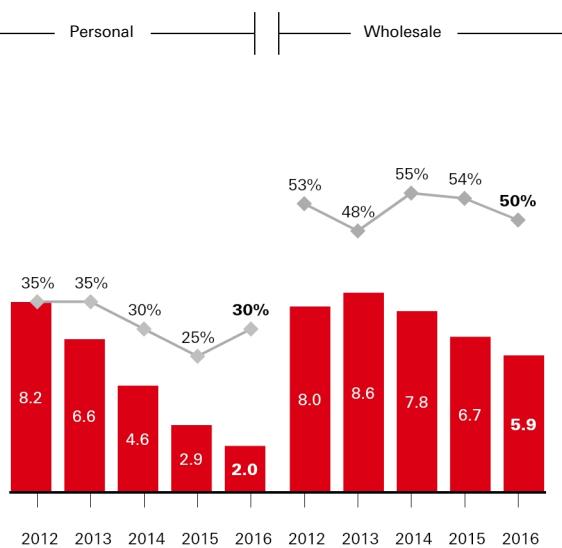
**Loan impairment charges by industry (\$bn)**



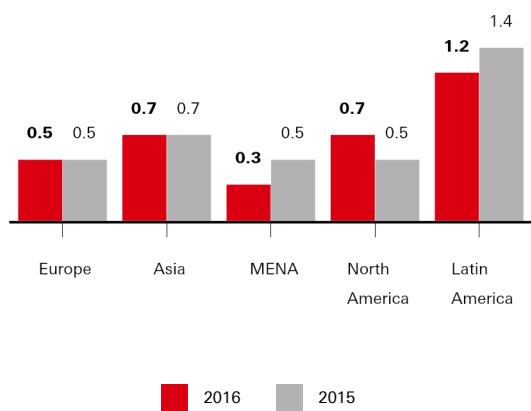
**Loan impairment charge over five years (\$bn)**



**Loan impairment allowances over five years (\$bn)**



**Loan impairment charges by geographical region (\$bn)**



—◆— Loan impairment allowances as a percentage of impaired loans      ■■■ Loan impairment allowances (\$bn)

**Credit exposure**

**Maximum exposure to credit risk**

(Audited)

The table that follows provides information on balance sheet items, offsets, and loan and other credit-related commitments. Commentary on balance sheet movements is provided on page 42.

The offset on derivatives remains in line with the movements in maximum exposure amounts.

The offset on corporate and commercial loans to customers decreased by \$17bn. This reduction was mainly related to corporate overdraft balances where a small number of clients benefited from the use of net interest arrangements across overdrafts and deposits. As a result, net risk exposures are usually stable, while gross balances can be volatile.

#### 'Maximum exposure to credit risk' table

The following table presents our maximum exposure before taking account of any collateral held or other credit enhancements (unless such enhancements meet accounting offsetting requirements). The table excludes financial instruments whose carrying amount best represents the net exposure to credit risk; and it excludes equity securities as they are not subject to credit risk. For the financial assets recognised on the balance sheet, the maximum exposure to credit risk equals their carrying amount; for financial guarantees and similar contracts granted, it is the maximum amount that we would have to pay if the guarantees were called upon. For loan commitments and other credit-related commitments, it is generally the full amount of the committed facilities.

The offset in the table relates to amounts where there is a legally enforceable right of offset in the event of counterparty default and where, as a result, there is a net exposure for credit risk purposes. However, as there is no intention to settle these balances on a net basis under normal circumstances, they do not qualify for net presentation for accounting purposes. No offset has been applied to off-balance sheet collateral. In the case of derivatives the offset column also includes collateral received in cash and other financial assets.

#### *Other credit risk mitigants*

While not disclosed as an offset in the following 'Maximum exposure to credit risk' table, other arrangements are in place which reduce our maximum exposure to credit risk. These include a charge over collateral on borrowers' specific assets such as residential properties, collateral held in the form of financial instruments that are not held on balance sheet and short positions in securities. In addition, for financial assets held as part of linked insurance/investment contracts the risk is predominantly borne by the policyholder. See Note 30 and pages 198 and 201 of the Financial Statements for further details of collateral in respect of certain loans and advances and derivatives.

#### Maximum exposure to credit risk

(Audited)

	2016			2015		
	Maximum exposure \$m	Offset \$m	Net \$m	Maximum exposure \$m	Offset \$m	Net \$m
Derivatives	<b>290,872</b>	(262,233)	<b>28,639</b>	288,476	(258,755)	29,721
Loans and advances to customers held at amortised cost	<b>861,504</b>	(33,657)	<b>827,847</b>	924,454	(52,190)	872,264
– personal	<b>337,826</b>	(3,629)	<b>334,197</b>	371,203	(5,373)	365,830
– corporate and commercial	<b>460,209</b>	(27,686)	<b>432,523</b>	493,078	(44,260)	448,818
– non-bank financial institutions	<b>63,469</b>	(2,342)	<b>61,127</b>	60,173	(2,557)	57,616
Loans and advances to banks held at amortised cost	<b>88,126</b>	(248)	<b>87,878</b>	90,401	(53)	90,348
Reverse repurchase agreements – non-trading	<b>160,974</b>	(4,764)	<b>156,210</b>	146,255	(900)	145,355
<b>Total balance sheet exposure to credit risk</b>	<b>2,204,751</b>	(300,902)	<b>1,903,849</b>	2,234,409	(311,898)	1,922,511
Total off-balance sheet	<b>692,915</b>	–	<b>692,915</b>	712,546	–	712,546
– financial guarantees and similar contracts	<b>37,072</b>	–	<b>37,072</b>	46,116	–	46,116
– loan and other credit-related commitments	<b>655,843</b>	–	<b>655,843</b>	666,430	–	666,430
<b>At 31 Dec</b>	<b>2,897,666</b>	(300,902)	<b>2,596,764</b>	2,946,955	(311,898)	2,635,057

#### Concentration of exposure

The geographical diversification of our lending portfolio, and our broad range of global businesses and products, ensured that we did not overly depend on a few markets to generate growth in 2016.

For an analysis of:

- financial investments, see Note 15 to the Financial Statements;
- trading assets, see Note 10 to the Financial Statements;

- derivatives, see page 99 and Note 14 to the Financial Statements; and
- loans and advances by industry sector and by the location of the principal operations of the lending subsidiary (or, in the case of the operations of The Hongkong and Shanghai Banking Corporation, HSBC Bank plc, HSBC Bank Middle East Limited and HSBC Bank USA, by the location of the lending branch) see page 94 for wholesale lending and page 100 for personal lending.

**Credit quality of financial instruments**

(Audited)

We assess the credit quality of all financial instruments that are subject to credit risk. Additional credit quality information in respect of our consolidated holdings of ABSs is provided on page 105.

For the purpose of the following disclosure, loans past due up to 90 days and not otherwise classified as impaired are separately classified as past due but not impaired, irrespective

of their credit quality grade. Trading assets, financial assets designated at fair value and financial investments exclude equity securities as they are not subject to credit risk. The changes to the mapping of sovereign external ratings to credit quality bands, described on page 73, mainly impacts the credit quality of financial investments in 2016 with an increase in the 'Strong' rating band and a decrease in the 'Good' and 'Satisfactory' rating bands.

**Distribution of financial instruments by credit quality**

(Audited)

	Neither past due nor impaired				Past due but not impaired	Impaired	Total gross amount	Impairment allowances	Total
	Strong	Good	Satisfactory	Sub- standard					
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Cash and balances at central banks	<b>126,838</b>	<b>711</b>	<b>444</b>	<b>16</b>			<b>128,009</b>		<b>128,009</b>
Items in the course of collection from other banks	<b>4,656</b>	<b>14</b>	<b>329</b>	<b>4</b>			<b>5,003</b>		<b>5,003</b>
Hong Kong Government certificates of indebtedness	<b>31,228</b>	—	—	—			<b>31,228</b>		<b>31,228</b>
Trading assets	<b>127,997</b>	<b>20,345</b>	<b>21,947</b>	<b>1,232</b>			<b>171,521</b>		<b>171,521</b>
– treasury and other eligible bills	<b>13,595</b>	<b>672</b>	<b>138</b>	<b>46</b>			<b>14,451</b>		<b>14,451</b>
– debt securities	<b>73,171</b>	<b>7,746</b>	<b>12,741</b>	<b>396</b>			<b>94,054</b>		<b>94,054</b>
– loans and advances to banks	<b>15,356</b>	<b>6,119</b>	<b>3,250</b>	<b>44</b>			<b>24,769</b>		<b>24,769</b>
– loans and advances to customers	<b>25,875</b>	<b>5,808</b>	<b>5,818</b>	<b>746</b>			<b>38,247</b>		<b>38,247</b>
Financial assets designated at fair value	<b>3,249</b>	<b>367</b>	<b>542</b>	<b>314</b>			<b>4,472</b>		<b>4,472</b>
Derivatives	<b>236,693</b>	<b>45,961</b>	<b>7,368</b>	<b>850</b>			<b>290,872</b>		<b>290,872</b>
Loans and advances to customers held at amortised cost	<b>437,531</b>	<b>200,385</b>	<b>185,717</b>	<b>18,831</b>	<b>8,662</b>	<b>18,228</b>	<b>869,354</b>	<b>(7,850)</b>	<b>861,504</b>
– personal	<b>290,313</b>	<b>24,544</b>	<b>12,505</b>	<b>884</b>	<b>5,062</b>	<b>6,490</b>	<b>339,798</b>	<b>(1,972)</b>	<b>337,826</b>
– corporate and commercial	<b>111,848</b>	<b>158,878</b>	<b>163,107</b>	<b>17,504</b>	<b>3,128</b>	<b>11,362</b>	<b>465,827</b>	<b>(5,618)</b>	<b>460,209</b>
– non-bank financial institutions	<b>35,370</b>	<b>16,963</b>	<b>10,105</b>	<b>443</b>	<b>472</b>	<b>376</b>	<b>63,729</b>	<b>(260)</b>	<b>63,469</b>
Loans and advances to banks held at amortised cost	<b>73,516</b>	<b>8,238</b>	<b>6,293</b>	<b>73</b>	<b>6</b>	—	<b>88,126</b>	—	<b>88,126</b>
Reverse repurchase agreements									
– non-trading	<b>123,822</b>	<b>18,223</b>	<b>18,166</b>	<b>763</b>	—	—	<b>160,974</b>	—	<b>160,974</b>
Financial investments	<b>401,010</b>	<b>13,579</b>	<b>13,570</b>	<b>2,940</b>	—	<b>1,031</b>	<b>432,130</b>		<b>432,130</b>
Assets held for sale	<b>1,774</b>	<b>536</b>	<b>392</b>	<b>266</b>	<b>236</b>	<b>1,030</b>	<b>4,234</b>	<b>(250)</b>	<b>3,984</b>
Other assets	<b>11,203</b>	<b>5,348</b>	<b>9,227</b>	<b>805</b>	<b>124</b>	<b>221</b>	<b>26,928</b>		<b>26,928</b>
– endorsements and acceptances	<b>1,160</b>	<b>3,688</b>	<b>3,125</b>	<b>474</b>	<b>35</b>	<b>92</b>	<b>8,574</b>		<b>8,574</b>
– accrued income and other	<b>10,043</b>	<b>1,660</b>	<b>6,102</b>	<b>331</b>	<b>89</b>	<b>129</b>	<b>18,354</b>		<b>18,354</b>
<b>At 31 Dec 2016</b>	<b>1,579,517</b>	<b>313,707</b>	<b>263,995</b>	<b>26,094</b>	<b>9,028</b>	<b>20,510</b>	<b>2,212,851</b>	<b>(8,100)</b>	<b>2,204,751</b>
	%	%	%	%	%	%	%	%	
Percentage of total gross amount	<b>71.4</b>	<b>14.2</b>	<b>11.9</b>	<b>1.2</b>	<b>0.4</b>	<b>0.9</b>	<b>100.0</b>		

### Distribution of financial instruments by credit quality (continued)

	Neither past due nor impaired				Past due but not impaired	Impaired	Total gross amount	Impairment allowances	Total
	Strong	Good	Satisfactory	Sub-standard					
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Cash and balances at central banks	97,365	583	939	47			98,934		98,934
Items in the course of collection from other banks	5,318	32	416	2			5,768		5,768
Hong Kong Government certificates of indebtedness	28,410	—	—	—			28,410		28,410
Trading assets	116,633	21,243	19,894	576			158,346		158,346
– treasury and other eligible bills	6,749	790	190	100			7,829		7,829
– debt securities	77,088	10,995	10,656	299			99,038		99,038
– loans and advances to banks	14,546	4,391	3,239	127			22,303		22,303
– loans and advances to customers	18,250	5,067	5,809	50			29,176		29,176
Financial assets designated at fair value	3,037	701	736	383			4,857		4,857
Derivatives	248,101	32,056	7,209	1,110			288,476		288,476
Loans and advances to customers held at amortised cost	472,691	214,152	194,393	16,836	12,179	23,758	934,009	(9,555)	924,454
– personal	309,720	29,322	15,021	944	7,568	11,507	374,082	(2,879)	371,203
– corporate and commercial	127,673	168,772	171,466	15,379	4,274	11,949	499,513	(6,435)	493,078
– non-bank financial institutions	35,298	16,058	7,906	513	337	302	60,414	(241)	60,173
Loans and advances to banks held at amortised cost	73,226	11,929	4,836	407	1	20	90,419	(18)	90,401
Reverse repurchase agreements									
– non-trading	108,238	16,552	20,931	46	—	488	146,255	—	146,255
Financial investments	382,328	18,600	16,341	4,525	—	1,326	423,120		423,120
Assets held for sale	10,177	9,605	17,279	1,635	703	2,133	41,532	(1,454)	40,078
Other assets	8,306	5,688	10,204	632	147	333	25,310		25,310
– endorsements and acceptances	1,084	3,850	3,798	343	22	52	9,149		9,149
– accrued income and other	7,222	1,838	6,406	289	125	281	16,161		16,161
At 31 Dec 2015	1,553,830	331,141	293,178	26,199	13,030	28,058	2,245,436	(11,027)	2,234,409
	%	%	%	%	%	%	%	%	
Percentage of total gross amount	69.2	14.7	13.1	1.2	0.6	1.2	100.0		

### Past due but not impaired gross financial instruments

(Audited)

Past due but not impaired gross financial instruments are those loans where, although customers have failed to make payments

in accordance with the contractual terms of their facilities, they have not met the impaired loan criteria described on page 90.

In North America, past due but not impaired balances decreased, mainly due to the continued repayments and loan sales in the US CML run-off portfolio.

### Past due but not impaired gross financial instruments by geographical region

(Audited)

	Europe \$m	Asia \$m	MENA \$m	North America \$m	Latin America \$m	Total \$m
<b>At 31 Dec 2016</b>	<b>1,206</b>	<b>3,484</b>	<b>1,260</b>	<b>2,549</b>	<b>529</b>	<b>9,028</b>
At 31 Dec 2015	1,599	3,444	1,263	5,474	1,250	13,030

**Ageing analysis of days for past due but not impaired gross financial instruments**

(Audited)

	Up to 29 days	30-59 days	60-89 days	90-179 days	180 days and over	Total
	\$m	\$m	\$m	\$m	\$m	\$m
Loans and advances to customers and banks held at amortised cost	<b>6,743</b>	<b>1,320</b>	<b>587</b>	<b>11</b>	<b>7</b>	<b>8,668</b>
– personal	3,696	986	380	—	—	5,062
– corporate and commercial	2,593	316	201	11	7	3,128
– financial	454	18	6	—	—	478
Assets held for sale	<b>194</b>	<b>29</b>	<b>13</b>	—	—	<b>236</b>
– disposal group	11	3	3	—	—	17
– non-current assets held for sale	183	26	10	—	—	219
Other financial instruments	<b>70</b>	<b>18</b>	<b>10</b>	<b>12</b>	<b>14</b>	<b>124</b>
<b>At 31 Dec 2016</b>	<b>7,007</b>	<b>1,367</b>	<b>610</b>	<b>23</b>	<b>21</b>	<b>9,028</b>
Loans and advances to customers and banks held at amortised cost	9,403	1,917	727	111	21	12,179
– personal	5,665	1,401	502	—	—	7,568
– corporate and commercial	3,432	505	225	93	19	4,274
– financial	306	11	—	18	2	337
Assets held for sale	476	137	90	—	—	703
– disposal group	476	136	89	—	—	701
– non-current assets held for sale	—	1	1	—	—	2
Other financial instruments	80	35	14	10	9	148
<b>At 31 Dec 2015</b>	<b>9,959</b>	<b>2,089</b>	<b>831</b>	<b>121</b>	<b>30</b>	<b>13,030</b>

**Impaired loans**

(Audited)

Impaired loans and advances are those that meet any of the following criteria:

- Wholesale loans and advances classified as customer risk rating ('CRR') 9 or CRR 10: these grades are assigned when HSBC considers that the customer is either unlikely to pay their credit obligations in full without recourse to security, or is more than 90 days past due on any material credit obligation to HSBC.
- Retail loans and advances classified as expected loss ('EL') 9 or EL 10: these grades are typically assigned to retail loans

and advances more than 90 days past due unless they have been individually assessed as not impaired.

- Renegotiated loans and advances: loans where we have changed the contractual cash flows due to credit distress of the obligor. Renegotiated loans remain classified as impaired until there is sufficient evidence to demonstrate a significant reduction in the risk of non-payment of future cash flows.

In personal lending, the continued repayments and loan sales in the US CML run-off portfolio reduced impaired loan balances by a further \$4.2bn.

**Movement in impaired loans by industry sector**

	2016				2015			
	Personal \$m	Corporate and commercial \$m	Financial \$m	Total \$m	Personal \$m	Corporate and commercial \$m	Financial \$m	Total \$m
<b>At 1 Jan</b>	<b>11,507</b>	<b>11,949</b>	<b>322</b>	<b>23,778</b>	15,160	13,795	375	29,330
Classified as impaired during the year	3,521	6,032	133	9,686	5,995	5,469	96	11,560
Transferred from impaired to unimpaired during the year	(1,210)	(922)	(7)	(2,139)	(2,346)	(922)	(38)	(3,306)
Amounts written off	(1,252)	(1,720)	(11)	(2,983)	(2,263)	(1,424)	(14)	(3,701)
Net repayments and other	(6,076)	(3,977)	(61)	(10,114)	(5,039)	(4,969)	(97)	(10,105)
<b>At 31 Dec</b>	<b>6,490</b>	<b>11,362</b>	<b>376</b>	<b>18,228</b>	11,507	11,949	322	23,778

### Impaired loans by industry sector and geographical region

	Europe \$m	Asia \$m	MENA \$m	North America \$m	Latin America \$m	Total \$m
Non-renegotiated impaired loans	4,354	1,771	1,042	1,913	399	9,479
– personal	1,239	453	459	1,043	220	3,414
– corporate and commercial	3,029	1,291	582	865	179	5,946
– financial	86	27	1	5	–	119
Renegotiated impaired loans	3,708	728	1,188	2,929	196	8,749
– personal	648	113	72	2,213	30	3,076
– corporate and commercial	2,868	614	1,052	716	166	5,416
– financial	192	1	64	–	–	257
<b>At 31 Dec 2016</b>	<b>8,062</b>	<b>2,499</b>	<b>2,230</b>	<b>4,842</b>	<b>595</b>	<b>18,228</b>
Impaired loans % of total gross loans and advances	2.3%	0.6%	5.5%	4.1%	2.9%	1.9%
Non-renegotiated impaired loans	4,583	1,760	1,051	2,177	623	10,194
– personal	1,361	385	475	1,786	211	4,218
– corporate and commercial	3,135	1,368	552	389	411	5,855
– financial	87	7	24	2	1	121
Renegotiated impaired loans	4,682	615	1,127	6,753	407	13,584
– personal	878	131	41	6,208	31	7,289
– corporate and commercial	3,607	480	1,086	545	376	6,094
– financial	197	4	–	–	–	201
At 31 Dec 2015	9,265	2,375	2,178	8,930	1,030	23,778
Impaired loans % of total gross loans and advances	2.3%	0.6%	4.6%	6.5%	4.8%	2.3%
Currency translation adjustment	(1,170)	(22)	(194)	12	(162)	(1,536)
31 Dec 2015 at 31 Dec 2016 exchange rates	8,095	2,353	1,984	8,942	868	22,242
Movement – constant currency basis	(33)	146	246	(4,100)	(273)	(4,014)
<b>31 Dec 2016 as reported</b>	<b>8,062</b>	<b>2,499</b>	<b>2,230</b>	<b>4,842</b>	<b>595</b>	<b>18,228</b>

### Renegotiated loans and forbearance

The most significant portfolio of renegotiated loans was in North America, substantially all of which were retail loans held by HSBC Finance Corporation ('HSBC Finance'). The ongoing repayments and loan sales in the US CML run-off portfolio reduced renegotiated loans by \$8.7bn during 2016.

The following tables show the gross carrying amounts of the Group's holdings of renegotiated loans and advances to customers by industry sector, geography, credit quality classification and arrangement type.

### Renegotiated loans and advances to customers by industry sector

	First lien residential mortgages \$m	Other personal lending \$m	Corporate and commercial \$m	Non-bank financial institutions \$m	Total \$m
	\$m	\$m	\$m	\$m	\$m
Neither past due nor impaired	976	282	1,848	260	3,366
Past due but not impaired	346	78	301	–	725
Impaired	2,751	325	5,416	257	8,749
<b>At 31 Dec 2016</b>	<b>4,073</b>	<b>685</b>	<b>7,565</b>	<b>517</b>	<b>12,840</b>
Impairment allowances on renegotiated loans	267	150	1,667	130	2,214
Neither past due nor impaired	3,973	716	2,152	391	7,232
Past due but not impaired	1,753	243	123	24	2,143
Impaired	6,556	733	6,094	201	13,584
At 31 Dec 2015	12,282	1,692	8,369	616	22,959
Impairment allowances on renegotiated loans	870	252	2,098	119	3,339

### Renegotiated loans and advances to customers by geographical region

	Europe \$m	Asia \$m	MENA \$m	North America \$m	Latin America \$m	Total \$m
	\$m	\$m	\$m	\$m	\$m	\$m
<b>At 31 Dec 2016</b>	<b>5,855</b>	<b>1,046</b>	<b>1,871</b>	<b>3,736</b>	<b>332</b>	<b>12,840</b>
At 31 Dec 2015	7,121	943	1,945	12,372	578	22,959

A range of forbearance strategies are employed in order to improve the management of customer relationships, maximise collection opportunities and, if possible, avoid default, foreclosure or repossession.

The tables below show renegotiated loans by arrangement type as a percentage of the total value of arrangements offered. In personal lending, renegotiated loans have been allocated to the single most dominant arrangement type.

**Renegotiated loans by arrangement type: personal lending**

	%
Interest rate and terms modifications	<b>21.9</b>
Payment concessions	<b>14.3</b>
Collection re-age	<b>19.2</b>
Modification re-age	<b>34.6</b>
Other	<b>10.0</b>
<b>At 31 Dec 2016</b>	<b>100.0</b>

Corporate renegotiated loans often require the granting of more than one arrangement type as part of an effective strategy. The percentages reported in the table below include the effect of loans being reported in more than one arrangement type.

**Renegotiated loans by arrangement type: corporate and commercial, and financial**

	%
Maturity term extensions	<b>37.3</b>
Reductions in margin, principal forgiveness, debt equity swaps and interest, fees or penalty payment forgiveness	<b>21.4</b>
Other changes to repayment profile	<b>19.4</b>
Interest only conversion	<b>9.3</b>
Other	<b>12.6</b>
<b>At 31 Dec 2016</b>	<b>100.0</b>

**Loan impairment charge to the income statement by industry sector**

	Europe	Asia	MENA	North America	Latin America	Total
	\$m	\$m	\$m	\$m	\$m	\$m
<b>Personal</b>	<b>162</b>	<b>264</b>	<b>226</b>	<b>219</b>	<b>832</b>	<b>1,703</b>
– first lien residential mortgages	1	(1)	10	149	7	166
– other personal	161	265	216	70	825	1,537
<b>Corporate and commercial</b>	<b>337</b>	<b>388</b>	<b>53</b>	<b>500</b>	<b>330</b>	<b>1,608</b>
– manufacturing and international trade and services	38	306	105	81	195	725
– commercial real estate and other property-related	(15)	(28)	(16)	3	25	(31)
– other commercial	314	110	(36)	416	110	914
<b>Financial</b>	<b>34</b>	<b>2</b>	<b>13</b>	<b>(10)</b>	—	39
<b>At 31 Dec 2016</b>	<b>533</b>	<b>654</b>	<b>292</b>	<b>709</b>	<b>1,162</b>	<b>3,350</b>
<b>Personal</b>	109	309	276	157	983	1,834
– first lien residential mortgages	(8)	(1)	50	70	41	152
– other personal	117	310	226	87	942	1,682
<b>Corporate and commercial</b>	415	372	212	319	451	1,769
– manufacturing and international trade and services	138	250	127	26	305	846
– commercial real estate and other property-related	33	18	49	24	47	171
– other commercial	244	104	36	269	99	752
<b>Financial</b>	14	—	(18)	(7)	—	(11)
<b>At 31 Dec 2015</b>	538	681	470	469	1,434	3,592

**Charge for impairment losses as a percentage of average gross loans and advances to customers by geographical region**

	Europe	Asia	MENA	North America	Latin America	Total
	%	%	%	%	%	%
New allowances net of allowance releases	<b>0.23</b>	<b>0.23</b>	<b>0.93</b>	<b>0.62</b>	<b>7.02</b>	<b>0.46</b>
Recoveries	(0.08)	(0.04)	(0.13)	(0.06)	(0.56)	(0.07)
<b>At 31 Dec 2016</b>	<b>0.15</b>	<b>0.19</b>	<b>0.80</b>	<b>0.56</b>	<b>6.46</b>	<b>0.39</b>
Amount written off net of recoveries	<b>0.26</b>	<b>0.14</b>	<b>0.84</b>	<b>0.48</b>	<b>2.99</b>	<b>0.32</b>
 New allowances net of allowance releases	0.26	0.23	1.35	0.41	5.37	0.48
Recoveries	(0.11)	(0.05)	(0.14)	(0.06)	(0.50)	(0.09)
At 31 Dec 2015	0.15	0.18	1.21	0.35	4.87	0.39
Amount written off net of recoveries	0.22	0.12	1.17	0.45	3.94	0.37

**Impairment of loans and advances**

(Audited)

*For an analysis of loan impairment charges and other credit risk provisions by global business, see page 38.*

The tables below analyse the loan impairment charges for the year by industry sector for impaired loans and advances that are either individually or collectively assessed, and for collective impairment allowances on loans and advances that are classified as not impaired.

### Movement in impairment allowances by industry sector and by geographical region

	Europe \$m	Asia \$m	MENA \$m	North America \$m	Latin America \$m	Total \$m
<b>At 1 Jan 2016</b>	<b>3,477</b>	<b>1,525</b>	<b>1,810</b>	<b>2,041</b>	<b>720</b>	<b>9,573</b>
Amounts written off						
Personal	(412)	(358)	(208)	(284)	(340)	(1,602)
– first lien residential mortgages	(10)	(6)	(3)	(142)	(12)	(173)
– other personal	(402)	(352)	(205)	(142)	(328)	(1,429)
Corporate and commercial	(730)	(285)	(137)	(381)	(297)	(1,830)
– manufacturing and international trade and services	(380)	(172)	(78)	(125)	(10)	(765)
– commercial real estate and other property-related	(109)	(31)	(54)	(35)	(223)	(452)
– other commercial	(241)	(82)	(5)	(221)	(64)	(613)
Financial	(1)	(5)	(18)	–	–	(24)
<b>Total amounts written off</b>	<b>(1,143)</b>	<b>(648)</b>	<b>(363)</b>	<b>(665)</b>	<b>(637)</b>	<b>(3,456)</b>
Recoveries of amounts written off in previous years						
Personal	225	124	34	54	78	515
– first lien residential mortgages	3	4	–	26	8	41
– other personal	222	120	34	28	70	474
Corporate and commercial	35	24	10	18	22	109
– manufacturing and international trade and services	15	23	5	9	16	68
– commercial real estate and other property-related	9	–	–	2	–	11
– other commercial	11	1	5	7	6	30
Financial	1	1	–	1	–	3
<b>Total recoveries of amounts written off in previous years</b>	<b>261</b>	<b>149</b>	<b>44</b>	<b>73</b>	<b>100</b>	<b>627</b>
Charge to income statement	533	654	292	709	1,162	3,350
Exchange and other movements	(339)	(45)	(102)	(886)	(872)	(2,244)
<b>At 31 Dec 2016</b>	<b>2,789</b>	<b>1,635</b>	<b>1,681</b>	<b>1,272</b>	<b>473</b>	<b>7,850</b>
Impairment allowances against banks:						
– individually assessed	–	–	–	–	–	–
Impairment allowances against customers:						
– individually assessed	2,060	1,038	1,137	540	157	4,932
– collectively assessed	729	597	544	732	316	2,918
<b>Impairment allowances at 31 Dec 2016</b>	<b>2,789</b>	<b>1,635</b>	<b>1,681</b>	<b>1,272</b>	<b>473</b>	<b>7,850</b>
At 1 Jan 2015	3,971	1,356	1,890	2,640	2,529	12,386
Amounts written off						
Personal	(468)	(416)	(273)	(554)	(996)	(2,707)
– first lien residential mortgages	(12)	(6)	(1)	(344)	(24)	(387)
– other personal	(456)	(410)	(272)	(210)	(972)	(2,320)
Corporate and commercial	(644)	(179)	(235)	(106)	(309)	(1,473)
– manufacturing and international trade and services	(233)	(149)	(215)	(28)	(213)	(838)
– commercial real estate and other property-related	(244)	(5)	(8)	(57)	(30)	(344)
– other commercial	(167)	(25)	(12)	(21)	(66)	(291)
Financial	(12)	–	–	(2)	–	(14)
Total amounts written off	(1,124)	(595)	(508)	(662)	(1,305)	(4,194)
Recoveries of amounts written off in previous years						
Personal	320	135	50	57	119	681
– first lien residential mortgages	6	4	–	26	(17)	19
– other personal	314	131	50	31	136	662
Corporate and commercial	46	30	3	18	27	124
– manufacturing and international trade and services	16	20	2	8	15	61
– commercial real estate and other property-related	24	5	–	5	2	36
– other commercial	6	5	1	5	10	27
Financial	2	–	–	1	–	3
Total recoveries of amounts written off in previous years	368	165	53	76	146	808
Charge to income statement	538	681	470	469	1,434	3,592
Exchange and other movements	(276)	(82)	(95)	(482)	(2,084)	(3,019)
At 31 Dec 2015	3,477	1,525	1,810	2,041	720	9,573
Impairment allowances against banks:						
– individually assessed	–	–	18	–	–	18
Impairment allowances against customers:						
– individually assessed	2,572	908	1,157	327	438	5,402
– collectively assessed	905	617	635	1,714	282	4,153
Impairment allowances at 31 Dec 2015	3,477	1,525	1,810	2,041	720	9,573

**Movement in impairment allowances on loans and advances to customers and banks**

(Audited)

	2016					2015					
	Banks		Customers			Total	Banks		Customers		
	individually assessed	\$m	Individually assessed	\$m	Collectively assessed		individually assessed	\$m	Individually assessed	\$m	Collectively assessed
<b>At 1 Jan</b>	<b>18</b>	<b>5,402</b>	<b>4,153</b>	<b>9,573</b>		49	6,195	6,142	12,386		
Amounts written off	(18)	(1,831)	(1,607)	(3,456)		—	(1,368)	(2,826)	(4,194)		
Recoveries of loans and advances previously written off	—	107	520	627		—	86	722	808		
Charge to income statement	—	1,831	1,519	3,350		(11)	1,516	2,087	3,592		
Exchange and other movements	—	(577)	(1,667)	(2,244)		(20)	(1,027)	(1,972)	(3,019)		
<b>At 31 Dec</b>	<b>—</b>	<b>4,932</b>	<b>2,918</b>	<b>7,850</b>		18	5,402	4,153	9,573		
Impairment allowances % of loans and advances	—	0.6%	0.3%	0.8%		—	0.6%	0.4%	0.9%		

**Wholesale lending**

Total wholesale lending balances declined by \$33bn including foreign exchange movements of \$41bn, of which \$31bn related to the UK. In North America, lending decreased by \$6.1bn, mainly in the US as paydowns and maturities exceeded new loan originations. This reflected our efforts to improve returns with more disciplined lending.

In Middle East and North Africa, overall lending fell by \$5.8bn, including \$3.4bn of foreign exchange movements. Other

causes of the decline were mainly in Turkey, where some portfolios are being reduced, and in the UAE, where we sold loans and exited certain customer relationships. These decreases were partly offset by loan growth mainly in Egypt and Oman.

In Asia, lending balances increased by \$13bn. This reflected strong credit growth in the fourth quarter of 2016 across a range of industries, and principally in Hong Kong, partly offset by foreign exchange decreases of \$3.8bn.

Total wholesale lending gross loans

	Europe \$m	Asia \$m	MENA \$m	North America \$m	Latin America \$m	As a % of total gross loans	
						Total \$m	%
	Corporate and commercial	48.6					
- manufacturing	27,005	32,564	2,941	15,348	2,785	80,643	8.4
- international trade and services	55,875	72,166	8,448	11,035	2,518	150,042	15.6
- commercial real estate	21,460	32,798	724	7,849	1,340	64,171	6.7
- other property-related	7,025	37,628	1,856	8,823	306	55,638	5.8
- government	3,009	2,919	1,619	354	541	8,442	0.9
- other commercial	47,279	34,773	6,490	14,867	3,482	106,891	11.2
Financial	43,666	79,254	10,370	14,823	3,742	151,855	15.9
- non-bank financial institutions	31,307	19,517	2,599	9,750	556	63,729	6.7
- banks	12,359	59,737	7,771	5,073	3,186	88,126	9.2
<b>Gross loans at 31 Dec 2016</b>	<b>205,319</b>	<b>292,102</b>	<b>32,448</b>	<b>73,099</b>	<b>14,714</b>	<b>617,682</b>	<b>64.5</b>
Loan and other credit-related commitments	135,394	183,508	18,562	124,720	9,849	472,033	
- corporate and commercial	112,229	167,298	18,474	96,301	9,174	403,476	
- financial	23,165	16,210	88	28,419	675	68,557	
Corporate and commercial	187,508	211,224	26,525	62,882	11,374	499,513	48.8
- manufacturing	36,623	34,272	4,884	17,507	2,572	95,858	9.4
- international trade and services	61,598	72,199	10,621	11,505	3,096	159,019	15.5
- commercial real estate	26,148	32,371	798	7,032	1,577	67,926	6.7
- other property-related	7,129	35,206	2,102	8,982	45	53,464	5.2
- government	3,653	1,132	1,695	203	772	7,455	0.7
- other commercial	52,357	36,044	6,425	17,653	3,312	115,791	11.3
Financial	50,447	68,321	11,761	16,308	3,996	150,833	14.7
- non-bank financial institutions	33,345	13,969	2,597	9,822	681	60,414	5.9
- banks	17,102	54,352	9,164	6,486	3,315	90,419	8.8
<b>Gross loans at 31 Dec 2015</b>	<b>237,955</b>	<b>279,545</b>	<b>38,286</b>	<b>79,190</b>	<b>15,370</b>	<b>650,346</b>	<b>63.5</b>
Currency translation adjustment	(32,287)	(3,846)	(3,446)	557	(2,316)	(41,338)	
31 Dec 2015 at 31 Dec 2016 exchange rates	205,668	275,699	34,840	79,747	13,054	609,008	
Movement – constant currency basis	(349)	16,403	(2,392)	(6,648)	1,660	8,674	
<b>31 Dec 2016 as reported</b>	<b>205,319</b>	<b>292,102</b>	<b>32,448</b>	<b>73,099</b>	<b>14,714</b>	<b>617,682</b>	
Loan and other credit-related commitments	125,029	171,566	20,829	126,912	19,151	463,487	
- corporate and commercial	104,832	159,947	20,610	102,369	18,155	405,913	
- financial	20,197	11,619	219	24,543	996	57,574	

Total wholesale lending impairment allowances

	Europe \$m	Asia \$m	MENA \$m	North America \$m	Latin America \$m	Total \$m
Corporate and commercial	2,048	1,343	1,137	880	210	5,618
– manufacturing	411	342	174	139	38	1,104
– international trade and services	473	647	476	81	35	1,712
– commercial real estate	402	11	144	67	36	660
– other property-related	167	34	202	37	55	495
– government	2	–	1	–	1	4
– other commercial	593	309	140	556	45	1,643
Financial	216	9	15	20	–	260
– non-bank financial institutions	216	9	15	20	–	260
– banks	–	–	–	–	–	–
<b>Impairment allowances at 31 Dec 2016</b>	<b>2,264</b>	<b>1,352</b>	<b>1,152</b>	<b>900</b>	<b>210</b>	<b>5,878</b>
Impairment allowances % of impaired loans	36.7%	69.9%	67.8%	56.7%	60.9%	50.0%
Corporate and commercial	2,638	1,256	1,254	777	510	6,435
– manufacturing	459	254	204	140	49	1,106
– international trade and services	796	599	456	123	48	2,022
– commercial real estate	613	35	145	76	343	1,212
– other property-related	234	72	270	55	1	632
– government	6	–	–	–	2	8
– other commercial	530	296	179	383	67	1,455
Financial	194	13	22	30	–	259
– non-bank financial institutions	194	13	4	30	–	241
– banks	–	–	18	–	–	18
Impairment allowances at 31 Dec 2015	2,832	1,269	1,276	807	510	6,694
Impairment allowances % of impaired loans	40.3%	68.3%	77.7%	86.2%	64.7%	54.6%
Currency translation adjustment	(502)	(21)	(101)	(21)	(78)	(723)
31 Dec 2015 at 31 Dec 2016 exchange rates	2,330	1,248	1,175	786	432	5,971
Movement – on constant currency basis	(66)	104	(23)	114	(222)	(93)
<b>31 Dec 2016 as reported</b>	<b>2,264</b>	<b>1,352</b>	<b>1,152</b>	<b>900</b>	<b>210</b>	<b>5,878</b>

**Commercial real estate**

Our commercial real estate lending disclosures focus on the regions containing the majority of our balances for loans and

advances. Europe, Asia and North America accounted for 97% of our total commercial real estate lending at 31 December 2016 (31 December 2015: 97%).

**Commercial real estate lending**

	of which:				of which:			
	31 Dec 2016 Total \$m	North			31 Dec 2015 Total \$m	North		
		Europe \$m	Asia \$m	America \$m		Europe \$m	Asia \$m	America \$m
Gross loans and advances								
Neither past due nor impaired	62,342	20,208	32,688	7,650	64,926	24,426	32,182	6,659
Past due but not impaired	221	41	88	89	454	89	119	212
Impaired loans	1,608	1,212	22	110	2,546	1,633	70	161
Total gross loans and advances	64,171	21,461	32,798	7,849	67,926	26,148	32,371	7,032
– of which: renegotiated loans	1,525	1,117	–	118	2,134	1,586	6	150
Impairment allowances	660	403	11	67	1,212	613	35	76

Commercial real estate lending includes the financing of corporate, institutional and high net worth customers who are investing primarily in income-producing assets and, to a lesser extent, in their construction and development. The portfolio is globally diversified with larger concentrations in Hong Kong, the UK, the US and Canada.

Our global exposure is centred largely on cities with economic, political or cultural significance. In many less-developed markets, industry is moving from the development and rapid construction of recent years to an increasing focus on investment stock consistent with more developed markets.

In more developed markets, our exposure mainly comprises the financing of investment assets, the redevelopment of existing stock and the augmentation of both commercial and residential markets to support economic and population growth. In less-developed commercial real estate markets, our exposures comprise lending for development assets on relatively short tenors with a particular focus on supporting larger, better capitalised developers involved in residential construction or assets supporting economic expansion.

Commercial real estate lending was \$3.8bn lower, largely because of a fall in the value of sterling contributing to a foreign exchange movement of \$4.0bn. Total lending balances in Europe declined by \$4.7bn, including foreign exchange movements of \$3.5bn, partly offset by increases in lending in Asia and North America.

### Refinance risk in commercial real estate

Commercial real estate lending tends to require the repayment of a significant proportion of the principal at maturity. Typically, a customer will arrange repayment through the acquisition of a new loan to settle the existing debt. Refinance risk is the risk

that a customer, being unable to repay the debt on maturity, fails to refinance it at commercial rates. We monitor our commercial real estate portfolio closely, assessing indicators for signs of potential issues with refinancing.

### Commercial real estate loans and advances maturity analysis

	of which:				of which:			
	31 Dec 2016				31 Dec 2015			
	Total	Europe	Asia	North America	Total	Europe	Asia	North America
	\$m							
On demand, overdrafts or revolving								
< 1 year	17,636	5,687	7,773	3,568	19,579	6,757	8,811	2,992
1-2 years	9,531	2,904	5,075	1,453	11,408	4,354	5,934	939
2-5 years	26,829	10,846	13,691	1,733	25,268	11,442	11,399	2,037
> 5 years	10,175	2,024	6,259	1,095	11,671	3,595	6,227	1,064
<b>Gross loans and advances</b>	<b>64,171</b>	<b>21,461</b>	<b>32,798</b>	<b>7,849</b>	<b>67,926</b>	<b>26,148</b>	<b>32,371</b>	<b>7,032</b>

### Collateral on loans and advances

Collateral held is analysed separately for commercial real estate and for other corporate, commercial and financial (non-bank) lending. The following tables include off-balance sheet loan commitments, primarily undrawn credit lines.

The collateral measured in the following tables consists of fixed first charges on real estate, and charges over cash and marketable financial instruments. The values in the tables represent the expected market value on an open market basis; no adjustment has been made to the collateral for any expected costs of recovery. Marketable securities are measured at their fair value.

Other types of collateral such as unsupported guarantees and floating charges over the assets of a customer's business are not measured in the tables below. While such mitigants have value, often providing rights in insolvency, their assignable value is not sufficiently certain and they are therefore assigned no value for disclosure purposes.

For impaired loans, the collateral values cannot be directly compared with impairment allowances recognised. The loan-

to-value ('LTV') figures use open market values with no adjustments. Impairment allowances are calculated on a different basis, by considering other cash flows and adjusting collateral values for costs of realising collateral as explained further on page 179.

### Commercial real estate loans and advances

The value of commercial real estate collateral is determined by using a combination of external and internal valuations and physical inspections. For CRR 1-7, local valuation policies determine the frequency of review on the basis of local market conditions because of the complexity of valuing collateral for commercial real estate. For CRR 8 and 9-10, almost all collateral would have been revalued within the last three years. In Hong Kong, market practice is typically for lending to major property companies to be either secured by guarantees or unsecured. In Europe, facilities of a working capital nature are generally not secured by a first fixed charge, and are therefore disclosed as not collateralised.

Commercial real estate loans and advances including loan commitments by level of collateral

(Audited)

	of which:				of which:			
	31 Dec 2016 Total	Europe	Asia	North America	31 Dec 2015 Total	Europe	Asia	North America
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Rated CRR/EL 1 to 7</b>								
Not collateralised	18,313	3,887	12,714	561	17,834	4,493	12,329	8
Fully collateralised	60,330	21,815	27,296	10,618	62,618	25,735	26,270	9,997
Partially collateralised (A)	3,917	1,360	1,106	1,388	6,265	2,961	1,924	1,264
– collateral value on A	2,571	1,021	552	991	4,270	2,045	1,175	981
<b>Total</b>	<b>82,560</b>	<b>27,062</b>	<b>41,116</b>	<b>12,567</b>	<b>86,717</b>	<b>33,189</b>	<b>40,523</b>	<b>11,269</b>
<b>Rated CRR/EL 8</b>								
Not collateralised	13	12	–	1	28	28	–	–
Fully collateralised	196	190	–	6	682	668	4	9
– LTV ratio: less than 50%	58	54	–	4	92	86	–	5
– 51% to 75%	77	76	–	1	385	377	4	4
– 76% to 90%	44	44	–	–	174	174	–	–
– 91% to 100%	17	16	–	1	31	31	–	–
Partially collateralised (B)	102	91	–	11	122	120	1	1
– collateral value on B	71	70	–	1	87	87	–	–
<b>Total</b>	<b>311</b>	<b>293</b>	<b>–</b>	<b>18</b>	<b>832</b>	<b>816</b>	<b>5</b>	<b>10</b>
<b>Rated CRR/EL 9 to 10</b>								
Not collateralised	75	62	3	4	422	65	51	2
Fully collateralised	1,118	764	14	85	1,124	899	18	76
– LTV ratio: less than 50%	141	79	7	5	221	174	10	15
– 51% to 75%	624	571	5	34	513	425	2	27
– 76% to 90%	88	64	1	7	156	139	2	10
– 91% to 100%	265	50	1	39	234	161	4	24
Partially collateralised (C)	412	384	5	21	1,032	716	5	66
– collateral value on C	202	148	5	13	555	397	3	35
<b>Total</b>	<b>1,605</b>	<b>1,210</b>	<b>22</b>	<b>110</b>	<b>2,578</b>	<b>1,680</b>	<b>74</b>	<b>144</b>
<b>At 31 Dec</b>	<b>84,476</b>	<b>28,565</b>	<b>41,138</b>	<b>12,695</b>	<b>90,127</b>	<b>35,685</b>	<b>40,602</b>	<b>11,423</b>

Other corporate, commercial and financial (non-bank) loans are analysed separately in the table below, which focuses on the regions containing the majority of our loans and advances balances. For financing activities in other corporate and commercial lending, collateral value is not strongly correlated to principal repayment performance.

Collateral values are generally refreshed when an obligor's general credit performance deteriorates and we have to assess the likely performance of secondary sources of repayment should it prove necessary to rely on them.

Accordingly, the table below reports values only for customers with CRR 8 to 10, recognising that these loans and advances generally have valuations that are comparatively recent.

#### Other corporate, commercial and non-bank financial institutions loans and advances including loan commitments by level of collateral rated CRR/EL 8 to 10 only

(Audited)

	of which:				of which:			
	31 Dec 2016				31 Dec 2015			
	Total	Europe	Asia	North America	Total	Europe	Asia	North America
\$m \$m \$m \$m \$m \$m \$m \$m \$m								
<b>Rated CRR/EL 8</b>								
Not collateralised	5,283	1,766	405	2,976	2,529	1,611	164	609
Fully collateralised	600	141	3	362	930	349	41	454
– LTV ratio: less than 50%	249	86	2	151	174	58	13	95
– 51% to 75%	168	34	1	118	430	267	8	85
– 76% to 90%	96	10	—	79	214	20	18	168
– 91% to 100%	87	11	—	14	112	4	2	106
Partially collateralised (A)	465	191	12	242	336	99	47	179
– collateral value on A	57	23	3	26	148	65	17	58
<b>Total</b>	<b>6,348</b>	<b>2,098</b>	<b>420</b>	<b>3,580</b>	<b>3,795</b>	<b>2,059</b>	<b>252</b>	<b>1,242</b>
<b>Rated CRR/EL 9 to 10</b>								
Not collateralised	3,508	1,439	848	154	4,877	2,805	889	80
Fully collateralised	2,545	1,394	447	488	1,853	789	440	323
– LTV ratio: less than 50%	838	570	126	59	514	270	94	47
– 51% to 75%	615	412	104	85	553	336	149	47
– 76% to 90%	414	180	86	53	231	87	74	27
– 91% to 100%	678	232	131	291	555	96	123	202
Partially collateralised (B)	2,368	478	642	771	3,079	1,667	506	423
– collateral value on B	1,034	322	268	353	1,374	770	236	283
<b>Total</b>	<b>8,421</b>	<b>3,311</b>	<b>1,937</b>	<b>1,413</b>	<b>9,809</b>	<b>5,261</b>	<b>1,835</b>	<b>826</b>
<b>At 31 Dec</b>	<b>14,769</b>	<b>5,409</b>	<b>2,357</b>	<b>4,993</b>	<b>13,604</b>	<b>7,320</b>	<b>2,087</b>	<b>2,068</b>

During the year, a number of counterparties were downgraded to CRR 8, mainly in the US' energy, commodities and Latin American portfolios. In the UK, a single large counterparty balance was settled which partly reduced the CRR 9 balance.

#### Other credit risk exposures

In addition to collateralised lending, other credit enhancements are employed and methods used to mitigate credit risk arising from financial assets. These are summarised below:

- Some securities issued by governments, banks and other financial institutions benefit from additional credit enhancement provided by government guarantees that cover the assets.
- Debt securities issued by banks and financial institutions include ABSs and similar instruments which are supported by underlying pools of financial assets. Credit risk associated with ABSs is reduced through the purchase of credit default swap ('CDS') protection.

*Disclosure of the Group's holdings of ABSs and associated CDS protection is provided on page 105.*

- Trading loans and advances mainly consist of cash collateral posted to satisfy margin requirements. There is limited credit risk on cash collateral posted since in the event of default of the counterparty these would be set-off against the related liability. Reverse repos and stock borrowing are by their nature collateralised.

*Collateral accepted as security that the Group is permitted to sell or repledge under these arrangements is described on page 231 of the Financial Statements.*

- The Group's maximum exposure to credit risk includes financial guarantees and similar contracts granted, as well as loan and other credit-related commitments. Depending on the terms of the arrangement, we may use additional credit mitigation if a guaranteee is called upon or a loan commitment is drawn and subsequently defaults.

*For further information on these arrangements, see Note 33 on the Financial Statements.*

#### Derivatives

HSBC participates in transactions exposing us to counterparty credit risk. Counterparty credit risk is the risk of financial loss if the counterparty to a transaction defaults before satisfactorily settling it. It arises principally from over-the-counter ('OTC') derivatives and securities financing transactions and is calculated in both the trading and non-trading books. Transactions vary in value by reference to a market factor such as an interest rate, exchange rate or asset price.

The counterparty risk from derivative transactions is taken into account when reporting the fair value of derivative positions. The adjustment to the fair value is known as the credit value adjustment ('CVA').

*For an analysis of CVAs, see Note 11 on the Financial Statements.*

The table below reflects by risk type the fair values and gross notional contract amounts of derivatives cleared through an exchange, central counterparty and non-central counterparty.

**Notional contract amounts and fair values of derivatives by product type**

	2016			2015		
	<b>Notional amount</b> \$m	<b>Fair value</b>		<b>Notional amount</b> \$m	<b>Fair value</b>	
		<b>Assets</b> \$m	<b>Liabilities</b> \$m		<b>Assets</b> \$m	<b>Liabilities</b> \$m
Foreign exchange	<b>5,846,095</b>	<b>127,413</b>	<b>119,781</b>	5,690,354	96,341	95,598
– exchange traded	12,657	209	65	195,612	167	76
– central counterparty cleared OTC	66,209	698	748	29,263	406	443
– non-central counterparty cleared OTC	5,767,229	126,506	118,968	5,465,479	95,768	95,079
Interest rate	<b>13,944,763</b>	<b>255,385</b>	<b>250,022</b>	14,675,036	279,154	271,367
– exchange traded	1,075,299	277	214	1,259,888	49	8
– central counterparty cleared OTC	8,207,550	120,017	122,022	8,774,674	117,877	117,695
– non-central counterparty cleared OTC	4,661,914	135,091	127,786	4,640,474	161,228	153,664
Equity	<b>472,169</b>	<b>7,410</b>	<b>9,240</b>	501,834	8,732	10,383
– exchange traded	250,810	919	2,173	265,129	1,888	2,601
– non-central counterparty cleared OTC	221,359	6,491	7,067	236,705	6,844	7,782
Credit	<b>448,220</b>	<b>5,199</b>	<b>5,767</b>	463,344	6,961	6,884
– central counterparty cleared OTC	122,832	1,954	1,941	90,863	1,779	2,069
– non-central counterparty cleared OTC	325,388	3,245	3,826	372,481	5,182	4,815
Commodity and other	<b>62,009</b>	<b>2,020</b>	<b>1,564</b>	51,683	3,148	2,699
– exchange traded	5,596	117	—	8,136	38	—
– non-central counterparty cleared OTC	56,413	1,903	1,564	43,547	3,110	2,699
Total OTC derivatives	<b>19,428,894</b>	<b>395,905</b>	<b>383,922</b>	19,653,486	392,194	384,246
– total OTC derivatives cleared by central counterparties	8,396,591	122,669	124,711	8,894,800	120,062	120,207
– total OTC derivatives not cleared by central counterparties	11,032,303	273,236	259,211	10,758,686	272,132	264,039
Total exchange traded derivatives	<b>1,344,362</b>	<b>1,522</b>	<b>2,452</b>	1,728,765	2,142	2,685
<b>Gross</b>	<b>20,773,256</b>	<b>397,427</b>	<b>386,374</b>	21,382,251	394,336	386,931
Offset	(106,555)	(106,555)		(105,860)	(105,860)	
<b>At 31 Dec</b>	<b>290,872</b>	<b>279,819</b>			288,476	281,071

*The purposes for which HSBC uses derivatives are described in Note 16 on the Financial Statements.*

The International Swaps and Derivatives Association ('ISDA') Master Agreement is our preferred agreement for documenting derivatives activity. It is common, and our preferred practice, for the parties to execute a Credit Support Annex ('CSA') in conjunction with the ISDA Master Agreement. Under a CSA, collateral is passed between the parties to mitigate the counterparty risk inherent in outstanding positions. The majority of our CSAs are with financial institutional clients.

We manage the counterparty exposure on our OTC derivative contracts by using collateral agreements with counterparties and netting agreements. Currently, we do not actively manage our general OTC derivative counterparty exposure in the credit markets, although we may manage individual exposures in certain circumstances.

We place strict policy restrictions on collateral types and as a consequence the types of collateral received and pledged are, by value, highly liquid and of a strong quality, being predominantly cash.

Where a collateral type is required to be approved outside the collateral policy, approval is required from a committee of senior representatives from Markets, Legal and Risk.

*See page 251 and Note 30 on the Financial Statements for details regarding legally enforceable right of offset in the event of counterparty default and collateral received in respect of derivatives.*

#### Personal lending

On a reported basis, total personal lending reduced by \$34bn, mainly due to foreign exchange movements of \$26bn and the ongoing repayments and loan sales of our US CML run-off portfolio in North America of \$13bn.

Loan impairment allowances reduced by \$0.9bn, largely due to the reduction in our US CML run-off portfolio.

Loan impairment charges for personal lending, remained flat at \$1.7bn for 2016. For further analysis of loan impairment charges and other credit risk provisions by global business, see page 38.

While the tables are presented on a reported basis, the commentary that follows is on a constant currency basis and excludes the effect of the ongoing run-off and loan sales in the US CML run-off portfolio.

Overall, personal lending increased by \$5.6bn compared with 31 December 2015. The growth was in mortgage balances which increased by \$7.5bn across the Group. UK mortgage balances increased by \$4.2bn as we grew our UK mortgage market share through increased sales across various channels including the expanded use of broker relationships. Mortgages in Hong Kong and China grew by \$4.5bn as a result of successful marketing campaigns and business growth initiatives. This growth was offset by a \$1.4bn reduction in Singapore, following a decision to continue to constrain the size of our mortgage portfolio.

The quality of both our Hong Kong and UK mortgage books remained high, with negligible defaults and impairment allowances. The average LTV ratio on new mortgage lending in Hong Kong was 47% compared with an estimated 29% for the overall mortgage portfolio. The LTV ratio on new lending in the UK was 59% compared with the average of 40% for the total mortgage portfolio.

Group credit policy prescribes the range of acceptable residential property LTV thresholds, with the maximum upper limit for new loans set at between 75% and 95%. Specific LTV thresholds and debt-to-income ratios are managed at regional and country levels. They must comply with the Group's policies, strategy and risk appetite, but vary to reflect the local factors: economic and housing market conditions, regulations, portfolio performance, pricing and product features.

Other personal lending balances declined by \$1.9bn, mainly due to reductions resulting from the continued repositioning of the Global Private Bank. This was offset by growth in RBWM, in other personal lending products including \$0.7bn in the UK and \$0.5bn in Mexico.

### Total personal lending gross loans

	Europe \$m	Asia \$m	MENA \$m	North America \$m	Latin America \$m	Total \$m	As a % of total gross loans
First lien residential mortgages	<b>108,008</b>	<b>98,072</b>	<b>2,535</b>	<b>39,239</b>	<b>1,924</b>	<b>249,778</b>	<b>26.1</b>
- of which:							
interest only (including offset)	<b>33,045</b>	<b>876</b>	<b>92</b>	<b>113</b>	—	<b>34,126</b>	<b>3.6</b>
affordability including ARMs	<b>297</b>	<b>3,427</b>	—	<b>14,182</b>	—	<b>17,906</b>	<b>1.9</b>
Other personal lending	<b>38,491</b>	<b>36,628</b>	<b>5,209</b>	<b>5,717</b>	<b>3,975</b>	<b>90,020</b>	<b>9.4</b>
- other	<b>29,297</b>	<b>26,059</b>	<b>3,072</b>	<b>3,061</b>	<b>2,018</b>	<b>63,507</b>	<b>6.6</b>
- credit cards	<b>9,096</b>	<b>10,438</b>	<b>1,816</b>	<b>993</b>	<b>1,595</b>	<b>23,938</b>	<b>2.5</b>
- second lien residential mortgages	<b>97</b>	<b>24</b>	<b>2</b>	<b>1,631</b>	—	<b>1,754</b>	<b>0.2</b>
- motor vehicle finance	<b>1</b>	<b>107</b>	<b>319</b>	<b>32</b>	<b>362</b>	<b>821</b>	<b>0.1</b>
<b>At 31 Dec 2016</b>	<b>146,499</b>	<b>134,700</b>	<b>7,744</b>	<b>44,956</b>	<b>5,899</b>	<b>339,798</b>	<b>35.5</b>
Loan and other credit-related commitments	<b>49,029</b>	<b>111,123</b>	<b>4,291</b>	<b>13,944</b>	<b>5,423</b>	<b>183,810</b>	
First lien residential mortgages	125,098	94,606	2,704	50,117	1,986	274,511	26.8
- of which:							
interest only (including offset)	<b>40,906</b>	<b>936</b>	—	<b>180</b>	—	<b>42,022</b>	<b>4.1</b>
affordability including ARMs	<b>356</b>	<b>3,966</b>	—	<b>17,041</b>	—	<b>21,363</b>	<b>2.1</b>
Other personal lending	42,568	38,101	6,861	8,069	3,972	99,571	9.7
- other	<b>31,763</b>	<b>27,682</b>	<b>4,246</b>	<b>3,284</b>	<b>1,816</b>	<b>68,791</b>	<b>6.7</b>
- credit cards	<b>10,803</b>	<b>10,189</b>	<b>2,241</b>	<b>996</b>	<b>1,780</b>	<b>26,009</b>	<b>2.5</b>
- second lien residential mortgages	—	33	2	3,762	—	3,797	0.4
- motor vehicle finance	2	197	372	27	376	974	0.1
At 31 Dec 2015	167,666	132,707	9,565	58,186	5,958	374,082	
Currency translation adjustment	(24,032)	(1,145)	(810)	<b>519</b>	(950)	(26,418)	
<b>31 Dec 2015 at 31 Dec 2016 exchange rates</b>	<b>143,634</b>	<b>131,562</b>	<b>8,755</b>	<b>58,705</b>	<b>5,008</b>	<b>347,664</b>	
Movement - constant currency basis	2,865	3,138	(1,011)	(13,749)	891	(7,866)	
<b>31 Dec 2016 as reported</b>	<b>146,499</b>	<b>134,700</b>	<b>7,744</b>	<b>44,956</b>	<b>5,899</b>	<b>339,798</b>	
Loan and other credit-related commitments	<b>67,787</b>	<b>103,153</b>	<b>5,318</b>	<b>14,510</b>	<b>12,175</b>	<b>202,943</b>	

### Total personal lending impairment allowances

	Europe \$m	Asia \$m	MENA \$m	North America \$m	Latin America \$m	Total \$m
First lien residential mortgages	<b>225</b>	<b>34</b>	<b>81</b>	<b>289</b>	<b>14</b>	<b>643</b>
Other personal lending	<b>300</b>	<b>249</b>	<b>448</b>	<b>83</b>	<b>249</b>	<b>1,329</b>
- other	<b>224</b>	<b>122</b>	<b>226</b>	<b>23</b>	<b>128</b>	<b>723</b>
- credit cards	<b>76</b>	<b>127</b>	<b>217</b>	<b>34</b>	<b>117</b>	<b>571</b>
- second lien residential mortgages	—	—	—	<b>26</b>	—	<b>26</b>
- motor vehicle finance	—	—	5	—	4	9
<b>At 31 Dec 2016</b>	<b>525</b>	<b>283</b>	<b>529</b>	<b>372</b>	<b>263</b>	<b>1,972</b>
Impairment allowances % of impaired loans	<b>27.8%</b>	<b>50.0%</b>	<b>99.6%</b>	<b>11.4%</b>	<b>105.2%</b>	<b>30.4%</b>
First lien residential mortgages	276	29	26	991	22	1,344
Other personal lending	374	227	507	241	186	1,535
- other	296	104	285	31	80	796
- credit cards	78	122	216	30	102	548
- second lien residential mortgages	—	—	—	180	—	180
- motor vehicle finance	—	1	6	—	4	11
At 31 Dec 2015	650	256	533	1,232	208	2,879
Impairment allowances % of impaired loans	29.0%	49.6%	103.3%	15.4%	86.0%	25.0%
Currency translation adjustment	(82)	(4)	(53)	2	(35)	(172)
<b>31 Dec 2015 at 31 Dec 2016 exchange rates</b>	<b>568</b>	<b>252</b>	<b>480</b>	<b>1,234</b>	<b>173</b>	<b>2,707</b>
Movement - constant currency basis	(43)	31	49	(862)	90	(735)
<b>31 Dec 2016 as reported</b>	<b>525</b>	<b>283</b>	<b>529</b>	<b>372</b>	<b>263</b>	<b>1,972</b>

**Exposure to UK interest-only mortgage loans**

Of total UK mortgage lending, interest-only mortgage products contributed \$32bn, including \$12bn of offset mortgages in First Direct and \$1.2bn of endowment mortgages.

The following information is presented for HSBC Bank plc interest-only mortgage loans with balances of \$15bn at the end of 2016. During the year, \$0.17bn of interest-only mortgages matured. Of these, 1,416 loans with total balances of \$0.07bn were repaid in full, 106 loans with balances of \$0.01bn have agreed future repayment plans and 529 loans with balances of \$0.09bn are subject to ongoing individual assessment.

The profile of expiring UK interest-only loans was as follows.

**UK interest-only mortgage loans**

	\$m
Expired interest-only mortgage loans	209
Interest-only mortgage loans by maturity	
– 2017	248
– 2018	517
– 2019	567
– 2020	570
– 2021-2025	3,071
– Post 2025	9,347
<b>At 31 Dec 2016</b>	<b>14,529</b>

**HSBC Finance****Gross loan portfolio of HSBC Finance real estate secured balances**

	Re-aged	Modified and re-aged	Modified	Total renegotiated loans	Total non- renegotiated loans	Total gross loans	Total impairment allowances	Impairment allowances/ gross loans
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	%
<b>At 31 Dec 2016</b>	<b>876</b>	<b>1,015</b>	<b>75</b>	<b>1,966</b>	<b>3,688</b>	<b>5,654</b>	<b>190</b>	<b>3.4</b>
At 31 Dec 2015	4,858	5,257	519	10,634	8,612	19,246	986	5.1

Residential mortgages, including second lien mortgages, decreased by \$14bn to \$6bn at 31 December 2016. In addition to the continued loan sales in the US CML run-off portfolio, we transferred a further \$12bn to 'Assets held for sale' during 2016, of which \$1.6bn remained at the year end due to be sold in February 2017. The average gain on sale of foreclosed properties that arose after we took title to the property was 2%.

There was a decrease in impairment allowances from \$1.0 bn at 31 December 2015 to \$0.2bn at the end of 2016, reflecting reduced levels of delinquency, and lower levels of both new impaired loans and loan balances outstanding as a result of continued liquidation of the portfolio.

Across the first and second lien residential mortgages in our US CML run-off portfolio, two months and over delinquent balances halved to \$1.0bn during 2016.

Renegotiated real estate secured accounts in HSBC Finance reduced by \$8.7bn or 82% and represented 67% at 31 December 2016 (2015: 91%) of our total renegotiated loans in North America, of which \$1.3bn were classified as impaired (2015: \$5.1bn). During 2016, the aggregate number of renegotiated loans in HSBC Finance reduced due to the portfolio repayments and further loan sales in the US CML run-off portfolio.

**Collateral and other credit enhancements held**

(Audited)

The following table shows the values of the fixed charges we hold over specific assets where we have previously enforced, and are able to enforce, collateral in satisfying a debt because the borrower has failed to meet contractual obligations, and where the collateral is cash or can be realised by sale in an established market.

The collateral valuation excludes any adjustments for obtaining and selling the collateral and, in particular, loans shown as not collateralised or partially collateralised may also benefit from other forms of credit mitigants.

**Residential mortgage loans including loan commitments by level of collateral**

(Audited)

	Europe \$m	Asia \$m	MENA \$m	North America \$m	Latin America \$m	Total \$m	UK \$m	Hong Kong \$m
<b>Non-impaired loans and advances</b>								
Fully collateralised	<b>111,799</b>	<b>104,122</b>	<b>2,333</b>	<b>35,773</b>	<b>1,813</b>	<b>255,840</b>	<b>106,006</b>	<b>65,480</b>
– LTV ratio: less than 50%	63,404	63,009	617	12,454	676	140,160	61,128	44,732
– 51% to 60%	19,129	18,198	369	8,124	316	46,136	18,094	10,656
– 61% to 70%	14,437	10,908	505	9,471	366	35,687	13,222	3,851
– 71% to 80%	9,029	7,370	659	4,374	253	21,685	8,433	2,958
– 81% to 90%	4,963	3,463	148	888	144	9,606	4,509	2,324
– 91% to 100%	837	1,174	35	462	58	2,566	620	959
Partially collateralised:								
Greater than 100% (A)	<b>430</b>	<b>41</b>	<b>69</b>	<b>373</b>	<b>26</b>	<b>939</b>	<b>284</b>	<b>1</b>
– 101% to 110%	150	20	15	179	17	381	106	1
– 111% to 120%	64	2	11	85	5	167	33	—
– greater than 120%	216	19	43	109	4	391	145	—
<i>Collateral on A</i>	<b>342</b>	<b>27</b>	<b>40</b>	<b>328</b>	<b>25</b>	<b>762</b>	<b>197</b>	<b>1</b>
<b>Non-impaired loans and advances</b>	<b>112,229</b>	<b>104,163</b>	<b>2,402</b>	<b>36,146</b>	<b>1,839</b>	<b>256,779</b>	<b>106,290</b>	<b>65,481</b>
<b>Impaired loans and advances</b>								
Fully collateralised	<b>1,213</b>	<b>247</b>	<b>59</b>	<b>2,905</b>	<b>85</b>	<b>4,509</b>	<b>1,059</b>	<b>42</b>
– LTV ratio: less than 50%	580	109	21	825	8	1,543	521	34
– 51% to 60%	222	49	3	527	3	804	200	4
– 61% to 70%	180	24	13	540	4	761	158	1
– 71% to 80%	122	29	4	449	3	607	101	1
– 81% to 90%	66	19	9	336	67	497	52	1
– 91% to 100%	43	17	9	228	—	297	27	1
Partially collateralised:								
Greater than 100% (B)	<b>80</b>	<b>7</b>	<b>73</b>	<b>182</b>	<b>—</b>	<b>342</b>	<b>42</b>	<b>—</b>
– 101% to 110%	37	3	10	94	—	144	17	—
– 111% to 120%	12	2	12	38	—	64	7	—
– greater than 120%	31	2	51	50	—	134	18	—
<i>Collateral on B</i>	<b>66</b>	<b>5</b>	<b>64</b>	<b>152</b>	<b>—</b>	<b>287</b>	<b>33</b>	<b>—</b>
<b>Impaired loans and advances</b>	<b>1,293</b>	<b>254</b>	<b>132</b>	<b>3,087</b>	<b>85</b>	<b>4,851</b>	<b>1,101</b>	<b>42</b>
<b>At 31 Dec 2016</b>	<b>113,522</b>	<b>104,417</b>	<b>2,534</b>	<b>39,233</b>	<b>1,924</b>	<b>261,630</b>	<b>107,391</b>	<b>65,523</b>
<b>Non impaired loans and advances</b>								
Fully collateralised	<b>127,697</b>	<b>100,102</b>	<b>2,560</b>	<b>41,567</b>	<b>1,869</b>	<b>273,795</b>	<b>122,221</b>	<b>61,784</b>
– LTV ratio: less than 50%	70,732	59,212	714	12,369	710	143,737	68,362	42,589
– 51% to 60%	24,069	16,625	442	8,266	387	49,789	23,068	9,193
– 61% to 70%	17,449	12,548	532	10,472	378	41,379	16,755	5,252
– 71% to 80%	10,184	7,813	576	6,279	256	25,108	9,593	2,391
– 81% to 90%	4,258	2,773	265	2,556	104	9,956	3,930	1,379
– 91% to 100%	1,005	1,131	31	1,625	34	3,826	513	980
Partially collateralised:								
Greater than 100% (A)	<b>535</b>	<b>168</b>	<b>51</b>	<b>1,208</b>	<b>13</b>	<b>1,975</b>	<b>321</b>	<b>97</b>
– 101% to 110%	212	154	16	709	7	1,098	126	97
– 111% to 120%	76	5	5	288	2	376	29	—
– greater than 120%	247	9	30	211	4	501	166	—
<i>Collateral on A</i>	<b>430</b>	<b>155</b>	<b>41</b>	<b>1,147</b>	<b>11</b>	<b>1,784</b>	<b>221</b>	<b>95</b>
Non-impaired loans and advances	<b>128,232</b>	<b>100,270</b>	<b>2,611</b>	<b>42,775</b>	<b>1,882</b>	<b>275,770</b>	<b>122,542</b>	<b>61,881</b>
<b>Impaired loans and advances</b>								
Fully collateralised	<b>1,392</b>	<b>222</b>	<b>59</b>	<b>6,713</b>	<b>109</b>	<b>8,495</b>	<b>1,191</b>	<b>46</b>
– LTV ratio: less than 50%	513	105	23	1,247	90	1,978	469	42
– 51% to 60%	270	38	8	990	6	1,312	254	2
– 61% to 70%	249	29	10	1,199	5	1,492	204	1
– 71% to 80%	171	18	6	1,257	5	1,457	143	1
– 81% to 90%	102	25	7	1,184	2	1,320	72	—
– 91% to 100%	87	7	5	836	1	936	49	—
Partially collateralised:								
Greater than 100% (B)	<b>178</b>	<b>8</b>	<b>18</b>	<b>628</b>	<b>1</b>	<b>833</b>	<b>49</b>	<b>—</b>
– 101% to 110%	130	3	1	375	1	510	15	—
– 111% to 120%	11	2	3	147		163	5	—
– greater than 120%	37	3	14	106		160	29	—
<i>Collateral value on B</i>	<b>160</b>	<b>6</b>	<b>13</b>	<b>547</b>	<b>—</b>	<b>726</b>	<b>36</b>	<b>—</b>
Impaired loans	<b>1,570</b>	<b>230</b>	<b>77</b>	<b>7,341</b>	<b>110</b>	<b>9,328</b>	<b>1,240</b>	<b>46</b>
<b>At 31 Dec 2015</b>	<b>129,802</b>	<b>100,500</b>	<b>2,688</b>	<b>50,116</b>	<b>1,992</b>	<b>285,098</b>	<b>123,782</b>	<b>61,927</b>

**Supplementary information**

**Gross loans and advances to customers by country**

	First lien residential mortgages \$m	Other personal \$m	Property-related \$m	Commercial, international trade and other \$m		Total \$m
Europe	<b>108,008</b>	<b>38,491</b>	<b>28,485</b>	<b>164,465</b>	<b>339,449</b>	
– UK	101,822	17,820	21,707	124,341	265,690	
– France		2,676	5,220	22,153	43,835	
– Germany		1	192	8,322	8,928	
– Switzerland		506	5,848	1,660	8,227	
– other		3,003	845	7,989	12,769	
Asia	<b>98,072</b>	<b>36,628</b>	<b>70,426</b>	<b>161,940</b>	<b>367,066</b>	
– Hong Kong	63,566	24,558	54,219	88,921	231,264	
– Australia		10,134	2,164	6,804	19,859	
– India		1,280	1,040	5,979	8,687	
– Indonesia		63	165	4,384	4,946	
– Mainland China		7,192	1,107	4,788	20,451	33,538
– Malaysia		2,719	3,065	1,693	4,179	11,656
– Singapore		6,194	4,502	2,920	11,832	25,448
– Taiwan		4,036	671	55	5,074	9,836
– other		2,888	1,246	3,382	14,316	21,832
Middle East and North Africa (excluding Saudi Arabia)	<b>2,535</b>	<b>5,209</b>	<b>2,580</b>	<b>22,107</b>	<b>32,431</b>	
– Egypt	—	272	73	1,327	1,672	
– Turkey		301	247	2,214	4,316	
– UAE		1,981	1,867	13,037	18,768	
– other		253	1,516	377	5,529	7,675
North America	<b>39,239</b>	<b>5,717</b>	<b>16,672</b>	<b>51,355</b>	<b>112,983</b>	
– US	22,756	2,676	11,835	38,199	75,466	
– Canada		15,220	2,831	12,515	35,152	
– other		1,263	210	641	2,365	
Latin America	<b>1,924</b>	<b>3,975</b>	<b>1,646</b>	<b>9,880</b>	<b>17,425</b>	
– Mexico	1,803	2,849	1,528	7,118	13,298	
– other		121	1,126	118	2,762	4,127
<b>At 31 Dec 2016</b>	<b>249,778</b>	<b>90,020</b>	<b>119,809</b>	<b>409,747</b>	<b>869,354</b>	

Europe	<b>125,098</b>	<b>42,568</b>	<b>33,277</b>	<b>187,576</b>	<b>388,519</b>
– UK	117,346	20,797	25,700	149,327	313,170
– France		3,606	12,130	6,070	20,380
– Germany		4	203	347	7,941
– Switzerland		511	8,045	224	834
– other		3,631	1,393	936	9,094
Asia	<b>94,606</b>	<b>38,101</b>	<b>67,577</b>	<b>157,616</b>	<b>357,900</b>
– Hong Kong	60,943	24,389	50,825	80,609	216,766
– Australia		9,297	726	1,592	18,063
– India		1,248	431	637	5,728
– Indonesia		56	346	71	4,965
– Mainland China		5,716	1,645	6,185	23,703
– Malaysia		2,792	3,113	1,993	4,947
– Singapore		7,743	5,392	3,334	11,021
– Taiwan		3,866	629	126	5,291
– other		2,945	1,430	2,814	14,904
Middle East and North Africa (excluding Saudi Arabia)	<b>2,704</b>	<b>6,861</b>	<b>2,900</b>	<b>26,222</b>	<b>38,687</b>
– Egypt	1	549	104	2,097	2,751
– Turkey		446	2,414	302	4,231
– UAE		1,854	2,286	1,833	14,199
– other		403	1,612	661	5,695
North America	<b>50,117</b>	<b>8,069</b>	<b>16,014</b>	<b>56,690</b>	<b>130,890</b>
– US	34,382	4,813	11,435	42,439	93,069
– Canada		14,418	3,029	4,315	13,490
– other		1,317	227	264	761
Latin America	<b>1,986</b>	<b>3,972</b>	<b>1,622</b>	<b>10,433</b>	<b>18,013</b>
– Mexico	1,881	2,828	1,498	7,844	14,051
– other		105	1,144	124	2,589
<b>At 31 Dec 2015</b>	<b>274,511</b>	<b>99,571</b>	<b>121,390</b>	<b>438,537</b>	<b>934,009</b>

The above tables analyse loans and advances by industry sector and by the location of the principal operations of the lending subsidiary or, in the case of the operations of The Hongkong

and Shanghai Banking Corporation, HSBC Bank plc, HSBC Bank Middle East and HSBC Bank USA, by the location of the lending branch.

## HSBC Holdings

(Audited)

Risk in HSBC Holdings is overseen by the HSBC Holdings Asset and Liability Management Committee ('Holdings ALCO').

The major risks faced by HSBC Holdings are credit risk, liquidity risk and market risk (in the form of interest rate risk and foreign exchange risk), of which the most significant is credit risk.

Credit risk in HSBC Holdings primarily arises from transactions with Group subsidiaries and from guarantees issued in support of obligations assumed by certain Group operations in the normal conduct of their business. It principally represents claims on Group subsidiaries in Europe and North America.

In HSBC Holdings, all financial instruments carrying amount represents the maximum exposure to credit risk. Derivatives have an offset balance of \$1.8bn at 31 December 2016 (2015: \$2.5bn).

The credit quality of loans and advances and financial investments, both of which consist of intra-Group lending, is assessed as 'strong' or 'good', with 100% of the exposure being neither past due nor impaired (2015: 100%).

### Securitisation exposures and other structured products

The following table summarises the carrying amount of our ABS exposure by categories of collateral and includes assets held in the GB&M legacy credit portfolio with a carrying value of \$11bn (2015: \$15bn).

At 31 December 2016, the available-for-sale reserve in respect of ABSs was a deficit of \$749m (2015: deficit of \$1,021m). For 2016, the impairment write-back in respect of ABSs was \$121m (2015: write-back of \$85m).

### Carrying amount of HSBC's consolidated holdings of ABSs

	<b>Trading</b> \$m	<b>Available for sale</b> \$m	<b>Held to maturity</b> \$m	<b>Designated at fair value through profit or loss</b> \$m	<b>Loans and receivables</b> \$m	<b>Total</b> \$m	<b>Of which held through consolidated SEs</b> \$m
<b>Mortgage-related assets:</b>							
Sub-prime residential	63	1,544	—	—	104	1,711	618
US Alt-A residential	—	1,453	5	—	39	1,497	1,382
US Government agency and sponsored enterprises:							
MBSs	247	13,070	12,788	—	—	26,105	—
Other residential	662	362	—	—	54	1,078	152
Commercial property	348	1,146	—	—	141	1,635	707
Leveraged finance-related assets	175	1,284	—	—	70	1,529	735
Student loan-related assets	140	2,865	—	—	11	3,016	2,616
Other assets	1,278	730	—	19	48	2,075	404
<b>At 31 Dec 2016</b>	<b>2,913</b>	<b>22,454</b>	<b>12,793</b>	<b>19</b>	<b>467</b>	<b>38,646</b>	<b>6,614</b>
<b>Mortgage-related assets:</b>							
Sub-prime residential	73	2,247	—	1	132	2,453	1,075
US Alt-A residential	—	1,989	7	—	55	2,051	1,796
US Government agency and sponsored enterprises:							
MBSs	166	15,082	13,997	—	—	29,245	—
Other residential	812	780	—	—	108	1,700	253
Commercial property	590	2,308	—	—	201	3,099	1,656
Leveraged finance-related assets	240	2,294	—	—	149	2,683	1,310
Student loan-related assets	236	2,991	—	—	25	3,252	2,679
Other assets	1,184	880	—	23	128	2,215	565
<b>At 31 Dec 2015</b>	<b>3,301</b>	<b>28,571</b>	<b>14,004</b>	<b>24</b>	<b>798</b>	<b>46,698</b>	<b>9,334</b>

## Liquidity and funding risk profile

	Page
Liquidity and funding risk in 2016	<b>106</b>
Management of liquidity and funding risk	<b>106</b>
Sources of funding	<b>107</b>
Analysis of on-balance sheet encumbered and unencumbered assets and off-balance sheet collateral	<b>108</b>
Contractual maturity of financial liabilities	<b>111</b>
HSBC Holdings	<b>112</b>

### Liquidity and funding risk in 2016

*A summary of our current policies and practices regarding the management of liquidity and funding risk is set out on page 106.*

The liquidity position of the Group remained strong in 2016. The amount of our unencumbered liquid assets was \$560bn. We recognised \$447bn of these liquid assets for the purposes of the Group consolidated LCR, which was 136%.

### Management of liquidity and funding risk

#### Liquidity coverage ratio

The Liquidity Coverage Ratio ('LCR') aims to ensure that a bank has sufficient unencumbered high-quality liquid assets ('HQLA') to meet its liquidity needs in a 30-calendar-day liquidity stress scenario. HQLA consist of cash or assets that can be converted into cash at little or no loss of value in markets. We reported a Group European Commission ('EC') LCR at 31 December 2016 of 136% (31 December 2015: 116%) to the PRA.

We assume no transferability of liquidity from non-EU entities other than to the extent currently permitted. This results in \$113bn of HQLA being excluded from the Group's LCR.

The ratio of total consolidated HQLA to the EC LCR denominator at 31 December 2016 was 171% (31 December 2015: 142%), reflecting the additional \$113bn (31 December 2015: \$94bn) of HQLAs excluded from the Group LCR.

At 31 December 2016, all the Group's principal operating entities were within the LCR risk tolerance level established by the Board and applicable under the Group's internal liquidity and funding risk management framework ('LFRF').

The liquidity position of the Group can also be represented by the stand-alone ratios of each of our principal operating entities. The Board and RMM decide the criteria for categorising an operating entity as a principal entity. The main criterion is a material balance sheet size. The following table displays the individual LCR levels for our principal operating entities on an EC LCR basis. The ratios for operating entities in non-EU jurisdictions can vary from local LCR measures due to differences in the way non-EU regulators have implemented the Basel III recommendations.

### Operating entities' LCRs

	Footnotes	At Dec	
		2016 %	2015 %
HSBC UK liquidity group	47	<b>123</b>	107
The Hongkong and Shanghai Banking Corporation – Hong Kong Branch	48	<b>185</b>	150
The Hongkong and Shanghai Banking Corporation – Singapore Branch	48	<b>154</b>	189
HSBC Bank USA		<b>130</b>	116
HSBC France	49	<b>122</b>	127
Hang Seng Bank		<b>218</b>	199
HSBC Canada	49	<b>142</b>	142
HSBC Bank China		<b>253</b>	183
HSBC Middle East – UAE Branch		<b>241</b>	
HSBC Mexico		<b>177</b>	
HSBC Private Bank		<b>178</b>	

For footnotes, see page 126.

#### Net stable funding ratio

The Net Stable Funding Ratio ('NSFR') requires institutions to maintain sufficient stable funding relative to required stable funding, and reflects a bank's long-term funding profile (funding with a term of more than a year). It is designed to complement the LCR.

At 31 December 2016, the Group's principal operating entities were within the NSFR risk tolerance level established by the Board and applicable under the LFRF.

The table below displays the NSFR levels for the principal HSBC operating entities.

Our NSFR levels were not disclosed at the last year-end, so there are no comparatives.

### Operating entities' NSFRs

	Footnotes	At 31 Dec 2016	%
HSBC UK liquidity group	47	<b>116</b>	
The Hongkong and Shanghai Banking Corporation – Hong Kong Branch	48	<b>157</b>	
The Hongkong and Shanghai Banking Corporation – Singapore Branch	48	<b>112</b>	
HSBC Bank USA		<b>120</b>	
HSBC France	49	<b>120</b>	
Hang Seng Bank		<b>162</b>	
HSBC Canada	49	<b>139</b>	
HSBC Bank China		<b>149</b>	
HSBC Middle East – UAE Branch		<b>141</b>	
HSBC Mexico		<b>128</b>	
HSBC Private Bank		<b>155</b>	

#### Depositor concentration and term funding maturity concentration

The LCR and NSFR metrics assume a stressed outflow based on a portfolio of depositors within each deposit segment. The validity of these assumptions is challenged if the portfolio of depositors is not large enough to avoid depositor concentration. Operating entities are exposed to term re-financing concentration risk if the current maturity profile results in future maturities being overly concentrated in any defined period.

At 31 December 2016, all principal operating entities were within the risk tolerance levels set for depositor concentration and term funding maturity concentration. These risk tolerances were established by the Board and are applicable under the LFRF.

#### Liquid assets of HSBC's principal operating entities

The table below shows the unweighted liquidity value of assets categorised as liquid, which is used for the purposes of calculating the LCR metric.

This reflects the stock of unencumbered liquid assets at the reporting date, using the regulatory definition of liquid assets. The amount recognised by entity at the Group level is different from the amount recognised at a solo entity level, reflecting where liquidity cannot be freely transferred up to Group.

### Liquid assets of HSBC's principal entities

	Footnotes	31 Dec 2016	
		Recognised at Group and entity level	Recognised at entity level only
		\$m	\$m
HSBC UK liquidity group	47		
Level 1		143,884	143,884
Level 2a		2,085	2,085
Level 2b		7,663	7,663
The Hongkong and Shanghai Banking Corporation – Hong Kong Branch			
Level 1		48,342	98,963
Level 2a		23,790	23,790
Level 2b		3,450	3,450
HSBC Bank USA			
Level 1		53,409	72,931
Level 2a		14,995	14,995
Level 2b		10	10
Hang Seng Bank			
Level 1		21,798	37,525
Level 2a		1,474	1,474
Level 2b		199	199
Total of HSBC's other principal entities	50		
Level 1		74,239	90,579
Level 2a		6,240	6,240
Level 2b		226	226

For footnotes, see page 126.

### Sources of funding

(Audited)

Our primary sources of funding are customer current accounts and customer savings deposits payable on demand or at short notice. We issue wholesale securities (secured and unsecured) to supplement our customer deposits and change the currency mix, maturity profile or location of our liabilities.

The following 'Funding sources and uses' table provides a consolidated view of how our balance sheet is funded, and should be read in light of the LFRF, which requires operating entities to manage liquidity and funding risk on a stand-alone basis.

The table analyses our consolidated balance sheet according to the assets that primarily arise from operating activities and the sources of funding primarily supporting these activities. Assets and liabilities that do not arise from operating activities are presented as a net balancing source or deployment of funds.

In 2016, the level of customer accounts continued to exceed the level of loans and advances to customers. The positive funding gap was predominantly deployed in liquid assets (cash and balances with central banks and financial investments) as required by the LFRF.

Loans and advances to banks continued to exceed deposits by banks, meaning the Group remained a net unsecured lender to the banking sector.

For a summary of sources and utilisation of repos and stock lending, see the Risk Management section on page 68.

### Funding sources and uses

	2016 \$m	2015 \$m
<b>Sources</b>		
Customer accounts	1,272,386	1,289,586
Deposits by banks	59,939	54,371
Repurchase agreements – non-trading	88,958	80,400
Debt securities in issue	65,915	88,949
Liabilities of disposal groups held for sale	2,790	36,840
Subordinated liabilities	20,984	22,702
Financial liabilities designated at fair value	86,832	66,408
Liabilities under insurance contracts	75,273	69,938
Trading liabilities	153,691	141,614
– repos	1,428	442
– stock lending	3,643	8,859
– settlement accounts	15,271	10,530
– other trading liabilities	133,349	121,783
Total equity	182,578	197,518
<b>At 31 Dec</b>	<b>2,009,346</b>	2,048,326
<b>Uses</b>		
Loans and advances to customers	861,504	924,454
Loans and advances to banks	88,126	90,401
Reverse repurchase agreements – non-trading	160,974	146,255
Assets held for sale	4,389	43,900
Trading assets	235,125	224,837
– reverse repos	4,780	438
– stock borrowing	5,427	7,118
– settlement accounts	17,850	12,127
– other trading assets	207,068	205,154
Financial investments	436,797	428,955
Cash and balances with central banks	128,009	98,934
Net deployment in other balance sheet assets and liabilities	94,422	90,590
<b>At 31 Dec</b>	<b>2,009,346</b>	2,048,326

### Wholesale term debt maturity profile

The maturity profile of our wholesale term debt obligations is set out in the following table 'Wholesale funding cash flows payable by HSBC under financial liabilities by remaining contractual maturities'.

The balances in the table are not directly comparable with those in the consolidated balance sheet as the table presents gross cash flows relating to principal payments and not the balance sheet carrying value, which include debt securities and subordinated liabilities measured at fair value.

#### Wholesale funding cash flows payable by HSBC under financial liabilities by remaining contractual maturities

	Due not more than 1 month	Due over 1 month but not more than 3 months	Due over 3 months but not more than 6 months	Due over 6 months but not more than 9 months	Due over 9 months but not more than 1 year	Due over 1 year but not more than 2 years	Due over 2 years but not more than 5 years	Due over 5 years	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Debt securities issued	7,462	10,110	11,834	6,930	8,043	21,906	43,764	44,164	154,213
– unsecured CDs and CP	691	5,906	5,530	3,152	2,384	242	133	12	18,050
– unsecured senior MTNs	837	1,706	3,727	2,699	3,580	13,626	30,519	36,240	92,934
– unsecured senior structured notes	1,088	1,675	1,389	882	2,066	5,940	8,344	3,885	25,269
– secured covered bonds	1,584	–	295	71	–	207	1,357	2,559	6,073
– secured asset-backed commercial paper	3,196	–	–	–	–	–	–	–	3,196
– secured ABS	11	23	893	126	13	91	908	439	2,504
– others	55	800	–	–	–	1,800	2,503	1,029	6,187
Subordinated liabilities	13	63	145	–	500	1,775	7,292	32,179	41,967
– subordinated debt securities	13	63	145	–	500	1,775	6,881	30,425	39,802
– preferred securities	–	–	–	–	–	–	411	1,754	2,165
<b>At 31 Dec 2016</b>	<b>7,475</b>	<b>10,173</b>	<b>11,979</b>	<b>6,930</b>	<b>8,543</b>	<b>23,681</b>	<b>51,056</b>	<b>76,343</b>	<b>196,180</b>
Debt securities issued	19,447	11,803	20,565	6,712	5,274	20,150	43,463	27,398	154,812
– unsecured CDs and CP	5,830	8,426	11,250	2,944	1,224	955	108	10	30,747
– unsecured senior MTNs	4,229	2,240	7,130	2,687	1,711	10,850	27,239	18,407	74,493
– unsecured senior structured notes	883	964	1,544	875	2,166	4,158	9,741	5,262	25,593
– secured covered bonds	–	–	–	–	–	2,074	1,619	2,577	6,270
– secured asset-backed commercial paper	8,414	–	–	–	–	–	–	–	8,414
– secured ABS	20	173	195	206	173	313	1,554	114	2,748
– others	71	–	446	–	–	1,800	3,202	1,028	6,547
Subordinated liabilities	–	816	–	–	34	648	6,826	34,423	42,747
– subordinated debt securities	–	–	–	–	34	648	6,338	32,494	39,514
– preferred securities	–	816	–	–	–	–	488	1,929	3,233
<b>At 31 Dec 2015</b>	<b>19,447</b>	<b>12,619</b>	<b>20,565</b>	<b>6,712</b>	<b>5,308</b>	<b>20,798</b>	<b>50,289</b>	<b>61,821</b>	<b>197,559</b>

#### Analysis of on-balance sheet encumbered and unencumbered assets and off-balance sheet collateral

##### On-balance sheet encumbered and unencumbered assets

The table on page 110, 'Analysis of on-balance sheet encumbered and unencumbered assets', summarises the total on-balance sheet assets capable of supporting future funding and collateral needs, and shows the extent to which they are currently pledged for this purpose. This disclosure aims to facilitate an understanding of available and unrestricted assets that could be used to support potential future funding and collateral needs.

During 2016 cash collateral given and reported within loans and advances to banks and customers, reflecting initial and variable cash margins, was reclassified from 'unencumbered assets' to 'encumbered assets' to align with our Pillar 3 disclosure. Furthermore a portfolio of mortgages, classified as 'unencumbered assets' in 2015 was reclassified to 'Assets positioned at central banks' (i.e. pre-positioned plus encumbered) in 2016. Comparative data have been restated.

Under 'Off-balance sheet collateral' below we discuss the off-balance sheet collateral received and re-pledged, and the level of available unencumbered off-balance sheet collateral.

*For a summary of our policy on collateral management and definition of encumbrance, see the Risk Management section on page 68.*

##### Off-balance sheet collateral

The fair value of assets accepted as collateral that we are permitted to sell or repledge in the absence of default was \$269bn at 31 December 2016 (2015: \$228bn). The fair value of any such collateral actually sold or re-pledged was \$157bn (2015: \$150bn). We are obliged to return equivalent securities. These transactions are conducted under terms that are usual and customary to standard reverse repo, stock borrowing and derivative transactions.

The fair value of collateral received and re-pledged in relation to reverse repos, stock borrowing and derivatives is reported on a gross basis. The related balance sheet receivables and payables are reported on a net basis where required under IFRS offset criteria. As a consequence of reverse repo, stock borrowing and derivative transactions where the collateral received could be sold or re-pledged but had not been, we held \$112bn (2015: \$78bn) of unencumbered collateral available to support potential future funding and collateral needs at 31 December 2016.

Under the terms of our current collateral obligations under derivative contracts (which are ISDA compliant CSA contracts and contracts entered into for pension obligations), and based on an estimate of the positions at 31 December 2016, we calculate that we could be required to post additional collateral of up to \$0.3bn (2015: \$0.4bn) in the event of a one-notch downgrade in third-party agencies' credit rating of HSBC's debt. This would increase to \$0.8 bn (2015: \$0.7bn) in the event of a two-notch downgrade.

## Encumbered and unencumbered assets

### Definitions of the categories included in the table 'Analysis of on-balance sheet encumbered and unencumbered assets':

- 'Assets encumbered as a result of transactions with counterparties other than central banks as a result of covered bonds' are any assets on our balance sheet pledged against our covered bonds issuance with a counterparty which is not central bank and as a result the assets are unavailable to the bank to secure funding, satisfy collateral needs or be sold to reduce potential future funding requirements.
- 'Assets encumbered as a result of transactions with counterparties other than central banks as a result of securitisation' are any assets on our balance sheet pledged against securitisations with a counterparty which is not central bank including asset-backed commercial paper, collateralised debt obligations, residential mortgage-backed securities, or structured investment vehicles paper and as a result the assets are unavailable to the bank to secure funding, satisfy collateral needs or be sold to reduce potential future funding requirements.
- 'Assets encumbered as a result of transactions with counterparties other than central banks – Other' are assets on our balance sheet (other than covered bonds and securitisation above) which have been pledged with a counterparty which is not central bank as a collateral against an existing liability, and as a result are assets which are unavailable to the bank to secure funding, satisfy collateral needs or be sold to reduce potential future funding requirements. Examples include assets pledged for sale and repurchase and stock lending transactions and certain property assets.
- 'Assets positioned at central banks (i.e. pre-positioned plus encumbered)' are any assets that are eligible for emergency central bank liquidity/funding or under central bank pre-existing arrangements for funding without further due diligence work required. Any transferable customer loan that is central bank eligible such as pre-positioned central bank UK mortgages and US mortgages accepted by the Federal Reserve Bank and assets on our balance sheet which have been pledged with central bank as collateral against an existing liability, and as a result are assets which are unavailable to the bank to secure funding, satisfy collateral needs or be sold to reduce potential future funding requirements.
- 'Unencumbered – readily available assets' are assets considered by the bank to be readily available in the normal course of business to secure funding, meet collateral needs, or be sold to reduce potential future funding requirements, and are not subject to any restrictions on their use for these purposes.
- 'Unencumbered – other assets capable of being encumbered' are assets where there are no restrictions on their use to secure funding, meet collateral needs, or be sold to reduce potential future funding requirements, but they are not readily realisable in the normal course of business in their current form.
- 'Unencumbered – reverse repo/stock borrowing receivables and derivative assets' are assets related specifically to reverse repo, stock borrowing and derivative transactions. They are shown separately as these on-balance sheet assets cannot be pledged but often give rise to the receipt of non-cash assets which are not recognised on the balance sheet, and can additionally be used to raise secured funding, meet additional collateral requirements or be sold.
- 'Unencumbered – cannot be encumbered' are assets that have not been pledged and which we have assessed could not be pledged and therefore could not be used to secure funding, meet collateral needs, or be sold to reduce potential future funding requirements. An example is assets held by the Group's insurance subsidiaries that back liabilities to policyholders and support the solvency of these entities.

Historically, the Group has not recognised any contingent liquidity value for assets other than those assets defined under the LFRF as being liquid assets, and any other negotiable instruments that under stress are assumed to be realisable after three months, even though they may currently be realisable. This approach has generally been driven by our appetite not to place any reliance on central banks. In a few cases, we have recognised the contingent value of discrete pools of assets, but the amounts involved are insignificant. As a result, we have reported the majority of our loans and advances to customers and banks in the category 'Other realisable assets' as management would need to perform additional actions in order to make the assets transferable and readily realisable.

**Analysis of on-balance sheet encumbered and unencumbered assets**

	Assets encumbered as a result of transactions with counterparties other than central banks			Assets positioned at central banks (i.e. pre-positioned plus encumbered)	Unencumbered assets not positioned at central banks					Total		
	As a result of covered bonds	As a result of securitisations	Other		Assets readily available for encumbrance	Other assets capable of being encumbered	Reverse repos/stock borrowing receivables and derivative assets	Assets that cannot be encumbered				
					\$m	\$m	\$m	\$m				
Cash and balances at central banks	—	—	10	82	123,363	326	—	4,228	128,009			
Items in the course of collection from other banks	—	—	—	—	—	—	—	—	5,003	5,003		
Hong Kong Government certificates of indebtedness	—	—	—	—	—	—	—	—	31,228	31,228		
Trading assets	—	—	62,962	2,504	131,420	7,419	10,207	20,613	235,125			
– treasury and other eligible bills	—	—	981	2,150	11,309	11	—	—	14,451			
– debt securities	—	—	34,144	354	59,231	318	—	7	94,054			
– equity securities	—	—	2,645	—	59,394	1,565	—	—	63,604			
– loans and advances to banks	—	—	10,532	—	1,331	1,910	5,386	5,610	24,769			
– loans and advances to customers	—	—	14,660	—	155	3,615	4,821	14,996	38,247			
Financial assets designated at fair value	—	—	—	—	835	20	—	23,901	24,756			
– treasury and other eligible bills	—	—	—	—	150	—	—	54	204			
– debt securities	—	—	—	—	442	—	—	3,747	4,189			
– equity securities	—	—	—	—	243	20	—	20,021	20,284			
– loans and advances to banks and customers	—	—	—	—	—	—	—	79	79			
Derivatives	—	—	—	—	—	—	290,872	—	290,872			
Loans and advances to banks	—	1	3,903	6,719	2,051	50,824	2,045	22,583	88,126			
Loans and advances to customers	6,258	8,365	10,425	67,208	15,941	732,242	4,027	17,038	861,504			
Reverse repurchase agreements – non-trading	—	—	—	—	—	—	160,974	—	160,974			
Financial investments	—	—	16,537	17,983	331,154	10,765	—	60,358	436,797			
– treasury and other eligible bills	—	—	537	3,766	93,566	1,143	—	214	99,226			
– debt securities	—	—	16,000	14,217	236,003	7,904	—	58,780	332,904			
– equity securities	—	—	—	—	1,585	1,718	—	1,364	4,667			
Prepayments, accrued income and other assets	—	—	2,358	—	8,368	27,099	—	26,084	63,909			
Current tax assets	—	—	—	—	—	—	—	1,145	1,145			
Interest in associates and joint ventures	—	—	345	—	62	19,329	—	293	20,029			
Goodwill and intangible assets	—	—	—	—	—	—	—	21,346	21,346			
Deferred tax	—	—	—	—	—	—	—	6,163	6,163			
<b>At 31 Dec 2016</b>	<b>6,258</b>	<b>8,366</b>	<b>96,540</b>	<b>94,496</b>	<b>613,194</b>	<b>848,024</b>	<b>468,125</b>	<b>239,983</b>	<b>2,374,986</b>			

### Analysis of on-balance sheet encumbered and unencumbered assets (continued)

	Assets encumbered as a result of transactions with counterparties other than central banks			Assets positioned at central banks (i.e. pre-positioned plus encumbered)	Unencumbered assets not positioned at central banks					
	As a result of covered bonds	As a result of securitisations	Other		Assets readily available for encumbrance	Other assets capable of being encumbered	Reverse repos/stock borrowing receivables and derivative assets	Assets that cannot be encumbered	Total	
					\$m	\$m	\$m	\$m	\$m	
Cash and balances at central banks	—	—	—	98	95,545	350	—	2,941	98,934	
Items in the course of collection from other banks	—	—	—	—	—	—	—	5,768	5,768	
Hong Kong Government certificates of indebtedness	—	—	—	—	—	—	—	28,410	28,410	
Trading assets	—	—	56,188	1,573	138,070	8,269	7,520	13,217	224,837	
– treasury and other eligible bills	—	—	1,099	984	5,618	128	—	—	7,829	
– debt securities	—	—	25,890	492	72,377	233	—	46	99,038	
– equity securities	—	—	4,616	—	59,430	2,445	—	—	66,491	
– loans and advances to banks	—	—	10,410	—	456	2,890	2,763	5,784	22,303	
– loans and advances to customers	—	—	14,173	97	189	2,573	4,757	7,387	29,176	
Financial assets	—	—	—	—	1,775	1,244	—	20,833	23,852	
– treasury and other eligible bills	—	—	—	—	258	—	—	138	396	
– debt securities	—	—	—	—	1,327	265	—	2,749	4,341	
– equity securities	—	—	—	—	178	979	—	17,838	18,995	
– loans and advances to banks and customers	—	—	—	—	12	—	—	108	120	
Derivatives	—	—	—	—	—	—	288,476	—	288,476	
Loans and advances to banks	—	1,329	2,900	1,702	2,054	61,602	815	19,999	90,401	
Loans and advances to customers	6,947	15,288	9,769	64,984	15,730	790,929	1,531	19,276	924,454	
Reverse repurchase agreements – non-trading	—	—	—	—	—	—	146,255	—	146,255	
Financial investments	—	—	25,078	8,150	325,101	14,753	—	55,873	428,955	
– treasury and other eligible bills	—	—	509	3,675	98,866	1,177	—	324	104,551	
– debt securities	—	—	24,561	4,475	224,355	11,124	—	54,054	318,569	
– equity securities	—	—	8	—	1,880	2,452	—	1,495	5,835	
Prepayments, accrued income and other assets	—	—	1,188	—	4,685	65,190	—	27,235	98,298	
Current tax assets	—	—	—	—	—	—	—	1,221	1,221	
Interest in associates and joint ventures	—	—	—	—	51	18,794	—	294	19,139	
Goodwill and intangible assets	—	—	—	—	—	—	—	24,605	24,605	
Deferred tax	—	—	—	—	—	—	—	6,051	6,051	
At 31 Dec 2015	6,947	16,617	95,123	76,507	583,011	961,131	444,597	225,723	2,409,656	

### Contractual maturity of financial liabilities

The balances in the table below do not agree directly with those in our consolidated balance sheet as the table incorporates, on an undiscounted basis, all cash flows relating to principal and future coupon payments (except for trading liabilities and derivatives not treated as hedging derivatives). Undiscounted cash flows payable in relation to hedging derivative liabilities are classified according to their contractual maturities. Trading liabilities and derivatives not treated as hedging derivatives are included in the 'On demand' time bucket and not by contractual maturity.

A maturity analysis of repos and debt securities in issue included in trading liabilities is presented in Note 29 on the Financial Statements.

In addition, loans and other credit-related commitments, financial guarantees and similar contracts are generally not recognised on our balance sheet. The undiscounted cash flows potentially payable under financial guarantees and similar contracts are classified on the basis of the earliest date they can be called.

**Cash flows payable by HSBC under financial liabilities by remaining contractual maturities**

(Audited)

	On demand	Due within 3 months	Due between 3 and 12 months	Due between 1 and 5 years	Due after 5 years
	\$m	\$m	\$m	\$m	\$m
Deposits by banks	40,277	10,222	3,284	5,233	1,033
Customer accounts	1,079,866	145,932	38,273	8,676	559
Repurchase agreements – non-trading	18,134	66,801	2,929	1,048	–
Trading liabilities	153,691	–	–	–	–
Financial liabilities designated at fair value	1,307	2,265	5,003	34,707	61,929
Derivatives	274,283	287	1,129	2,472	1,727
Debt securities in issue	9	13,118	19,492	29,487	8,089
Subordinated liabilities	1	400	1,378	10,302	21,552
Other financial liabilities	45,569	15,844	3,050	1,525	843
	1,613,137	254,869	74,538	93,450	95,732
Loan and other credit-related commitments	410,950	95,751	63,729	57,019	28,395
Financial guarantees and similar contracts	12,608	4,647	10,301	8,138	1,378
<b>At 31 Dec 2016</b>	<b>2,036,695</b>	<b>355,267</b>	<b>148,568</b>	<b>158,607</b>	<b>125,505</b>
Deposits by banks	42,182	6,643	1,452	4,029	107
Customer accounts	1,076,595	160,368	43,289	10,964	263
Repurchase agreements – non-trading	13,181	64,109	2,144	535	543
Trading liabilities	141,614	–	–	–	–
Financial liabilities designated at fair value	327	4,077	6,149	24,642	41,365
Derivatives	276,141	255	970	1,721	1,652
Debt securities in issue	377	25,910	23,886	35,499	6,993
Subordinated liabilities	–	803	971	10,151	28,132
Other financial liabilities	59,298	17,476	7,226	10,188	1,014
	1,609,715	279,641	86,087	97,729	80,069
Loan and other credit-related commitments	425,000	93,149	73,115	60,078	15,089
Financial guarantees and similar contracts	12,579	5,727	15,091	9,915	2,805
<b>At 31 Dec 2015</b>	<b>2,047,294</b>	<b>378,517</b>	<b>174,293</b>	<b>167,722</b>	<b>97,963</b>

### HSBC Holdings

Liquidity risk in HSBC Holdings is overseen by Holdings ALCO. This risk arises because of HSBC Holdings' obligation to make payments to debt holders as they fall due. The liquidity risk related to these cash flows is managed by matching external debt obligations with internal loan cash flows and by maintaining an appropriate liquidity buffer that is monitored by Holdings ALCO.

The balances in the table below are not directly comparable with those on the balance sheet of HSBC Holdings as the table incorporates, on an undiscounted basis, all cash flows relating

to principal and future coupon payments (except for derivatives not treated as hedging derivatives). Undiscounted cash flows payable in relation to hedging derivative liabilities are classified according to their contractual maturities. Derivatives not treated as hedging derivatives are included in the 'On demand' time bucket.

In addition, loan commitments and financial guarantees and similar contracts are generally not recognised on our balance sheet. The undiscounted cash flows potentially payable under financial guarantees and similar contracts are classified on the basis of the earliest date on which they can be called.

**Cash flows payable by HSBC Holdings under financial liabilities by remaining contractual maturities**

(Audited)

	On demand	Due within 3 months	Due between 3 and 12 months	Due between 1 and 5 years	Due after 5 years
	\$m	\$m	\$m	\$m	\$m
Amounts owed to HSBC undertakings	—	<b>2,051</b>	—	<b>105</b>	—
Financial liabilities designated at fair value	—	<b>314</b>	<b>960</b>	<b>11,964</b>	<b>25,665</b>
Derivatives	<b>3,841</b>	—	—	<b>592</b>	<b>592</b>
Debt securities in issue	—	<b>157</b>	<b>478</b>	<b>8,393</b>	<b>19,164</b>
Subordinated liabilities	—	<b>196</b>	<b>598</b>	<b>4,461</b>	<b>20,899</b>
Other financial liabilities	—	<b>1,343</b>	<b>164</b>	—	—
	<b>3,841</b>	<b>4,061</b>	<b>2,200</b>	<b>25,515</b>	<b>66,320</b>
Loan commitments	—	—	—	—	—
Financial guarantees and similar contracts	<b>7,619</b>	—	—	—	—
<b>At 31 Dec 2016</b>	<b>11,460</b>	<b>4,061</b>	<b>2,200</b>	<b>25,515</b>	<b>66,320</b>
Amounts owed to HSBC undertakings	257	1,375	424	110	—
Financial liabilities designated at fair value	—	1,145	655	5,202	20,779
Derivatives	2,065	—	—	213	—
Debt securities in issue	—	15	47	250	1,176
Subordinated liabilities	—	229	699	5,149	25,474
Other financial liabilities	—	1,426	152	—	—
	2,322	4,190	1,977	10,924	47,429
Loan commitments	—	—	—	—	—
Financial guarantees and similar contracts	68,333	—	—	—	—
<b>At 31 Dec 2015</b>	<b>70,655</b>	<b>4,190</b>	<b>1,977</b>	<b>10,924</b>	<b>47,429</b>

## Market risk profile

	Page
Market risk in 2016	<b>114</b>
Trading portfolios	<b>114</b>
Non-trading portfolios	<b>115</b>
Market risk balance sheet linkages	<b>116</b>
Structural foreign exchange exposures	<b>116</b>
Net interest income sensitivity	<b>117</b>
Sensitivity of capital and reserves	<b>118</b>
Third-party assets in BSM	<b>118</b>
Defined benefit pension schemes	<b>118</b>
Additional market risk measures applicable only to the parent company	<b>118</b>

### Market risk in 2016

Market risk is the risk that movements in market factors, such as foreign exchange rates, interest rates, credit spreads, equity prices and commodity prices, will reduce our income or the value of our portfolios. Exposure to market risk is separated into two portfolios:

- trading portfolios; and
- non-trading portfolios.

Market risk exposures arising from our insurance manufacturing operations are discussed on page 82.

A summary of our current policies and practices regarding the management of market risk is set out on page 77.

Global markets were influenced by the increase in US interest rates in line with market expectation. Bond yields continued to rise and global stock markets continued to be supported by expectations of fiscal expansion in the US in the wake of the new US presidential elections. The US monetary tightening contrasts with the ECB extending its quantitative easing programme, highlighting the divergence in monetary policies during the year.

In China, the prospect of a slowdown in the economy in the first half of 2016, and uncertainty around the trade relationship with the US, following the elections, led to further depreciation of the renminbi. Chinese policymakers will attempt to keep this process gradual in order to avoid disruptive capital outflows.

In the UK, following the decision to leave the EU, concerns persist about the upcoming exit negotiations and the ultimate nature of the EU-UK relationship.

Capital flows to the emerging markets remained weak, with some central banks increasing local interest rates to reduce reserve outflows.

Trading value at risk ('VaR') spiked in quarter one, due to higher market volatility impacting the foreign exchange and credit spread asset classes. For the remainder of the year, exposures in all asset classes were managed down. Non-trading VaR increased during the year as higher interest rates, especially in US dollars, caused the duration of non-trading assets to increase.

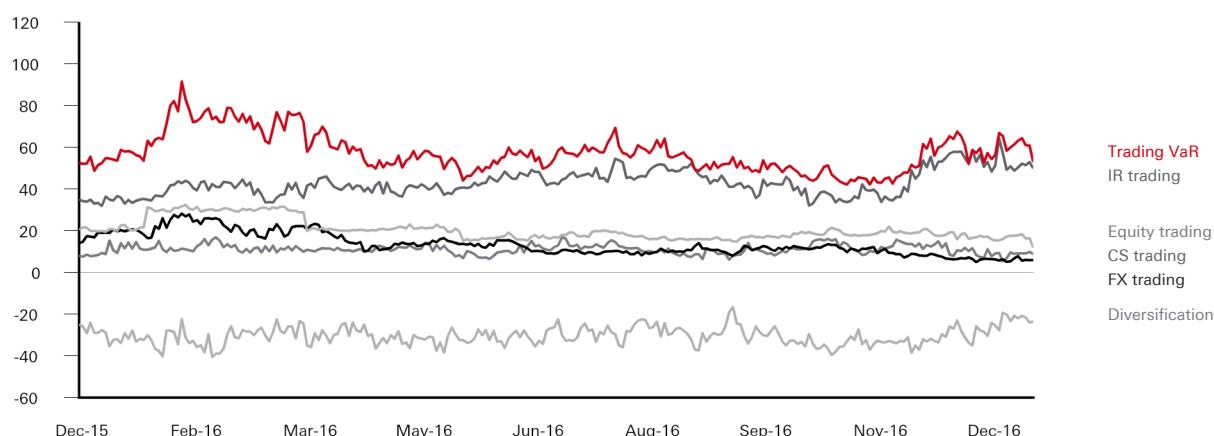
### Trading portfolios

#### Value at risk of the trading portfolios

Trading VaR predominantly resides within Global Markets. It was relatively stable at 31 December 2016 compared with 31 December 2015. During the year, the trading VaR composition changed in that interest rate trading VaR increased but was offset by decreases in both credit spread and equity trading VaR components.

The daily levels of total trading VaR over the last year are set out in the graph below.

Daily VaR (trading portfolios), 99% 1 day (\$m)



The Group trading VaR for the year is shown in the table below.

#### Trading VaR, 99% 1 day<sup>51</sup>

(Audited)

	Foreign exchange (FX) and commodity \$m	Interest rate (IR) \$m	Equity (EQ) \$m	Credit spread (CS) \$m	Portfolio diversification \$m	Total <sup>53</sup> \$m
<b>Balance at 31 Dec 2016</b>	<b>8.9</b>	<b>49.7</b>	<b>11.8</b>	<b>5.9</b>	<b>(23.5)</b>	<b>52.8</b>
Average	11.1	42.8	20.4	13.5	(30.3)	57.5
Maximum	16.9	64.2	32.4	28.1		91.5
Minimum	5.4	31.8	11.8	5.0		42.1
Balance at 31 Dec 2015	8.0	34.9	21.4	13.9	(24.9)	53.3
Average	14.7	46.0	19.6	15.5	(35.7)	60.1
Maximum	25.4	57.0	29.0	23.3		77.9
Minimum	6.3	32.6	11.9	9.8		47.5

For footnotes, see page 126.

#### Back-testing

In 2016, the Group experienced two back-testing exceptions against hypothetical profit and loss: a loss exception in February, driven by Libor against overnight index spread widening on long positions; and a profit exception in June, driven by significant devaluations in sterling and the euro against the US dollar resulting from the UK's referendum on EU membership.

There was no evidence of model errors or control failures.

The back-testing result excludes exceptions due to changes in fair value adjustments.

#### Non-trading portfolios

##### Value at risk of the non-trading portfolios

Non-trading VaR of the Group includes contributions from all global businesses. There is no commodity risk in the non-trading portfolios. The increase in non-trading VaR during 2016 was due primarily to the lengthening of the duration in the non-trading book from higher interest rates, especially US rates.

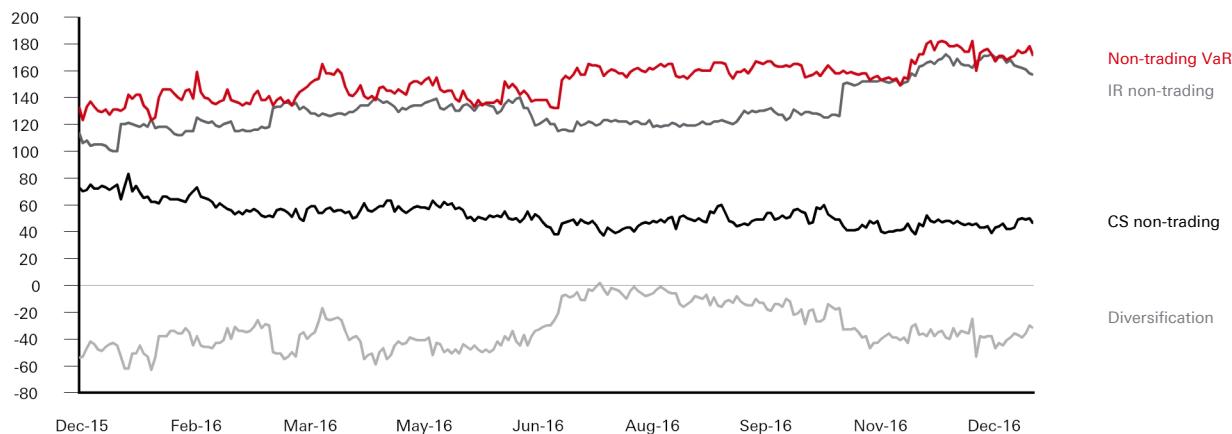
The increase in non-trading interest rate was offset by a decrease in the credit spread VaR component and an increase in portfolio diversification effects.

Non-trading VaR includes the interest rate risk in the banking book transferred to and managed by Balance Sheet Management ('BSM') and the non-trading financial instruments held by BSM. The management of interest rate risk in the banking book and the role of BSM are described further in Interest rate risk in the banking book section below.

Non-trading VaR excludes the insurance operations which are discussed further on page 121 and the interest rate risk in the banking book arising from HSBC Holdings.

The daily levels of total non-trading VaR over the last year are set out in the graph below.

#### Daily VaR (non-trading portfolios), 99% 1 day (\$m)



The Group non-trading VaR for the year is shown in the table below.

**Non-trading VaR, 99% 1 day**

(Audited)

	Interest rate (IR) \$m	Credit spread (CS) \$m	Portfolio diversification <sup>52</sup> \$m	Total <sup>53</sup> \$m
<b>Balance at 31 Dec 2016</b>	<b>157.0</b>	<b>46.5</b>	<b>(32.1)</b>	<b>171.4</b>
Average	131.6	52.8	(32.1)	152.3
Maximum	171.9	82.8		182.1
Minimum	100.2	36.9		123.3
 Balance at 31 Dec 2015				
Average	97.5	65.7	(42.0)	121.2
Maximum	131.5	89.4		156.8
Minimum	70.5	52.1		91.5

For footnotes, see page 126.

Non-trading VaR excludes equity risk on available-for-sale securities, structural foreign exchange risk and interest rate risk on fixed-rate securities issued by HSBC Holdings. This section and the sections below describe the scope of HSBC's management of market risks in non-trading books.

**Equity securities classified as available for sale**

**Fair value of equity securities**

(Audited)

	2016 \$bn	2015 \$bn
Footnotes		
Private equity holdings	54 <b>1.2</b>	1.9
Investment to facilitate ongoing business	55 <b>1.5</b>	1.9
Other strategic investments	<b>2.0</b>	2.1
<b>At 31 Dec</b>	<b>4.7</b>	5.9

For footnotes, see page 126.

The table above sets out the maximum possible loss on shareholders' equity from available-for-sale equity securities. The fair value of equity securities classified as available for sale reduced from \$5.9bn to \$4.7bn. The decrease in private equity holdings was largely due to fund distributions and the reclassification of the investment in certain funds as an associate investment. The decrease in business facilitation equities was largely due to the sale of the Visa investment.

**Market risk balance sheet linkages**

Below are the balance sheet lines in the Group's consolidated position that are subject to market risk.

**Trading assets and liabilities**

The Group's trading assets and liabilities are in almost all cases originated by GB&M. These assets and liabilities are treated as traded risk for the purposes of market risk management, other than a limited number of exceptions, primarily in Global Banking where the short-term acquisition and disposal of the assets are linked to other non-trading related activities such as loan origination.

**Derivative assets and liabilities**

We undertake derivative activity for three primary purposes: to create risk management solutions for clients, to manage the portfolio risks arising from client business, and to manage and hedge our own risks. Most of our derivative exposures arise from sales and trading activities within GB&M, and are treated as traded risk for market risk management purposes.

The assets and liabilities included in trading VaR give rise to a large proportion of the income included in net trading income. As set out on page 184, HSBC's net trading income in 2016 was \$9,452m (2015: \$8,723m). Adjustments to trading income such as valuation adjustments do not feed the trading VaR model.

*For information on the accounting policies applied to financial instruments at fair value, see Note 13 on the Financial Statements.*

**Structural foreign exchange exposures**

*For our policies and procedures for managing structural foreign exchange exposures, see page 78 of the Risk management section.*

HSBC's structural foreign exchange exposures are represented by the net asset value of its foreign exchange equity and subordinated debt investments in subsidiaries, branches, joint ventures and associates with non-US dollar functional currencies. Gains or losses on structural foreign exchange exposures are recognised in other comprehensive income.

**Net structural foreign exchange exposures**

	2016 \$m	2015 \$m
<b>Currency of structural exposure</b>		
Hong Kong dollars	<b>32,472</b>	28,270
Pound sterling <sup>1</sup>	<b>27,527</b>	32,701
Chinese renminbi	<b>24,504</b>	24,117
Euros	<b>17,397</b>	19,966
Indian rupees	<b>3,901</b>	3,645
Mexican pesos	<b>3,826</b>	4,228
Canadian dollars	<b>3,734</b>	3,595
Saudi riyals	<b>3,690</b>	3,109
Swiss francs	<b>2,226</b>	2,642
Malaysian ringgit	<b>2,079</b>	1,994
UAE dirhams	<b>2,073</b>	1,898
Singapore dollars	<b>1,995</b>	1,454
Taiwanese dollars	<b>1,753</b>	1,702
Australian dollars	<b>1,667</b>	1,396
Indonesian rupiah	<b>1,439</b>	1,303
Korean won	<b>1,260</b>	1,296
Argentine pesos	<b>860</b>	875
Brazilian real	<b>755</b>	2,865
Turkish lira	<b>734</b>	1,006
Thai baht	<b>736</b>	662
Others, each less than \$700m	<b>5,728</b>	6,038
<b>At 31 Dec</b>	<b>140,356</b>	144,762

<sup>1</sup> During 2016, we entered into new forward exchange contracts amounting to \$1.5bn (2015: \$2.6bn) in order to manage our sterling structural foreign exchange exposure.

Shareholders' equity would decrease by \$2,247m (2015: \$2,633m) if euro and sterling foreign currency exchange rates weakened by 5% relative to the US dollar.

## Net interest income sensitivity

The following table sets out the assessed impact on our base case projected net interest income ('NII') for 2016 (excluding insurance) of a series of four quarterly parallel shocks of 25 basis points to the current market-implied path of interest rates worldwide at the beginning of each quarter from 1 January 2017.

The sensitivities shown represent our assessment as to the change in expected base case net interest income under the two rate scenarios, assuming that all other non-interest rate risk variables remain constant, and there are no management actions. In deriving our base case net interest income projections, the repricing rates of assets and liabilities used are derived from current yield curves, thereby reflecting current market expectations of the future path of interest rates. The scenarios therefore represent interest rate shocks to the current market implied path of rates.

The NII sensitivities shown are indicative and based on simplified scenarios, including the assumption that the balance sheet size and structure remains static, other than instances where the size of the balances or repricing is deemed interest rate sensitive (non-interest bearing current account migration and fixed rate loan early prepayment) and where non-traded VaR is assumed to contractually run off. The limitations of this analysis are discussed within the 'Risk management' section on page 68.

Assuming no management response, a sequence of such rises ('up-shock') would increase expected net interest income for 2016 by \$1,709m (2015: \$1,251m), while a sequence of such falls ('down-shock') would decrease planned net interest income by \$2,406m (2015: \$2,258m).

The NII sensitivity of the Group can be split into three key components: the structural sensitivity arising from the four global businesses excluding BSM and Markets, the sensitivity of the funding of the trading book (Markets) and the sensitivity of BSM.

The structural sensitivity is positive in a rising rate environment and negative in a falling rate environment. The sensitivity of the funding of the trading book is negative in a rising rate environment and positive in a falling rate environment, and in terms of the impact on profit the change in NII would be expected to be offset by a similar change in net trading income. The sensitivity of BSM will depend on its position. Typically, assuming no management response, the sensitivity of BSM is negative in a rising rate environment and positive in a falling rate environment.

The NII sensitivity figures also incorporate the effect of any interest rate behaviourisation applied and the effect of any assumed repricing across products under the specific interest rate scenario. They do not incorporate the effect of any management decision to change the HSBC balance sheet composition.

The NII sensitivity in BSM arises from a combination of the techniques that BSM use to mitigate the transferred interest rate risk and the methods they use to optimise net revenues in line with their defined risk mandate. The figures in the table below do not incorporate the effect of any management decisions within BSM, but in reality it is likely that there would be some short-term adjustment in BSM positioning to offset the NII effects of the specific interest rate scenario where necessary.

The NII sensitivity arising from the funding of the trading book is comprised of the expense of funding trading assets, while the revenue from these trading assets is reported in net trading income. This leads to an asymmetry in the NII sensitivity figures which is cancelled out in our global business results, where we include both net interest income and net trading income. It is likely, therefore, that the overall effect on profit before tax of the funding of the trading book will be much less pronounced than the figures in the following table.

## Net interest income sensitivity<sup>56</sup>

(Audited)

	US dollar bloc \$m	Rest of Americas bloc \$m	Hong Kong dollar bloc \$m	Rest of Asia bloc \$m	Sterling bloc \$m	Euro bloc \$m	Total \$m
Change in 2016 net interest income arising from a shift in yield curves of:							
+25 basis points at the beginning of each quarter	605	47	504	280	61	212	1,709
-25 basis points at the beginning of each quarter	(1,024)	(41)	(797)	(292)	(261)	9	(2,406)
Change in 2015 net interest income arising from a shift in yield curves of:							
+25 basis points at the beginning of each quarter	410	72	217	369	135	49	1,251
-25 basis points at the beginning of each quarter	(691)	(74)	(645)	(290)	(528)	(30)	(2,258)

For footnote, see page 126.

We expect NII to rise in the rising rate scenario and fall in the falling rate scenario. This is due to a structural mismatch between our assets and liabilities (on balance we would expect our assets to reprice more quickly, and to a greater extent, than our liabilities).

## Economic value of equity

The table below sets out the assessed impact on our base case economic value of equity ('EVE') of an immediate parallel

upward shock of 200 basis points ('bps') (up 200bps) and an immediate parallel downward shock of 200 basis points (down 200bps) to the market-implied path of interest rates worldwide on 1 January 2017.

The economic value of equity remains higher than the book value of equity under base case, up 200bps and down 200bps scenarios.

### Economic value of equity

	US dollar bloc \$m	Rest of Americas bloc \$m	Hong Kong dollar bloc \$m	Rest of Asia bloc \$m	Sterling bloc \$m	Euro bloc \$m	Total \$m
Change in economic value of equity as at 31 Dec 2016 arising from an immediate shift in yield curves of:							
+200 basis points	1,616	(596)	1,492	(103)	(684)	(597)	1,128
-200 basis points	(7,455)	531	(2,591)	(159)	(792)	58	(10,408)

### Sensitivity of capital and reserves

Under CRD IV, available-for-sale ('AFS') reserves are included as part of CET1 capital. We measure the potential downside risk to the CET1 ratio due to interest rate and credit spread risk in the AFS portfolio by the portfolio's stressed VaR, using a 99% confidence level and an assumed holding period of one quarter. At December 2016, the stressed VaR of the portfolio was \$3.2bn.

We monitor the sensitivity of reported cash flow hedging reserves to interest rate movements on a monthly basis by

assessing the expected reduction in valuation of cash flow hedges due to parallel movements of plus or minus 100bps in all yield curves. These particular exposures form only a part of our overall interest rate exposure.

The following table describes the sensitivity of our cash flow hedge reported reserves to the stipulated movements in yield curves and the maximum and minimum month-end figures during the year. The sensitivities are indicative and based on simplified scenarios.

### Sensitivity of cash flow hedging reported reserves to interest rate movements

	Maximum impact		Minimum impact	
	\$m	\$m	\$m	\$m
<b>At 31 Dec 2016</b>				
+100 basis point parallel move in all yield curves	(1,051)	(1,173)	(1,051)	
As a percentage of total shareholders' equity	(0.6)%	(0.7)%	(0.6)%	
-100 basis point parallel move in all yield curves	1,080	1,080	1,145	
As a percentage of total shareholders' equity	0.6%	0.6%	0.7%	
At 31 Dec 2015				
+100 basis point parallel move in all yield curves	(1,235)	(1,259)	(1,137)	
As a percentage of total shareholders' equity	(0.66)%	(0.67)%	(0.60)%	
-100 basis point parallel move in all yield curves	1,224	1,232	1,133	
As a percentage of total shareholders' equity	0.65%	0.65%	0.60%	

### Third-party assets in Balance Sheet Management

*For our BSM governance framework, see page 79 of 'Risk management'.*

Third-party assets in BSM increased by 9% during 2016. Deposits with central banks increased by \$28bn, predominantly in North America and Europe, due to deployment of increased commercial surplus, partly offset by decrease in the UK due to foreign exchange movements as sterling depreciated against the US dollar.

Financial investments increased by \$17bn due to increases in Europe and Asia, as commercial surplus was deployed into government bonds.

### Third-party assets in Balance Sheet Management

	2016 \$m	2015 \$m
Cash and balances at central banks	98,996	71,116
Trading assets	414	639
Loans and advances:		
– to banks	37,287	42,059
– to customers	2,564	2,773
Reverse repurchase agreements	35,143	29,760
Financial investments	352,419	335,543
Other	4,555	4,277
<b>At 31 Dec</b>	<b>531,378</b>	<b>486,167</b>

### Defined benefit pension schemes

Market risk arises within our defined benefit pension schemes to the extent that the obligations of the schemes are not fully matched by assets with determinable cash flows.

*For details of our defined benefit schemes, including asset allocation, see Note 5 on the Financial Statements, and for pension risk management see page 84.*

### Additional market risk measures applicable only to the parent company

The principal tools used in the management of market risk are VaR for foreign exchange rate risk and the projected sensitivity of HSBC Holdings' net interest income to future changes in yield curves and interest rate gap repricing tables for interest rate risk.

### Foreign exchange risk

Total foreign exchange VaR arising within HSBC Holdings in 2016 was as follows:

### HSBC Holdings – foreign exchange VaR

	2016 \$m	2015 \$m
<b>At 31 Dec</b>	<b>32.1</b>	<b>45.6</b>
Average	44.4	42.3
Minimum	32.1	32.9
Maximum	58.2	47.1

The foreign exchange risk largely arises from loans to subsidiaries of a capital nature that are not denominated in the functional currency of either the provider or the recipient and which are accounted for as financial assets. Changes in the carrying amount of these loans due to foreign exchange rate differences are taken directly to HSBC Holdings' income

statement. These loans, and most of the associated foreign exchange exposures, are eliminated on consolidation.

#### Sensitivity of net interest income

HSBC Holdings monitors NII sensitivity over a five-year time horizon reflecting the longer-term perspective on interest rate risk management appropriate to a financial services holding company. These sensitivities assume that any issuance where HSBC Holdings has an option to reimburse at a future call date is called at this date. The table below sets out the effect on

HSBC Holdings' future NII over a five-year time horizon of incremental 25 basis point parallel falls or rises in all yield curves worldwide at the beginning of each quarter during the 12 months from 1 January 2016.

Assuming no management actions, a sequence of such rises would increase planned NII for the next five years by \$746m (2015: increase of \$247m), while a sequence of such falls would decrease planned NII by \$723m (2015: decrease of \$266m).

#### Sensitivity of HSBC Holdings' net interest income to interest rate movements<sup>56</sup>

	US dollar bloc \$m	Sterling bloc \$m	Euro bloc \$m	Total \$m
<b>Change in projected net interest income as at 31 Dec arising from a shift in yield curves</b>				
<b>2016</b>				
of +25 basis points at the beginning of each quarter				
0-1 year	84	6	0	90
2-3 years	299	20	6	325
4-5 years	304	20	8	332
of -25 basis points at the beginning of each quarter				
0-1 year	(84)	(4)	—	(88)
2-3 years	(299)	(13)	—	(312)
4-5 years	(304)	(19)	(1)	(324)
<b>2015</b>				
of +25 basis points at the beginning of each quarter				
0-1 year	57	15	—	72
2-3 years	118	43	7	168
4-5 years	(23)	43	(12)	8
of -25 basis points at the beginning of each quarter				
0-1 year	(57)	(14)	(6)	(77)
2-3 years	(118)	(43)	(22)	(183)
4-5 years	23	(43)	15	(5)

For footnote, see page 126.

The interest rate sensitivities tabulated above are indicative and based on simplified scenarios. The figures represent hypothetical movements in NII based on our projected yield curve scenarios, HSBC Holdings' current interest rate risk profile and assumed changes to that profile during the next five years.

Changes to assumptions concerning the risk profile over the next five years can have a significant impact on the NII sensitivity for that period. However, the figures do not take into account the effect of actions that could be taken to mitigate this interest rate risk.

**Interest rate repricing gap table**

The interest rate risk on the fixed-rate securities issued by HSBC Holdings is not included within the Group VaR but is managed

on a repricing gap basis. The interest rate repricing gap table below analyses the full-term structure of interest rate mismatches within HSBC Holdings' balance sheet.

**Repricing gap analysis of HSBC Holdings**

	Total \$m	Up to 1 year \$m	From over 1 to 5 years \$m	From over 5 to 10 years \$m	More than 10 years \$m	Non-interest bearing \$m
<b>Cash at bank and in hand:</b>						
- balances with HSBC undertakings	—	—	—	—	—	—
Derivatives	<b>2,184</b>	—	—	—	—	<b>2,184</b>
Loans and advances to HSBC undertakings	<b>77,680</b>	<b>72,288</b>	<b>279</b>	<b>405</b>	—	<b>4,708</b>
Financial investments in HSBC undertakings	<b>3,555</b>	<b>2,675</b>	<b>731</b>	<b>8</b>	—	<b>141</b>
Investments in subsidiaries	<b>96,183</b>	—	—	—	—	<b>96,183</b>
Other assets	<b>1,488</b>	—	<b>105</b>	—	—	<b>1,383</b>
<b>Total assets</b>	<b>181,090</b>	<b>74,963</b>	<b>1,115</b>	<b>413</b>	—	<b>104,599</b>
Amounts owed to HSBC undertakings	(2,157)	(105)	—	—	—	(2,052)
Financial liabilities designated at fair values	(30,145)	(1,109)	(7,344)	(12,588)	(6,422)	(2,682)
Derivatives	(5,018)	—	—	—	—	(5,018)
Debt securities in issue	(21,824)	(4,199)	(2,997)	(11,708)	(3,916)	996
Other liabilities	(1,628)	—	—	—	—	(1,628)
Subordinated liabilities	(15,200)	—	(3,267)	(2,000)	(9,445)	(488)
Total equity	(105,118)	—	—	—	—	(105,118)
Total liabilities and equity	(181,090)	(5,413)	(13,608)	(26,296)	(19,783)	(115,990)
Off-balance sheet items attracting interest rate sensitivity	(57,089)	13,608	26,296	13,441	3,743	
<b>Net interest rate risk gap at 31 Dec 2016</b>	<b>12,461</b>	<b>1,115</b>	<b>413</b>	<b>(6,342)</b>	<b>(7,647)</b>	
Cumulative interest rate gap	<b>12,461</b>	<b>13,576</b>	<b>13,989</b>	<b>7,647</b>	—	
<b>Cash at bank and in hand:</b>						
- balances with HSBC undertakings	242	242	—	—	—	—
Derivatives	2,467	—	—	—	—	2,467
Loans and advances to HSBC undertakings	44,350	42,661	279	405	—	1,005
Financial investments in HSBC undertakings	4,285	2,985	—	731	—	569
Investments in subsidiaries	97,770	—	—	—	—	97,770
Other assets	1,080	—	109	—	—	971
Total assets	150,194	45,888	388	1,136	—	102,782
Amounts owed to HSBC undertakings	(2,152)	(781)	—	—	—	(1,371)
Financial liabilities designated at fair values	(19,853)	(1,741)	(3,239)	(7,032)	(4,312)	(3,628)
Derivatives	(2,278)	—	—	—	—	(2,278)
Debt securities in issue	(960)	—	—	(963)	—	3
Other liabilities	(15,895)	—	(3,374)	(3,500)	(9,119)	98
Subordinated liabilities	(1,642)	—	—	—	—	(1,642)
Total equity	(107,414)	—	—	—	—	(107,414)
Total liabilities and equity	(150,194)	(2,522)	(6,613)	(11,495)	(13,332)	(116,232)
Off-balance sheet items attracting interest rate sensitivity	—	(22,748)	5,351	10,722	5,763	912
Net interest rate risk gap at 31 Dec 2015	—	20,618	(874)	363	(7,569)	(12,538)
Cumulative interest rate gap	—	20,618	19,744	20,107	12,538	—

## Operational risk profile

Operational risk is the risk to achieving our strategy or objectives as a result of inadequate or failed internal processes, people and systems or from external events. It arises from day-to-day operations or external events, and is relevant to every aspect of our business.

Responsibility for minimising operational risk lies with HSBC's staff. All staff are required to manage the operational risks of the business and operational activities for which they are responsible.

A summary of our current policies and practices regarding the management of operational risk is set out on page 80.

## Operational risk exposures in 2016

HSBC continued to strengthen those controls that manage our most material risks in 2016. Among other measures, we:

- further embedded Global Standards into the operational risk management framework to ensure that we know our customers, ask the right questions and escalate concerns to prevent financial crime;
- implemented a number of initiatives to raise our standards in relation to the conduct of our business, as described on page 81 of the 'Regulatory compliance risk management' section;
- increased monitoring and enhanced detective controls to manage those fraud risks which arise from new technologies and new ways of banking;
- strengthened internal security controls to prevent cyber-attacks;
- improved controls and security to protect customers when using digital channels; and
- enhanced third-party risk management capability to enable the consistent risk assessment of any third-party service.

Further information on the nature of these risks is provided in 'Top and emerging risks' on page 64.

## Operational risk losses in 2016

Operational risk losses in 2016 are lower than in 2015, reflecting a reduction in losses incurred relating to large legacy conduct-related events. Conduct-related costs included in significant items are outlined on page 62. The profile of operational risk losses below shows the distribution of losses for 2015 and 2016 against event types.

### Operational risk losses

	2016 %	2015 %
Business disruption and system failures	—	—
Clients, products and business practices	<b>57</b>	74
Damage to physical assets	—	—
Employee practices and workplace safety	<b>1</b>	1
Execution, delivery and process management	<b>34</b>	13
External fraud	<b>8</b>	11
Internal fraud	—	1
<b>Total</b>	<b>100</b>	100

## Insurance manufacturing operations risk profile

	Page
Insurance manufacturing operations risk in 2016	121
HSBC's bancassurance model	121
Measurement	121
Key risk types	123
Market risk	123
Credit risk	124
Liquidity risk	124
Insurance risk	125

### Insurance manufacturing operations risk in 2016

The majority of the risk in our insurance business derives from manufacturing activities and can be categorised as financial risk or insurance risk. Financial risks include market risk, credit risk and liquidity risk. Insurance risk is the risk, other than financial risk, of loss transferred from the holder of the insurance contract to the issuer (HSBC).

*A summary of our current policies and practices regarding the management of insurance risk is set out on page 82.*

#### HSBC's bancassurance model

We operate an integrated bancassurance model that provides insurance products principally for customers with whom we have a banking relationship.

The insurance contracts we sell relate to the underlying needs of our banking customers, which we can identify from our point-of-sale contacts and customer knowledge. The majority of sales are of savings and investment products and term and credit life contracts.

By focusing largely on personal and SME lines of business, we are able to optimise volumes and diversify individual insurance risks. We choose to manufacture these insurance products in HSBC subsidiaries based on an assessment of operational scale and risk appetite. Manufacturing insurance allows us to retain the risks and rewards associated with writing insurance contracts by keeping part of the underwriting profit and investment income within the Group.

We have life insurance manufacturing subsidiaries in nine countries (Argentina, mainland China, France, Hong Kong, Malaysia, Malta, Mexico, Singapore and the UK). We also have life insurance manufacturing associates in Saudi Arabia and India.

Where we do not have the risk appetite or operational scale to be an effective insurance manufacturer, we engage with a handful of leading external insurance companies in order to provide insurance products to our customers through our banking network and direct channels. These arrangements are generally structured with our exclusive strategic partners and earn the Group a combination of commissions, fees and a share of profits. We distribute insurance products in all of our geographical regions.

Insurance products are sold through all global businesses, but predominantly by RBWM and CMB through our branches and direct channels worldwide.

The sale of our Brazilian insurance operations completed on 1 July 2016. These operations were reported as part of the disposal group held for sale at 31 December 2015.

#### Measurement

(Audited)

The risk profile of our insurance manufacturing businesses is measured using an economic capital approach. Assets and liabilities are measured on a market value basis, and a capital requirement is defined to ensure that there is a less than one in

200 chance of insolvency over a one-year time horizon, given the risks that the businesses are exposed to. The methodology for the economic capital calculation is largely aligned to the pan-European Solvency II insurance capital regulations, which were applicable from January 2016. The economic capital coverage ratio (economic net asset value divided by the economic capital requirement) is a key risk appetite measure.

The business has a current appetite to remain above 140% with a tolerance of 110%. In addition to economic capital, the regulatory solvency ratio is also a metric used to manage risk appetite on an entity basis.

The tables below show the composition of assets and liabilities by contract type and by geographical region.

**Balance sheet of insurance manufacturing subsidiaries by type of contract<sup>63</sup>**

(Audited)

Footnotes	With DPF \$m	Unit-linked \$m	Other contracts <sup>67</sup> \$m	Shareholder assets and liabilities <sup>58</sup> \$m	Total \$m
<b>Financial assets</b>	<b>57,004</b>	<b>8,877</b>	<b>13,021</b>	<b>5,141</b>	<b>84,043</b>
– trading assets	–	–	2	–	2
– financial assets designated at fair value	12,134	8,592	2,889	684	24,299
– derivatives	212	2	13	46	273
– financial investments – HTM	25,867	–	5,329	2,919	34,115
– financial investments – AFS	14,359	–	4,206	1,355	19,920
– other financial assets	4,432	283	582	137	5,434
<b>Reinsurance assets</b>	<b>498</b>	<b>322</b>	<b>1,048</b>	<b>–</b>	<b>1,868</b>
PVIF	61	–	–	6,502	6,502
<b>Other assets and investment properties</b>	<b>1,716</b>	<b>5</b>	<b>171</b>	<b>525</b>	<b>2,417</b>
<b>Total assets</b>	<b>59,218</b>	<b>9,204</b>	<b>14,240</b>	<b>12,168</b>	<b>94,830</b>
Liabilities under investment contracts designated at fair value	–	2,197	3,805	–	6,002
Liabilities under insurance contracts	58,800	6,949	9,524	–	75,273
Deferred tax	62	13	3	7	1,166
Other liabilities	–	–	–	1,805	1,805
<b>Total liabilities</b>	<b>58,813</b>	<b>9,149</b>	<b>13,336</b>	<b>2,971</b>	<b>84,269</b>
Total equity	–	–	–	10,561	10,561
<b>Total liabilities and equity at 31 Dec 2016</b>	<b>58,813</b>	<b>9,149</b>	<b>13,336</b>	<b>13,532</b>	<b>94,830</b>
Financial assets	53,521	8,840	11,691	5,531	79,583
– trading assets	–	–	2	–	2
– financial assets designated at fair value	11,119	8,435	2,718	1,015	23,287
– derivatives	160	1	33	62	256
– financial investments – HTM	22,840	–	4,189	3,050	30,079
– financial investments – AFS	15,077	–	4,020	1,233	20,330
– other financial assets	4,325	404	729	171	5,629
Reinsurance assets	202	264	951	–	1,417
PVIF	61	–	–	5,685	5,685
Other assets and investment properties	1,726	7	139	4,576	6,448
<b>Total assets</b>	<b>55,449</b>	<b>9,111</b>	<b>12,781</b>	<b>15,792</b>	<b>93,133</b>
Liabilities under investment contracts designated at fair value	–	2,256	3,771	–	6,027
Liabilities under insurance contracts	55,023	6,791	8,124	–	69,938
Deferred tax	62	11	–	1,056	1,081
Other liabilities	–	–	–	5,553	5,553
<b>Total liabilities</b>	<b>55,034</b>	<b>9,047</b>	<b>11,909</b>	<b>6,609</b>	<b>82,599</b>
<b>Total equity</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>10,534</b>	<b>10,534</b>
<b>Total liabilities and equity at 31 Dec 2015</b>	<b>55,034</b>	<b>9,047</b>	<b>11,909</b>	<b>17,143</b>	<b>93,133</b>

For footnotes, see page 126.

### Balance sheet of insurance manufacturing subsidiaries by geographical region<sup>63, 64</sup>

(Audited)

Footnotes				
	Europe \$m	Asia \$m	Latin America \$m	Total \$m
<b>Financial assets</b>	<b>26,238</b>	<b>56,371</b>	<b>1,434</b>	<b>84,043</b>
– trading assets	–	–	2	2
– financial assets designated at fair value	10,171	13,618	510	24,299
– derivatives	187	86	–	273
– financial investments – HTM	59	–	33,624	491
– financial investments – AFS	59	13,812	5,735	373
– other financial assets	60	2,068	3,308	58
<b>Reinsurance assets</b>	<b>362</b>	<b>1,499</b>	<b>7</b>	<b>1,868</b>
PVIF	61	711	5,682	109
Other assets and investment properties		871	1,493	53
<b>Total assets</b>	<b>28,182</b>	<b>65,045</b>	<b>1,603</b>	<b>94,830</b>
Liabilities under investment contracts designated at fair value	1,321	4,681	–	6,002
Liabilities under insurance contracts	24,310	49,793	1,170	75,273
Deferred tax	62	238	919	32
Other liabilities		841	914	50
<b>Total liabilities</b>	<b>26,710</b>	<b>56,307</b>	<b>1,252</b>	<b>84,269</b>
Total equity		1,472	8,738	351
<b>Total liabilities and equity at 31 Dec 2016</b>	<b>28,182</b>	<b>65,045</b>	<b>1,603</b>	<b>94,830</b>
Financial assets	26,897	51,087	1,599	79,583
– trading assets	–	–	2	2
– financial assets designated at fair value	9,987	12,668	632	23,287
– derivatives	163	93	–	256
– financial investments – HTM	59	–	29,496	583
– financial investments – AFS	59	14,525	5,503	302
– other financial assets	60	2,222	3,327	80
Reinsurance assets		287	1,122	8
PVIF	61	807	4,761	117
Other assets and investment properties		919	1,358	4,171
<b>Total assets</b>	<b>28,910</b>	<b>58,328</b>	<b>5,895</b>	<b>93,133</b>
Liabilities under investment contracts designated at fair value	1,376	4,651	–	6,027
Liabilities under insurance contracts	24,699	43,975	1,264	69,938
Deferred tax	62	274	767	40
Other liabilities		832	974	3,747
<b>Total liabilities</b>	<b>27,181</b>	<b>50,367</b>	<b>5,051</b>	<b>82,599</b>
Total equity		1,729	7,961	844
<b>Total liabilities and equity at 31 Dec 2015</b>	<b>28,910</b>	<b>58,328</b>	<b>5,895</b>	<b>93,133</b>

For footnotes, see page 126.

### Key risk types

The key risk for the insurance operation is market risk, followed by insurance risk. Credit and liquidity risk, while significant for the bank, are minor for our insurance operations.

### Market risk

(Audited)

#### Description and exposure

Market risk is the risk of changes in market factors affecting HSBC's capital or profit. Market factors include interest rates, equity and growth assets, spread risk and foreign exchange rates.

Our exposure varies depending on the type of contract issued. Our most significant life insurance products are contracts with discretionary participating features ('DPF') issued in France and Hong Kong. These products typically include some form of capital guarantee or guaranteed return on the sums invested by the policyholders, to which discretionary bonuses are added if allowed by the overall performance of the funds. These funds are primarily invested in bonds, with a proportion allocated to other asset classes to provide customers with the potential for enhanced returns.

DPF products expose HSBC to the risk of variation in asset returns, which will impact our participation in the investment

performance. In addition, in some scenarios the asset returns can become insufficient to cover the policyholders' financial guarantees, in which case the shortfall has to be met by HSBC. Reserves are held against the cost of such guarantees, calculated by stochastic modelling.

Where local rules require, these reserves are held as part of liabilities under insurance contracts. Any remainder is accounted for as a deduction from the present value of in-force ('PVIF') long-term insurance business on the relevant product. The table below shows the total reserve held for the cost of guarantees, the range of investment returns on assets supporting these products and the implied investment return that would enable the business to meet the guarantees.

The cost of guarantees decreased to \$625m (2015: \$748m) primarily due to changes to the profit-sharing mechanism on DPF contracts with guarantees in Hong Kong, which primarily reduced the cost of guarantees on portfolios reported in the 2.1% to 4.0% category. In addition, there was a movement in cost of guarantees from the 2.1% to 4.0% category, to the 0.1% to 2.0% category due to reducing average guarantees on certain portfolios. The real annual return guarantees reported in 2015 relate to insurance operations in Brazil, which were sold on 1 July 2016.

For unit-linked contracts, market risk is substantially borne by the policyholder, but some market risk exposure typically

remains, as fees earned are related to the market value of the linked assets.

#### Financial return guarantees<sup>63</sup>

(Audited)

Footnotes	2016				2015		
	Investment returns implied by guarantee		Current yields	Cost of guarantees	Investment returns implied by guarantee		Cost of guarantees
	%	%	%	\$m	%	%	\$m
Capital	<b>0.0</b>	<b>0.0 – 3.0</b>	<b>59</b>		0.0	0.0 – 3.8	85
Nominal annual return	<b>0.1 – 2.0</b>	<b>3.7 – 3.8</b>	<b>64</b>		0.1 – 1.9	3.9 – 3.9	4
Nominal annual return	<b>65</b>	<b>2.1 – 4.0</b>	<b>426</b>		2.0 – 4.0	3.8 – 4.0	603
Nominal annual return		<b>4.1 – 5.0</b>	<b>76</b>		4.1 – 5.0	3.8 – 4.1	28
Real annual return	<b>66</b>	n/a	n/a		0.0 – 6.0	5.9 – 6.1	28
<b>At 31 Dec</b>				<b>625</b>			<b>748</b>

For footnotes, see page 126.

#### Sensitivities

Changes in financial market factors, from the economic assumptions in place at the start of the year, had a negative impact on reported profit before tax of \$386m (2015: \$13m negative). The following table illustrates the effects of selected interest rate, equity price and foreign exchange rate scenarios on our profit for the year and the total equity of our insurance manufacturing subsidiaries.

Where appropriate, the effects of the sensitivity tests on profit after tax and equity incorporate the impact of the stress on the PVIF. The relationship between the profit and total equity and the risk factors is non-linear, therefore the results disclosed should not be extrapolated to measure sensitivities to different levels of stress. For the same reason, the impact of the stress is

not symmetrical on the upside and downside. The sensitivities are stated before allowance for management actions which may mitigate the effect of changes in the market environment. The sensitivities presented allow for adverse changes in policyholder behaviour that may arise in response to changes in market rates.

Interest rate movements have a greater impact on total equity as changes in market value of available-for-sale bonds are not recognised in profit after tax.

Changes in sensitivity compared to 2015 were primarily driven by the impact of decreasing yields in France on the projected cost of options and guarantees and by the adoption of a more market-aligned PVIF methodology in Singapore.

#### Sensitivity of HSBC's insurance manufacturing subsidiaries to market risk factors

(Audited)

Footnote	2016		2015	
	Effect on profit after tax	Effect on total equity	Effect on profit after tax	Effect on total equity
	\$m	\$m	\$m	\$m
+100 basis point parallel shift in yield curves	<b>63</b>	<b>(494)</b>	39	(474)
-100 basis point parallel shift in yield curves	<b>(182)</b>	<b>490</b>	(213)	404
10% increase in equity prices	<b>189</b>	<b>190</b>	176	176
10% decrease in equity prices	<b>(191)</b>	<b>(191)</b>	(158)	(158)
10% increase in US dollar exchange rate compared with all currencies	<b>19</b>	<b>19</b>	16	16
10% decrease in US dollar exchange rate compared with all currencies	<b>(19)</b>	<b>(19)</b>	(16)	(16)

For footnote, see page 126.

#### Credit risk

(Audited)

##### Description and exposure

Credit risk is the risk of financial loss if a customer or counterparty fails to meet their obligation under a contract. It arises in two main areas for our insurance manufacturers:

- risk of default by debt security counterparties after investing premiums to generate a return for policyholders and shareholders; and
- risk of default by reinsurance counterparties and non-reimbursement for claims made after ceding insurance risk.

The amounts outstanding at the balance sheet date in respect of these items are shown in the table on page 122.

The credit quality of the reinsurers' share of liabilities under insurance contracts is assessed as 'satisfactory' or higher (as defined on page 74), with 100% of the exposure being neither past due nor impaired (2015: 100%).

Credit risk on assets supporting unit-linked liabilities is predominantly borne by the policyholder; therefore, our

exposure is primarily related to liabilities under non-linked insurance and investment contracts and shareholders' funds. The credit quality of insurance financial assets is included in the table on page 88.

#### Liquidity risk

(Audited)

##### Description and exposure

Liquidity risk is the risk that an insurance operation, though solvent, either does not have sufficient financial resources available to meet its obligations when they fall due, or can secure them only at excessive cost.

The following table shows the expected undiscounted cash flows for insurance liabilities at 31 December 2016. The liquidity risk exposure is wholly borne by the policyholder in the case of unit-linked business and is shared with the policyholder for non-linked insurance.

The profile of the expected maturity of insurance contracts at 31 December 2016 remained comparable with 2015.

The remaining contractual maturity of investment contract liabilities is included in Note 29.

### Expected maturity of insurance contract liabilities<sup>63</sup>

(Audited)

	Expected cash flows (undiscounted)				
	Within 1 year \$m	1-5 years \$m	5-15 years \$m	Over 15 years \$m	Total \$m
Unit-linked	630	2,468	5,101	9,513	17,712
With DPF and Other contracts	5,582	23,136	40,621	40,447	109,786
<b>At 31 Dec 2016</b>	<b>6,212</b>	<b>25,604</b>	<b>45,722</b>	<b>49,960</b>	<b>127,498</b>
Unit-linked	549	2,164	5,945	11,080	19,738
With DPF and Other contracts	5,356	22,796	37,585	38,649	104,386
At 31 Dec 2015	5,905	24,960	43,530	49,729	124,124

For footnotes, see page 126.

### Insurance risk

#### Description and exposure

Insurance risk is the risk of loss through adverse experience, in either timing or amount, of insurance underwriting parameters (non-economic assumptions). These parameters include mortality, morbidity, longevity, lapses and unit costs.

The principal risk we face is that, over time, the cost of the contract, including claims and benefits, may exceed the total amount of premiums and investment income received.

The tables on pages 122 and 123 analyse our life insurance risk exposures by type of contract and by geographical region.

The insurance risk profile and related exposures remain largely consistent with those observed at 31 December 2015.

#### Sensitivities

(Audited)

The table below shows the sensitivity of profit and total equity to reasonably possible changes in non-economic assumptions across all our insurance manufacturing subsidiaries.

Mortality and morbidity risk is typically associated with life insurance contracts. The effect on profit of an increase in mortality or morbidity depends on the type of business being written. Our largest exposures to mortality and morbidity risk exist in Hong Kong and Singapore.

Sensitivity to lapse rates depends on the type of contracts being written. For a portfolio of term assurance, an increase in lapse rates typically has a negative effect on profit due to the loss of future income on the lapsed policies. However, some contract lapses have a positive effect on profit due to the existence of policy surrender charges. We are most sensitive to a change in lapse rates on unit-linked and universal life contracts in Hong Kong and Singapore, and DPF contracts in France.

Expense rate risk is the exposure to a change in the cost of administering insurance contracts. To the extent that increased expenses cannot be passed on to policyholders, an increase in expense rates will have a negative effect on our profits.

#### Sensitivity analysis

(Audited)

	2016 \$m	2015 \$m
<b>Effect on profit after tax and total equity at 31 Dec</b>		
10% increase in mortality and/or morbidity rates	(71)	(70)
10% decrease in mortality and/or morbidity rates	75	75
10% increase in lapse rates	(80)	(90)
10% decrease in lapse rates	93	102
10% increase in expense rates	(89)	(85)
10% decrease in expense rates	87	83

## Footnotes to Risk

### Liquidity and funding

- 47 The HSBC UK Liquidity Group shown comprises four legal entities: HSBC Bank plc (including all overseas branches, and SPEs consolidated by HSBC Bank plc for Financial Statement purposes), Marks and Spencer Financial Services plc, HSBC Private Bank (UK) Ltd and HSBC Trust Company (UK) Limited, managed as a single operating entity, in line with the application of UK liquidity regulation as agreed with the UK PRA.
- 48 The Hongkong and Shanghai Banking Corporation – Hong Kong branch and The Hongkong and Shanghai Banking Corporation – Singapore branch represent the material activities of the Hongkong and Shanghai Banking Corporation. Each branch is monitored and controlled for liquidity and funding risk purposes as a stand-alone operating entity.
- 49 HSBC France and HSBC Canada represent the consolidated banking operations of the Group in France and Canada, respectively. HSBC France and HSBC Canada are each managed as single distinct operating entities for liquidity purposes.
- 50 The total shown for other principal HSBC operating entities represents the combined position of all the other operating entities overseen directly by the Risk Management Meeting of the GMB.

### Market risk

- 51 Trading portfolios comprise positions arising from the market-making and warehousing of customer-derived positions.
- 52 Portfolio diversification is the market risk dispersion effect of holding a portfolio containing different risk types. It represents the reduction in unsystematic market risk that occurs when combining a number of different risk types; for example, interest rate, equity and foreign exchange, together in one portfolio. It is measured as the difference between the sum of the VaR by individual risk type and the combined total VaR. A negative number represents the benefit of portfolio diversification. As the maximum and minimum occurs on different days for different risk types, it is not meaningful to calculate a portfolio diversification benefit for these measures.
- 53 The total VaR is non-additive across risk types due to diversification effects.
- 54 Investments in private equity are primarily made through managed funds that are subject to limits on the amount of investment. Potential new commitments are subject to risk appraisal to ensure that industry and geographical concentrations remain within acceptable levels for the portfolio as a whole. Regular reviews are performed to substantiate the valuation of the investments within the portfolio.
- 55 Investments held to facilitate ongoing business include holdings in government-sponsored enterprises and local stock exchanges.
- 56 Instead of assuming that all interest rates move together, we group our interest rate exposures into currency blocs whose rates are considered likely to move together. See page 281, 'Cautionary statement regarding forward-looking statements'.

### Risk management of insurance operations

- 57 'Other Contracts' includes term assurance, credit life insurance, universal life insurance and investment contracts not included in the 'Unit-linked' or 'With DPF' columns.
- 58 At 31 December 2015, 'Shareholder assets and liabilities' included assets and liabilities classified as held for sale in respect of the disposal of operations in Brazil, which was completed on 1 July 2016. The assets, comprising mainly debt and equity securities and PVIF, were reported within 'Other assets and investment properties' and totalled \$4.1bn. The liabilities classified as held for sale, comprising mainly liabilities under insurance contracts and liabilities under investment contracts, were reported within 'Other liabilities' and totalled \$3.7bn. No assets and liabilities relating to insurance businesses were held for sale at 31 December 2016.
- 59 Financial investments held to maturity ('HTM') and available for sale ('AFS').
- 60 Comprise mainly loans and advances to banks, cash and inter-company balances with other non-insurance legal entities.
- 61 Present value of in-force long-term insurance business.
- 62 'Deferred tax' includes the deferred tax liabilities arising on recognition of PVIF.
- 63 Does not include associated insurance companies SABB Takaful Company and Canara HSBC Oriental Bank of Commerce Life Insurance Company Limited.
- 64 HSBC has no insurance manufacturing subsidiaries in Middle East and North Africa or North America.
- 65 A block of contracts in France with guaranteed nominal annual returns in the range 1.25%-3.72% is reported entirely in the 2.1%-4.0% category in line with the average guaranteed return of 2.6% offered to policyholders by these contracts.
- 66 Real annual return guarantees provide the policyholder a guaranteed return in excess of the rate of inflation, and are supported by inflation-linked debt securities with yields that are also expressed in real terms.
- 67 Where a -100 basis point parallel shift in the yield curve would result in a negative interest rate, the effects on profit after tax and total equity have been calculated using a minimum rate of 0%.

## Capital

	Page
<b>Capital overview</b>	<b>127</b>
<b>Capital management</b>	<b>127</b>
<b>Capital</b>	<b>128</b>
<b>Risk-weighted assets</b>	<b>129</b>
<b>Leverage ratio</b>	<b>131</b>

### Capital highlights

- Our common equity tier 1 ('CET1') ratio of 13.6% was up from 11.9% at the end of 2015, mainly due to a change in the regulatory treatment of Bank of Communications Co., Limited ('BoCom').
- Our CET1 capital base reduced during the year by \$14.3bn, driven by unfavourable foreign currency movements of \$7.7bn, a \$5.6bn reduction due to the BoCom change, and the \$2.5bn share buy-back.
- A decrease in RWAs in 2016 of \$245.8bn from continued implementation of RWA-reduction initiatives, the BoCom change and favourable foreign currency movements, supported the increase in capital ratios.

## Capital overview

### Capital ratios

	Footnote	At 31 Dec	
		2016 %	2015 %
CRD IV end point			
Common equity tier 1 ratio	1	<b>13.6</b>	11.9
CRD IV transitional			
Common equity tier 1 ratio	1	<b>13.6</b>	11.9
Tier 1 ratio		<b>16.1</b>	13.9
<b>Total capital ratio</b>		<b>20.1</b>	17.2

### Total regulatory capital and risk-weighted assets

	Footnote	At 31 Dec	
		2016 \$m	2015 \$m
CRD IV end point			
Common equity tier 1 capital	1	<b>115,984</b>	130,863
CRD IV transitional			
Common equity tier 1 capital	1	<b>116,552</b>	130,863
Additional tier 1 capital		<b>21,470</b>	22,440
Tier 2 capital		<b>34,336</b>	36,530
<b>Total regulatory capital</b>		<b>172,358</b>	189,833
Transitional risk-weighted assets	1	<b>857,181</b>	1,102,995

<sup>1</sup> Due to transitional provisions in the threshold deduction our CET1 and RWAs are different for transitional and end point. At 31 December 2016, end point RWAs were \$855.8bn.

### RWAs by risk types

	RWAs \$bn	Capital required <sup>1</sup> \$bn
Credit risk	<b>655.7</b>	<b>52.5</b>
Counterparty credit risk	<b>62.0</b>	<b>5.0</b>
Market risk	<b>41.5</b>	<b>3.3</b>
Operational risk	<b>98.0</b>	<b>7.8</b>
<b>At 31 Dec 2016</b>	<b>857.2</b>	<b>68.6</b>

<sup>1</sup> 'Capital required' represents the Pillar 1 capital charge at 8% of RWAs.

## Capital management

(Audited)

Our objective in the management of Group capital is to maintain appropriate levels of capital to support our business strategy, and meet our regulatory and stress testing related requirements.

### Approach and policy

Our approach to capital management is driven by our strategic and organisational requirements, taking into account the regulatory, economic and commercial environment. It is our objective to maintain a strong capital base to support the risks inherent in our business and invest in accordance with our strategy, meeting both consolidated and local regulatory capital requirements at all times. Our policy on capital management is underpinned by a capital management framework and our internal capital adequacy assessment process ('ICAAP'), which enables us to manage our capital in a consistent manner. The framework incorporates a number of different capital measures calculated on an economic capital and regulatory capital basis. The internal capital adequacy assessment process brings together regulatory and internal capital resources and requirements with HSBC's business model, strategy, performance and planning, risks to capital, and the implications of stress testing to assess the bank's capital position.

Our assessment of capital adequacy is aligned to our assessment of risks. These include credit, market, operational, pensions, insurance, structural foreign exchange risk, residual risks and interest rate risk in the banking book.

### Planning and performance

Capital plans and RWA plans form part of the Annual Operating Plan that is approved by the Board. Revised RWA forecasts are submitted to the GMB on a monthly basis and reported RWAs are monitored against plan.

The responsibility for global capital allocation principles and decisions rests with the Group Finance Director. Through our internal governance processes, we seek to maintain discipline over our investment and capital allocation decisions, and seek to ensure that returns on investment meet the Group's management objectives. Our strategy is to allocate capital to businesses and entities to support growth objectives where above hurdle returns have been identified and their regulatory and economic capital needs.

We manage business returns by use of a return on risk-weighted assets ('RoRWA') measure. In 2016, we augmented this through the introduction of financial information and metrics on the consumption of, and returns on, capital by global business to support management's assessment of business performance and the allocation of capital resources. We plan to further embed this in 2017.

### Risks to capital

Outside the stress testing framework, other risks may be identified that have the potential to affect our RWAs and/or capital position. The downside or upside scenarios are assessed against our capital management objectives and mitigating actions are assigned as necessary.

### Stress testing

In addition to an annual internal stress test, the Group is subject to supervisory stress testing in many jurisdictions. Supervisory stress testing requirements are increasing in frequency and in the granularity with which the results are required. These exercises include the programmes of the PRA, the FRB, the EBA, the ECB and the HKMA, as well as stress tests undertaken in other jurisdictions. We take into account the results of all such regulatory stress testing and our internal stress test when assessing our internal capital requirements. The outcome of stress testing exercises carried out by the PRA will also feed

into a PRA buffer under the Pillar 2 requirements, where required.

### Capital generation

HSBC Holdings is the provider of equity capital to its subsidiaries and also provides them with non-equity capital

where necessary. These investments are substantially funded by HSBC Holdings' own capital issuance and profit retention. As part of its capital management process, HSBC Holdings seeks to maintain a prudent balance between the composition of its capital and its investment in subsidiaries.

## Capital

### Transitional own funds disclosure

(Audited)

Ref*	At 31 Dec	
	2016 \$m	2015 \$m
<b>Common equity tier 1 ('CET1') capital: instruments and reserves</b>		
1 Capital instruments and the related share premium accounts		
– ordinary shares	21,310	20,858
2 Retained earnings <sup>1</sup>	125,442	122,304
3 Accumulated other comprehensive income (and other reserves) <sup>1</sup>	560	8,832
5 Minority interests (amount allowed in consolidated CET1)	3,878	3,519
5a Independently reviewed interim net profits net of any foreseeable charge or dividend <sup>1</sup>	(1,899)	8,670
<b>6 Common equity tier 1 capital before regulatory adjustments</b>	<b>149,291</b>	164,183
<b>Common equity tier 1 capital: regulatory adjustments</b>		
7 Additional value adjustments	(1,358)	(1,151)
8 Intangible assets (net of related deferred tax liability)	(15,037)	(20,650)
10 Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability)	(1,696)	(1,204)
11 Fair value reserves related to gains or losses on cash flow hedges	(52)	(52)
12 Negative amounts resulting from the calculation of expected loss amounts	(4,025)	(4,920)
14 Gains or losses on liabilities at fair value resulting from changes in own credit standing	1,052	(495)
15 Defined-benefit pension fund assets	(3,680)	(4,009)
16 Direct and indirect holdings of own CET1 instruments	(1,573)	(839)
19 Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions)	(6,370)	—
<b>28 Total regulatory adjustments to common equity tier 1</b>	<b>(32,739)</b>	(33,320)
<b>29 Common equity tier 1 capital</b>	<b>116,552</b>	130,863
<b>Additional tier 1 ('AT1') capital: instruments</b>		
30 Capital instruments and the related share premium accounts	11,259	9,261
31 – classified as equity under IFRSs	11,259	9,261
33 Amount of qualifying items and the related share premium accounts subject to phase out from AT1	7,946	8,972
34 Qualifying tier 1 capital included in consolidated AT1 capital (including minority interests not included in CET1) issued by subsidiaries and held by third parties	2,419	4,388
35 – <i>of which: instruments issued by subsidiaries subject to phase out</i>	1,522	2,842
<b>36 Additional tier 1 capital before regulatory adjustments</b>	<b>21,624</b>	22,621
<b>Additional tier 1 capital: regulatory adjustments</b>		
37 Direct and indirect holdings of own AT1 instruments	(60)	(60)
41b Residual amounts deducted from AT1 capital with regard to deduction from tier 2 ('T2') capital during the transitional period	(94)	(121)
– direct and indirect holdings by the institution of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities	(94)	(121)
<b>43 Total regulatory adjustments to additional tier 1 capital</b>	<b>(154)</b>	(181)
<b>44 Additional tier 1 capital</b>	<b>21,470</b>	22,440
<b>45 Tier 1 capital (T1 = CET1 + AT1)</b>	<b>138,022</b>	153,303
<b>Tier 2 capital: instruments and provisions</b>		
46 Capital instruments and the related share premium accounts	16,732	15,863
47 Amount of qualifying items and the related share premium accounts subject to phase out from T2	5,695	6,645
48 Qualifying own funds instruments included in consolidated T2 capital (including minority interests and AT1 instruments not included in CET1 or AT1) issued by subsidiaries and held by third parties	12,323	14,344
49 – <i>of which: instruments issued by subsidiaries subject to phase out</i>	12,283	14,330
<b>51 Tier 2 capital before regulatory adjustments</b>	<b>34,750</b>	36,852
<b>Tier 2 capital: regulatory adjustments</b>		
52 Direct and indirect holdings of own T2 instruments	(40)	(40)
55 Direct and indirect holdings by the institution of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions)	(374)	(282)
<b>57 Total regulatory adjustments to tier 2 capital</b>	<b>(414)</b>	(322)
<b>58 Tier 2 capital</b>	<b>34,336</b>	36,530
<b>59 Total capital (TC = T1 + T2)</b>	<b>172,358</b>	189,833

\* The references identify the lines prescribed in the EBA template, which are applicable and where there is a value.

<sup>1</sup> In the comparative period, profits and other comprehensive income have been reallocated from row 2 into rows 5a and 3 respectively. In addition, retained earnings and profits pertaining to the deconsolidation of insurance and other entities have been reallocated from row 3 to rows 2 and 5a.

Throughout 2016, we complied with the Prudential Regulation Authority's ('PRA') regulatory capital adequacy requirements, including those relating to stress testing.

Following a clarification of policy by the PRA, at 30 September 2016 the regulatory treatment of our investment in BoCom changed from proportional consolidation of RWAs to a deduction from capital (subject to regulatory thresholds). The revised regulatory treatment is more consistent with our financial reporting treatment, aligning with the equity method of accounting, and better reflects our relationship with BoCom, including the nature of our obligations and financial commitments.

CET1 capital decreased during the year by \$14.3bn, primarily because of:

- unfavourable foreign currency translation differences of \$7.8bn;
- a \$5.6bn reduction from the change in treatment of BoCom; and
- the \$2.5bn share buy-back.

These decreases were partly offset by:

- \$2.4bn from the sale of our operations in Brazil.

## Risk-weighted assets

### RWAs

RWAs decreased in 2016 by \$245.8bn, of which \$38.1bn was due to foreign currency translation differences. RWA initiatives reduced RWAs by \$143.2bn, partly offset by book size movements increasing RWAs by \$38.7bn. The change of regulatory treatment of our investment in BoCom reduced RWAs by \$120.9bn.

The following comments describe RWA movements in 2016, excluding foreign currency translation differences.

### RWA initiatives

The main drivers of these reductions were:

- \$69.8bn as a result of reduced exposures, refined calculations and process improvements;
- \$41.8bn from the sale of our activities in Brazil; and
- \$31.6bn through the continued reduction in Legacy Credit and US run-off portfolios.

### Book size

Book size movements increased RWAs by \$38.7bn, principally from:

- increased corporate lending in GB&M and CMB, increasing RWAs by \$32bn in Asia and Europe;
- movements in market parameters increasing counterparty credit risk and market risk by \$11.7bn; and
- offset by a decrease in operational risk RWAs of \$3.4bn reflecting the decrease of average income over three years.

### RWAs by global business

	<b>RBWM</b> \$bn	<b>CMB</b> \$bn	<b>GB&amp;M</b> \$bn	<b>GPB</b> \$bn	<b>Corporate Centre</b> \$bn	<b>Total</b> \$bn
Credit risk	<b>84.6</b>	<b>250.6</b>	<b>170.8</b>	<b>12.2</b>	<b>137.5</b>	<b>655.7</b>
Counterparty credit risk	—	—	<b>59.1</b>	<b>0.2</b>	<b>2.7</b>	<b>62.0</b>
Market risk	—	—	<b>38.5</b>	—	<b>3.0</b>	<b>41.5</b>
Operational risk	<b>30.5</b>	<b>25.3</b>	<b>32.0</b>	<b>2.9</b>	<b>7.3</b>	<b>98.0</b>
<b>At 31 Dec 2016</b>	<b>115.1</b>	<b>275.9</b>	<b>300.4</b>	<b>15.3</b>	<b>150.5</b>	<b>857.2</b>
Credit risk	99.7	278.1	189.6	14.4	294.1	875.9
Counterparty credit risk	—	—	64.3	0.3	4.6	69.2
Market risk	—	—	40.7	—	1.8	42.5
Operational risk	31.0	24.1	35.7	3.3	21.3	115.4
At 31 Dec 2015	130.7	302.2	330.3	18.0	321.8	1,103.0

### RWAs by geographical region

	<b>Europe</b> \$bn	<b>Asia</b> \$bn	<b>MENA</b> \$bn	<b>North America</b> \$bn	<b>Latin America</b> \$bn	<b>Total</b> \$bn
Credit risk	<b>205.8</b>	<b>260.0</b>	<b>49.0</b>	<b>118.5</b>	<b>22.4</b>	<b>655.7</b>
Counterparty credit risk	<b>30.9</b>	<b>16.1</b>	<b>1.2</b>	<b>12.6</b>	<b>1.2</b>	<b>62.0</b>
Market risk <sup>1</sup>	<b>30.8</b>	<b>21.3</b>	<b>1.4</b>	<b>6.8</b>	<b>0.5</b>	<b>41.5</b>
Operational risk	<b>30.9</b>	<b>36.6</b>	<b>7.5</b>	<b>12.8</b>	<b>10.2</b>	<b>98.0</b>
<b>At 31 Dec 2016</b>	<b>298.4</b>	<b>334.0</b>	<b>59.1</b>	<b>150.7</b>	<b>34.3</b>	<b>857.2</b>
Credit risk	231.6	373.6	59.2	156.4	55.1	875.9
Counterparty credit risk	31.9	17.1	2.0	14.6	3.6	69.2
Market risk	30.5	21.9	1.5	6.5	1.6	42.5
Operational risk	33.2	47.1	7.9	14.1	13.1	115.4
At 31 Dec 2015	327.2	459.7	70.6	191.6	73.4	1,103.0

<sup>1</sup> RWAs are non-additive across geographical regions due to market risk diversification effects within the Group.

RWA movement by global business by key driver

	Credit risk, counterparty credit risk and operational risk						Total RWAs \$bn
	RBWM \$bn	CMB \$bn	GB&M \$bn	GPB \$bn	Corporate Centre \$bn	Market risk \$bn	
	130.8	302.1	289.6	18.0	320.0	42.5	1,103.0
<b>RWAs at 1 Jan 2016</b>							
RWA movements							
RWA initiatives	(10.1)	(39.0)	(48.1)	(0.3)	(39.8)	(5.9)	(143.2)
Foreign exchange movement	(4.1)	(15.7)	(10.1)	(0.7)	(7.5)	—	(38.1)
Acquisitions and disposals	—	—	—	—	—	—	—
Book size	0.7	16.6	22.9	(1.5)	(4.9)	4.9	38.7
Book quality	(1.5)	7.7	8.5	—	0.3	—	15.0
Model updates	(0.9)	—	(0.1)	—	—	—	(1.0)
– portfolios moving onto IRB <sup>1</sup> approach	—	—	(0.1)	—	—	—	(0.1)
– new/updated models	(0.9)	—	—	—	—	—	(0.9)
Methodology and policy	0.2	4.2	(0.8)	(0.2)	(120.6)	—	(117.2)
– internal updates	1.0	4.2	(0.8)	(0.2)	(1.0)	—	3.2
– external updates – regulatory	(0.8)	—	—	—	(119.6)	—	(120.4)
<b>Total RWA movement</b>	<b>(15.7)</b>	<b>(26.2)</b>	<b>(27.7)</b>	<b>(2.7)</b>	<b>(172.5)</b>	<b>(1.0)</b>	<b>(245.8)</b>
<b>RWAs at 31 Dec 2016</b>	<b>115.1</b>	<b>275.9</b>	<b>261.9</b>	<b>15.3</b>	<b>147.5</b>	<b>41.5</b>	<b>857.2</b>

1 Internal ratings based.

RWA movement by geographical region by key driver

	Credit risk, counterparty credit risk and operational risk						Total RWAs \$bn
	Europe \$bn	Asia \$bn	MENA \$bn	North America \$bn	Latin America \$bn	Market risk \$bn	
	296.7	437.8	69.1	185.0	71.9	42.5	1,103.0
<b>RWAs at 1 Jan 2016</b>							
RWA movements							
RWA initiatives	(28.4)	(19.1)	(3.6)	(43.6)	(42.6)	(5.9)	(143.2)
Foreign exchange movement	(26.9)	(7.8)	(6.5)	0.9	2.2	—	(38.1)
Acquisitions and disposals	—	—	—	—	—	—	—
Book size	20.4	12.6	(1.4)	0.2	2.0	4.9	38.7
Book quality	4.1	7.6	0.2	2.8	0.3	—	15.0
Model updates	0.2	—	—	(1.2)	—	—	(1.0)
– portfolios moving onto IRB <sup>1</sup> approach	(0.1)	—	—	—	—	—	(0.1)
– new/updated models	0.3	—	—	(1.2)	—	—	(0.9)
Methodology and policy	1.5	(118.4)	(0.1)	(0.2)	—	—	(117.2)
– internal updates	2.6	0.6	(0.1)	(0.2)	0.3	—	3.2
– external updates – regulatory	(1.1)	(119.0)	—	—	(0.3)	—	(120.4)
<b>Total RWA movement</b>	<b>(29.1)</b>	<b>(125.1)</b>	<b>(11.4)</b>	<b>(41.1)</b>	<b>(38.1)</b>	<b>(1.0)</b>	<b>(245.8)</b>
<b>RWAs at 31 Dec 2016</b>	<b>267.6</b>	<b>312.7</b>	<b>57.7</b>	<b>143.9</b>	<b>33.8</b>	<b>41.5</b>	<b>857.2</b>

1 Internal ratings based.

## Leverage ratio

### Leverage ratio

Ref*	At 31 Dec	
	2016 \$bn	2015 \$bn
21 Total leverage ratio exposure	2,354.4	2,794.4
20 Tier 1 capital (end point)	127.3	140.2
22 Leverage ratio	5.4%	5.0%
EU-23 Choice on transitional arrangements for the definition of the capital measure	Fully phased in	Fully phased in
<b>Total leverage ratio exposure – quarterly average</b>	<b>2,438.7</b>	<b>2,869.4</b>
Leverage ratio – quarterly average	5.4%	5.0%

\* The references identify the lines prescribed in the EBA template.

Our leverage ratio calculated on CRR basis was 5.4% at 31 December 2016, up from 5.0% at 31 December 2015. This was mainly due to a reduction in the exposure measure resulting from the change in regulatory treatment of our investment in BoCom.

The Group's UK leverage ratio on a modified basis, excluding qualifying central bank balances, was 5.7%. This modification to the leverage ratio exposure measure was made following recommendations by the Bank of England's Financial Policy Committee.

The Financial Policy Committee has stated that it intends to recalibrate the leverage ratio in 2017 to take account of this modification. HSBC's UK leverage ratio on a modified basis should be considered in this context.

At 31 December 2016, our UK minimum leverage ratio requirement of 3% was supplemented by an additional leverage ratio buffer of 0.2%. This additional buffer translates to a value of \$5bn. The countercyclical leverage ratio buffer results in no capital impact. We comfortably exceeded these leverage requirements.

### Pillar 3 disclosure requirements

Pillar 3 of the Basel regulatory framework is related to market discipline and aims to make firms more transparent by requiring publication, at least annually, of wide-ranging information on their risks, capital and management. Pillar 3 Disclosures 2016 is published on our website, [www.hsbc.com](http://www.hsbc.com), under Investor Relations.

## Corporate Governance Report

	Page
Statement of compliance	132
The Board	132
Director and Group Managing Director biographies	133
Appointment and induction of Directors	138
Operation of the Board	138
Conflicts of interest and indemnification	138
Board performance evaluation	138
Shareholder engagement and the AGM	139
Board committees	140
Internal control	145
Going concern and viability	146
Share capital and other disclosures	147
Employees	150

### Statement of compliance

The statement of corporate governance practices set out on pages 132 to 182 and the information referred to therein constitutes the Corporate Governance Report of HSBC Holdings. The websites referred to do not form part of this Report.

#### Relevant corporate governance codes

UK Corporate Governance Code	<a href="http://www.frc.org.uk">www.frc.org.uk</a>
Hong Kong Corporate Governance Code (set out in Appendix 14 to the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited)	<a href="http://www.hkex.com.hk">www.hkex.com.hk</a>
Descriptions of the roles and responsibilities of the:	<a href="http://www.hsbc.com/about-hsbc/corporate-governance/board-committees">www.hsbc.com/about-hsbc/corporate-governance/board-committees</a>
– Group Chairman	
– Group Chief Executive	
– Senior Independent Director	
Board and senior management	<a href="http://www.hsbc.com/about-hsbc/leadership">www.hsbc.com/about-hsbc/leadership</a>
Roles and responsibilities of the Board and its committees	<a href="http://www.hsbc.com/about-hsbc/corporate-governance/board-committees">www.hsbc.com/about-hsbc/corporate-governance/board-committees</a>
Board's policies on:	<a href="http://www.hsbc.com/investor-relations/governance/corporate-governance-codes">www.hsbc.com/investor-relations/governance/corporate-governance-codes</a>
– Diversity	
– Shareholder communication	
Global Internal Audit Charter	<a href="http://www.hsbc.com/investor-relations/governance/internal-control">www.hsbc.com/investor-relations/governance/internal-control</a>

HSBC is subject to corporate governance requirements in both the UK and Hong Kong. During 2016, HSBC complied with the applicable provisions of the UK Corporate Governance Code, and also the requirements of the Hong Kong Corporate Governance Code.

Under the Hong Kong Code the Audit Committee should be responsible for the oversight of all risk management and internal control systems. HSBC's Group Risk Committee is responsible for oversight of internal control, other than internal control over financial reporting, and risk management systems. This is permitted under the UK Corporate Governance Code.

The Board has codified obligations for transactions in HSBC Group securities in accordance with the requirements of the Market Abuse Regulation and the rules governing the listing of securities on The Stock Exchange of Hong Kong Limited ('HKEx'), save that the HKEx has granted waivers from strict compliance with the rules that take into account accepted practices in the UK, particularly in respect of employee share plans. HSBC is in discussion with the HKEx to update these waivers to take account of the Market Abuse Regulation.

Following specific enquiry, each Director has confirmed that he or she has complied with their obligations in respect of transacting in Group securities during the year.

### The Board

The Board aims to promote the Group's long-term success, deliver sustainable value to shareholders and promote a culture of openness and debate.

Led by the Group Chairman, the Board sets the Group's strategy and risk appetite. It also approves capital and operating plans for achieving strategic objectives, on the recommendation of management.

#### Powers of the Board

The Board is responsible for overseeing the management of HSBC globally and, in so doing, may exercise its powers, subject to any relevant laws, regulations and HSBC Holdings' Articles of Association (the 'Articles of Association').

Although the Board delegates day-to-day management of the business and implementation of strategy to the Group Chief Executive, certain matters, including annual operating plans, risk appetite and performance targets, procedures for monitoring and control of operations, approval of credit or market risk limits, acquisitions, disposals, investments, capital expenditure or realisation or creation of a new venture, specified senior appointments and any substantial change in balance sheet management policy are reserved by the Board for approval.

#### Executive Directors

The Group Chairman, the Group Chief Executive, the Group Finance Director and the Group Chief Risk Officer are HSBC employees.

#### Non-executive Directors

The Board comprises a majority of independent non-executive Directors. Their role is to constructively challenge, scrutinise the performance of management and help develop proposals on strategy. They also review the performance of management in meeting agreed goals and objectives and monitor the Group's risk profile.

The Board considers all non-executive Directors to be independent of HSBC. The Board has concluded that there are no relationships or circumstances likely to affect any individual non-executive Director's judgement. To satisfy the Rules Governing the Listing of Securities on the HKEx, all non-executive Directors have provided confirmation of their independence during the year. Sam Laidlaw has served on the Board for more than nine years and, in that respect only, does not meet the usual criteria for independence set out in the UK Corporate Governance Code and the Hong Kong Corporate Governance Code. The Board has determined Sam Laidlaw to be independent in character and judgement, notwithstanding his length of service, taking into account his continuing level of constructive challenge of management and strong contribution to Board discussions. He will, however, be retiring from the Board at the conclusion of the forthcoming AGM.

#### Role and support of Directors

The roles of Group Chairman and Group Chief Executive are separate, with a clear division of responsibilities between the running of the Board and executive responsibility for running HSBC's business. Their respective roles are set out in writing and are available on the website at [www.hsbc.com/about-hsbc/corporate-governance/board-committees](http://www.hsbc.com/about-hsbc/corporate-governance/board-committees), along with the role description of the Senior Independent Director ('SID').

## Executive Directors

### Douglas Flint, CBE, 61

#### Group Chairman

Appointed to the Board: December 1995  
Group Chairman since December 2010



**Skills and experience:** Douglas has extensive board-level experience and knowledge of governance primarily having served on the boards of HSBC and BP plc, and as a partner of KPMG. He has expertise in finance and risk management in banking, multinational financial reporting, treasury and securities trading operations. He joined HSBC as Group Finance Director in 1995 and, prior to becoming Chairman in 2010, his responsibilities broadened to Chief Financial Officer, and Executive Director for Risk and Regulation.

He is a member of the Institute of Chartered Accountants of Scotland and a Fellow of the Chartered Institute of Management Accountants.

**Current appointments include:** Board member of the Institute of International Finance, member of the International Business Leaders Advisory Councils of the mayors of both Beijing and Shanghai, a UK Business Ambassador at the invitation of the UK Prime Minister, non-executive Chairman of the Just Finance Foundation, trustee of the Royal Marsden Cancer Charity Board and a member of its Investment Committee.

### Stuart Gulliver, 57

#### Group Chief Executive

Appointed to the Board: May 2008  
Group Chief Executive since January 2011



**Skills and experience:** Stuart has more than 36 years' international banking experience, having joined HSBC in 1980. He played a leading role in developing and expanding Global Banking and Markets, and has held key roles in the Group's operations worldwide, working in London, Hong Kong, Tokyo, Kuala Lumpur and the United Arab Emirates. Former appointments include Chairman of HSBC Bank plc, HSBC Bank Middle East Limited, HSBC Private Banking Holdings (Suisse) SA and HSBC France. He was also Deputy Chairman of HSBC Trinkaus & Burkhardt AG and a member of its supervisory board.

**Current appointments include:** Chairman of the Group Management Board, and The Hongkong and Shanghai Banking Corporation Limited.

### Iain Mackay, 55

#### Group Finance Director

Appointed to the Board: December 2010



**Skills and experience:** Iain has extensive financial and international experience, having worked in London, Paris, the US, Africa and Asia. He joined HSBC in 2007 as Chief Financial Officer of HSBC North America Holdings Inc. Other former

appointments include director of Hang Seng Bank Limited; Chief Financial Officer, HSBC Asia-Pacific. Before joining HSBC, Iain worked at General Electric ('GE'), serving as Controller of its Global Consumer Finance Unit, Chief Financial Officer of GE Consumer Finance Americas, and Chief Financial Officer of GE Healthcare – Global Diagnostic Imaging. Iain is a member of the Institute of Chartered Accountants of Scotland.

**Current appointments include:** Member of the Board of Trustees of the British Heart Foundation and chairman of its audit and risk committee.

### Marc Moses, 59

#### Group Chief Risk Officer

Appointed to the Board: January 2014



**Skills and experience:** Marc joined HSBC in 2005 as Chief Financial and Risk Officer for Global Banking and Markets, and in December 2010 became Group Chief Risk Officer. He has extensive risk management and financial experience. Marc is a Fellow of the Institute of Chartered Accountants in England and Wales. He was European chief financial officer at J.P. Morgan and an audit partner at PricewaterhouseCoopers.

## Independent non-executive Directors

### Phillip Ameen, 68

#### Independent non-executive Director

Appointed to the Board: January 2015



Member of the Group Audit Committee.

**Skills and experience:** As a Certified Public Accountant with extensive financial and accounting experience, Phillip served as Vice President, Comptroller, and Principal Accounting Officer of GE. Prior to joining General Electric, he was a partner of KPMG. He also served on the International Financial Reporting Interpretations Committee of the International Accounting Standards Board, the Accounting Standards Executive Committee of the American Institute of Certified Public Accountants and the Financial Accounting Standards Board Emerging Issues Task Force. He was also Chairman of the Committee on Corporate Reporting of Financial Executives International, Chairman of Skyonic Corporation and a trustee of the Financial Accounting Foundation.

**Current appointments include:** A non-executive director of HSBC North America Holdings Inc., HSBC Bank USA N.A., HSBC Finance Corporation and HSBC USA Inc.

### Kathleen Casey, 50

#### Independent non-executive Director

Appointed to the Board: March 2014



Member of the Group Audit Committee and the Financial System Vulnerabilities Committee.

**Skills and experience:** Kathleen has extensive financial regulatory policy experience. She is a former Commissioner of the US Securities and Exchange Commission, and acted as its principal representative in multilateral and bilateral regulatory dialogues with the G-20 Financial Stability Board and the International Organisation of Securities Commissions. Other former appointments include Staff Director and Counsel to the United States Senate Committee on Banking, Housing, and Urban Affairs; Chair of the Alternative Investment Management Association; and Legislative Director and Chief of Staff for a US Senator.

**Current appointments include:** Senior adviser to Patomak Global Partners and to a number of public bodies in the US.

**Laura Cha,** GBS, 67  
**Independent non-executive Director**  
Appointed to the Board: March 2011



*Chair of the Philanthropic & Community Investment Oversight Committee, and a member of the Conduct & Values Committee and the Nomination Committee.*

**Skills and experience:** Laura has extensive regulatory and policy making experience in the finance and securities sector in Hong Kong and mainland China. She is the former Vice Chairman of the China Securities Regulatory Commission. Other former appointments include serving as a non-executive director of Bank of Communications Co., Limited; Hong Kong Exchanges and Clearing Limited; and Tata Consultancy Services Limited. She also served as chair of the University Grants Committee in Hong Kong, and was Deputy Chairman of the Securities and Futures Commission in Hong Kong.

**Current appointments include:** A non-executive Deputy Chairman of The Hongkong and Shanghai Banking Corporation Limited, Chairman of Hong Kong's Financial Services Development Council and a non-executive director of China Telecom Corporation Limited, Unilever PLC and Unilever N.V.

**Henri de Castries,** 62  
**Independent non-executive Director**  
Appointed to the Board: March 2016



**Skills and experience:** Henri has more than 25 years' international experience in the financial services industry. He joined AXA in 1989 and his roles included responsibility for the group's asset management, financial and real-estate businesses, the oversight of North American and UK operations, and the preparation and execution of all the group's major mergers and acquisitions undertaken in the 1990s. Henri retired as Chairman and Chief Executive Officer of AXA SA on 1 September 2016. Other former appointments include serving as a director of AllianceBernstein Corporation.

**Current appointments include:** Chairman of Institut Montaigne, a French think-tank; non-executive director of Nestlé S.A. and a non-executive director of the French National Foundation for Political Science.

**Lord Evans of Weardale,** 59  
**Independent non-executive Director**  
Appointed to the Board: August 2013



*Chairman of the Financial System Vulnerabilities Committee, and a member of the Conduct & Values Committee and the Philanthropic & Community Investment Oversight Committee.*

**Skills and experience:** Jonathan has extensive experience in national security policy and operations. He was formerly Director General of the UK's Security Service (MI5) with responsibility for its leadership, policy and strategy, and areas including international and domestic counter-terrorism, counter-espionage and counter-proliferation activities, and cybersecurity. Jonathan held various positions during a 30-year career in the Security Service, which included responsibility for the oversight of the Joint Terrorist Analysis Centre and the Centre for the Protection of National Infrastructure, and attending the National Security Council.

**Current appointments include:** A non-executive director of Ark Data Centres and an adviser to various cybersecurity and technology companies.

**Joachim Faber,** 66  
**Independent non-executive Director**  
Appointed to the Board: March 2012



*Chairman of the Group Risk Committee.*

**Skills and experience:** Joachim has extensive international experience in banking and asset management. He is a former Chief Executive Officer of Allianz Global Investors AG and is a member of the management board of Allianz SE. He spent 14 years with Citicorp, holding positions in Trading and Project Finance, and as Head of Capital Markets for Europe, North America and Japan. He was also chairman of various Allianz subsidiaries. He was previously a member of the supervisory board and chairman of the audit and risk committee of OSRAM Licht AG. He was also a member of the German Council for Sustainable Development and a member of the advisory board of the Siemens Group Pension Board.

**Current appointments include:** Chairman of the supervisory board of Deutsche Börse AG and the Shareholder Committee of Joh. A. Benckiser SARL, and a director of Coty Inc. and Allianz France S.A.

**Sam Laidlaw,** 61  
**Independent non-executive Director**  
Appointed to the Board: January 2008



*Chairman of the Group Remuneration Committee and the Nomination Committee.*

**Skills and experience:** Sam has had responsibility for businesses in four continents and has particular experience in the energy sector. He was Chief Executive Officer of Centrica plc and lead non-executive board member of the UK

Department for Transport. He was also an Executive Vice President of Chevron Corporation and a member of the UK Prime Minister's Business Advisory Group. He is a qualified solicitor with a Master's in business administration.

**Current appointments include:** Chair of the National Centre for Universities and Business, Chair of the Global Leadership Council for the Saïd Business School and Executive Chairman of Neptune Oil & Gas Limited. Sam was also appointed as a non-executive director of Rio Tinto plc and Rio Tinto Limited on 10 February 2017.

**Irene Lee,** 63

**Independent non-executive Director**

Appointed to the Board: July 2015



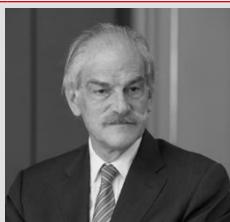
**Skills and experience:** Irene has more than 30 years' finance industry experience, having held senior investment banking and fund management positions in the UK, the US and Australia, including positions at Citibank and the Commonwealth Bank of Australia. Other former appointments include serving as a member of the Advisory Council of J.P. Morgan Australia and the Australian Takeovers Panel.

**Current appointments include:** Executive Chairman of Hysan Development Company Limited and a non-executive director of The Hongkong and Shanghai Banking Corporation Limited, Hang Seng Bank Limited, Cathay Pacific Airways Limited, CLP Holdings Limited and Noble Group Limited.

**John Lipsky,** 70

**Independent non-executive Director**

Appointed to the Board: March 2012



Member of the Group Risk Committee, the Nomination Committee and the Group Remuneration Committee.

**Skills and experience:** John worked for J.P. Morgan in Chile, New York, Washington and London, and interacted with financial institutions, central banks and governments in many countries. He served at the International Monetary Fund as First Deputy Managing Director, Acting Managing Director and Special Adviser. Other former appointments include serving as a trustee of the Economic Club of New York, a Global Policy Adviser for Anderson Global Macro, LLC and Chairman of the World Economic Forum's Global Agenda Council on the International Monetary System.

**Current appointments include:** Senior appointments and advisory positions in international economic research organisations.

**Rachel Lomax,** 71

**Senior Independent Director**

Appointed to the Board: December 2008

Senior Independent Director since April 2015



Chair of the Conduct & Values Committee, and a member of the Group Risk Committee and the Nomination Committee.

**Skills and experience:** Rachel was Deputy Governor of the Bank of England, and Permanent Secretary at the UK Government Departments for Transport and Work and Pensions, and the Welsh Office. She was a non-executive director of Reinsurance Group of America Inc. and The Scottish American Investment Company P.L.C.

**Current appointments include:** A non-executive director of Arcus European Infrastructure Fund GP LLP, Heathrow Airport Holdings Limited, SETL Development Limited and Serco Group plc, as well as Chairman of the latter's corporate responsibility committee.

**Heidi Miller,** 63

**Independent non-executive Director**

Appointed to the Board: September 2014



Member of the Group Risk Committee.

**Skills and experience:** Heidi is a former President of International at JP Morgan Chase, and was responsible for leading the global expansion and the international business strategy across its investment bank, asset management, and treasury and securities services divisions. She was also a non-executive director of Merck & Co., Inc. and Progressive Corp.; Executive Vice President and Chief Financial Officer of Bank One Corporation; Senior Executive Vice President of Priceline.com Inc.; and Executive Vice President and Chief Financial Officer of Citigroup Inc.

**Current appointments include:** Chair of HSBC North American Holdings Inc., a non-executive director of First Data Corporation and General Mills Inc., and an advisory director of SRS Acquiom LLC.

**David Nish,** 56

**Independent non-executive Director**

Appointed to the Board: May 2016



Member of the Group Audit Committee.

**Skills and experience:** David served as Chief Executive Officer of Standard Life plc between 2010 and 2015, having joined as Finance Director in 2006. David led its investment in technology, complementary acquisitions and the disposal of the group's Canadian operations. Other former appointments include Group Finance Director of Scottish Power plc, non-executive director of HDFC Life (India) and partner of Price Waterhouse. He is a qualified chartered accountant.

**Current appointments include:** A non-executive director of Vodafone plc, London Stock Exchange Group plc, UK Green Investment Bank plc and Zurich Insurance Group.

**Jonathan Symonds,** CBE, 57

**Independent non-executive Director**

Appointed to the Board: April 2014



Chairman of the Group Audit Committee and a member of the Conduct & Values Committee.

**Skills and experience:** Jonathan is a former Chief Financial Officer of Novartis AG and AstraZeneca plc. He was also a partner and Managing Director of Goldman Sachs, a partner of KPMG, and a non-executive director and chair of the Audit Committee of Diageo plc. He is a fellow of the Institute of Chartered Accountants in England and Wales.

**Current appointments include:** Chairman of HSBC Bank plc, Innocoll AG and Proteus Digital Health Inc., and a non-executive director of Genomics England Limited.

**Jackson Tai,** 66

**Independent non-executive Director**

*Appointed to the Board: September 2016*



*Member of the Group Risk Committee and the Financial System Vulnerabilities Committee.*

**Skills and experience:** Jackson was formerly Vice Chairman and Chief Executive of DBS Group and DBS Bank Ltd, having served the group as Chief Financial Officer and then as President and Chief Operating Officer. He previously worked at JP Morgan & Co. Incorporated as an investment banker in New York, Tokyo and San Francisco. Other former appointments include non-executive director of Bank of China Limited, Singapore Airlines, NYSE Euronext, ING Groep N.V., CapitaLand Ltd, SingTel Ltd. and Jones Lang LaSalle Inc. Jackson also served as Vice-Chairman of Islamic Bank of Asia.

**Current appointments include:** Non-executive director of Eli Lilly and Company, Koninklijke Philips Electronics N.V., MasterCard Incorporated and the Canada Pension Plan Investment Board.

**Pauline van der Meer Mohr,** 57

**Independent non-executive Director**

*Appointed to the Board: September 2015*



*Member of the Group Remuneration Committee, the Group Nomination Committee and the Conduct & Values Committee.*

**Skills and experience:** Pauline has extensive legal and human resources experience across a number of different sectors, and contributed to the Dutch Banking Code Monitoring Commission. Former appointments include President of Erasmus University Rotterdam; Senior Executive Vice President and Head of Group Human Resources at ABN AMRO Bank NV; Group Human Resources Director at TNT NV; HR Director, Information Technology, Royal Dutch Shell Group; and Senior Legal Counsel, Shell International.

**Current appointments include:** President of the supervisory board of EY Netherlands and member of the supervisory boards of ASML Holding N.V. and Royal DSM N.V.

**Paul Walsh,** 61

**Independent non-executive Director**

*Appointed to the Board: January 2016*



*Member of the Group Remuneration Committee and the Group Nomination Committee.*

**Skills and experience:** Paul was Group Chief Executive of Diageo plc for 12 years, having originally joined the Board of its predecessor, Grand Metropolitan plc, in 1995. He was also a non-executive director of Unilever PLC, United Spirits Limited and Centrica plc. Paul is a Fellow of the Chartered Institute of Management Accountants.

**Current appointments include:** Non-executive Chairman of Compass Group PLC, Avanti Communications Group Plc and Chime Communications Limited, and a non-executive director of FedEx Corporation and RM2 International S.A.

## Group Company Secretary

**Ben Mathews,** 49

**Group Company Secretary**



Ben joined HSBC in June 2013 and became Group Company Secretary in July 2013. He is a Fellow of the Institute of Chartered Secretaries and Administrators. Former appointments include Group Company Secretary of Rio Tinto plc and of BG Group plc.

### Role of the Group Company Secretary

All Directors have access to the advice and services of the Group Company Secretary, who is responsible to the Board for ensuring that Board procedures and all applicable rules and regulations are complied with, and for advising the Board on corporate governance matters.

Under the direction of the Group Chairman, the Group Company Secretary is responsible for ensuring good information flows within the Board and its committees and between senior management and non-executive Directors, as well as facilitating induction and assisting with professional development as required.

## Group Managing Directors

### **Samir Assaf,** 56

**Chief Executive, Global Banking and Markets**

Samir joined HSBC in 1994 and became a Group Managing Director in 2011. He is Chairman and a non-executive director of HSBC France; a director of HSBC Trinkaus & Burkhardt AG and The Saudi British Bank. Former appointments include: a director of HSBC Bank plc; HSBC Global Asset Management Limited and HSBC Bank Egypt S.A.E.; and Head of Global Markets for Europe, Middle East and Africa.

### **Peter Boyles,** 61

**Chief Executive Officer of Global Private Banking**

Peter joined HSBC in 1975 and became a Group Managing Director in 2013. He is Chairman of HSBC Private Bank (Monaco) SA and a director of HSBC Global Asset Management Limited and HSBC Private Bank (UK) Limited. Former appointments include: Chief Executive of HSBC France; a director of HSBC Bank plc, HSBC Bank Malta p.l.c. and HSBC Trinkaus & Burkhardt AG.

### **Patrick Burke,** 55

**President and Chief Executive Officer of HSBC USA**

Patrick joined HSBC in 1989 and became a Group Managing Director in 2015. He is Chairman of HSBC Bank USA, N.A., HSBC Finance Corporation, HSBC USA Inc. and HSBC Global Asset Management (USA) Inc.

### **John Flint,** 48

**Chief Executive Officer, Retail Banking and Wealth Management**

John joined HSBC in 1989 and became a Group Managing Director in 2013. Former appointments include: a director of HSBC Private Banking Holdings (Suisse) SA, a director of HSBC Bank Canada, Chief of Staff to the Group Chief Executive and Group Head of Strategy and Planning, Chief Executive Officer HSBC Global Asset Management, Group Treasurer and Deputy Head of Global Markets.

### **Pierre Goad,** 55

**Group Head of Employee Insight and Communications**

Pierre first joined HSBC in 2001. In 2010 he left and joined Zurich Insurance Group as Head of Communications. He rejoined HSBC in 2011 and became a Group Managing Director in 2015. He is a director of HSBC Bank Canada. Former appointments include: Global Head of Communications; and Head of Corporate Development, Europe, Middle East and Global Businesses.

### **Pam Kaur,** 53

**Group Head of Internal Audit**

Pam joined HSBC and became a Group Managing Director in 2013. She is a co-opted member of The Institute of Chartered Accountants in England and Wales. Former appointments include: Global Head of Group Audit for Deutsche Bank AG; Chief Financial Officer and Chief Operating Officer of the Restructuring and Risk Division, Royal Bank of Scotland Group plc; Group Head of Compliance and AML, Lloyds TSB; and Global Director of Compliance, Global Consumer Group, Citigroup.

### **Stuart Levey,** 53

**Chief Legal Officer**

Stuart joined HSBC and became a Group Managing Director in 2012. Former appointments include: Under Secretary for Terrorism and Financial Intelligence in the US Department of the Treasury; Senior Fellow for National Security and Financial Integrity at the Council on Foreign Relations; Principal Associate Deputy Attorney General at the US Department of Justice; and a Partner at Miller, Cassidy, Larroca & Lewin LLP and at Baker Botts LLP.

### **Andy Maguire,** 50

**Group Chief Operating Officer**

Andy joined HSBC in 2014 as Group Chief Operating Officer and became a Group Managing Director in 2015. He is Chairman of HSBC Global Services (UK) Limited; a director of HSBC Global Services Limited and HSBC Group Management Services Limited. He was formerly a Managing Partner (UK and Ireland) of the Boston Consulting Group.

### **Paulo Maia,** 58

**Chief Executive, Latin America**

Paulo joined HSBC in 1993 and became a Group Managing Director on 1 February 2016. He is Chairman of Grupo Financiero HSBC Mexico S.A. de C.V., HSBC Argentina Holdings S.A. and a Director of HSBC North America Holdings Inc. Former appointments include: Chief Executive of HSBC Bank Canada and HSBC Bank Australia Limited.

### **Noel Quinn,** 55

**Chief Executive, Global Commercial Banking**

Noel joined HSBC in 1992 when the Group acquired Midland Bank and became a Group Managing Director on 1 September 2016. Former appointments include: Head of Specialised and Equity Finance, Director of Strategy & Development for Commercial Banking, Head of Commercial Finance Europe, Head of Commercial Banking UK and Head of Commercial Banking Asia.

### **Antonio Simoes,** 41

**Chief Executive, HSBC Bank plc**

Antonio joined HSBC in 2007 and became a Group Managing Director on 1 February 2016. He is a director of HSBC Bank plc and HSBC France. Former appointments include: Chief Executive of HSBC UK; Head of Retail Banking and Wealth Management, Europe; and Chief of Staff to the Group Chief Executive and Group Head of Strategy and Planning. He is the Chairman of the Practitioner Panel of the FCA. He was formerly a Partner of McKinsey & Company.

### **Peter Wong,** 65

**Deputy Chairman and Chief Executive,  
The Hongkong and Shanghai Banking Corporation Limited**

Peter joined HSBC in 2005 and became a Group Managing Director in 2010. He is Chairman of HSBC Bank (China) Company Limited and HSBC Bank Malaysia Berhad, and a non-executive director of Hang Seng Bank Limited. He is also non-executive Vice Chairman of Bank of Communications Co Ltd and an independent non-executive Director of Cathay Pacific Airways Limited. Former appointments include: Vice Chairman of HSBC Bank (Vietnam) Ltd; a director of HSBC Bank Australia Limited; and a director of Ping An Insurance (Group) Company of China, Ltd.

## Board of Directors

### Appointment, retirement and re-election of Directors

Appointments to the Board are made on merit and candidates are considered against objective criteria, having due regard to the benefits of diversity on the Board. A rigorous selection process, overseen by the Nomination Committee and based upon agreed requirements using an external search consultancy, is followed in relation to the appointment of non-executive Directors.

During the year Henri de Castries, David Nish, Jackson Tai and Paul Walsh were appointed to the Board. Their biographies can be found on pages 133 to 136.

The number of Directors must not be less than five nor exceed 25. The Board may at any time appoint any person as a Director, either to fill a vacancy or as an addition to the existing Board. The Board may appoint any Director to hold any employment or executive office and may revoke or terminate any such appointment. Shareholders may, by ordinary resolution, appoint a person as a Director or remove any Director before the expiration of his or her period of office.

Newly appointed Directors retire at the Annual General Meeting ('AGM') following appointment and are eligible for election. All Directors are nominated for annual re-election by shareholders subject to continued satisfactory performance based upon an assessment by the Group Chairman and the Nomination Committee.

Non-executive Directors are appointed for an initial three-year term and, subject to re-election by shareholders at AGMs, are typically expected to serve two three-year terms. The Board may invite a Director to serve additional periods. Any term beyond six years is subject to particularly rigorous review.

The terms and conditions of appointment of non-executive Directors are set out in a letter of appointment, which includes the expectations of them and the time estimated for them to meet their commitment to the Group. The current anticipated minimum time commitment, which is subject to periodic review and adjustment by the Board, is 30 days per year. Non-executive Directors are also advised that the time they need to devote to the Group may be considerably more if they serve on Board Committees or as other matters require. All non-executive Directors have confirmed they can meet this requirement, taking into account any other commitments they have at the time of appointment, and most devote considerably more time.

During their term of appointment, non-executive Directors are expected to consult the Group Chairman or the Group Company Secretary if they are considering whether to accept or vary any commitments outside the Group. The agreement of the Group Chairman is required if any additional or changed commitment might affect the time that a Director is able to devote to his or her role with the Group.

Letters setting out the terms of appointment of each non-executive Director are available for inspection at the registered office of HSBC Holdings. The Board diversity policy is available at [www.hsbc.com/investor-relations/governance/corporate-governance-codes](http://www.hsbc.com/investor-relations/governance/corporate-governance-codes).

### Induction

Formal induction programmes are arranged for newly appointed Directors, based on the individual's needs, skills and experience. Typically, these consist of a series of meetings with other Directors and senior executives, as well as local site visits, to provide familiarity with the business. Directors also receive comprehensive guidance from the Group Company Secretary on the Group's governance framework and associated policies, as well as their duties as Directors on the Board. During the year Henri de Castries, David Nish, Paul Walsh and Jackson Tai completed a formal induction programme.

### Operation of the Board

The Board regularly reviews reports on performance against financial and other strategic objectives, key business challenges, risk, business developments, and investor and external relations. During 2016, it also considered presentations on strategy and performance by each of the global businesses and across the principal geographical areas.

All of HSBC's activities involve the measurement, evaluation, acceptance and management of risk or combinations of risks. The Board, advised by the Group Risk Committee ('GRC'), Conduct & Values Committee ('CVC') and the Financial System Vulnerabilities Committee ('FSVC'), promotes a strong risk governance culture which shapes the Group's attitude to risk. The Board and these committees oversee the development and maintenance of a strong risk management framework.

The Group Company Secretary will ensure that agenda and supporting papers are distributed in advance of Board and Board committee meetings to allow reasonable time for review and to facilitate full discussion at the meetings.

The Chairman met with the non-executive Directors without the other executive Directors in attendance. The SID also facilitated meetings of the non-executive Directors without the attendance of executive Directors, including that of the Group Chairman.

The Directors are encouraged to have free and open contact with management at all levels and full access to all relevant information. When attending off-site Board meetings and when travelling for other reasons, non-executive Directors are encouraged to visit local business operations and meet local management.

Directors may take independent professional advice, if necessary, at HSBC Holdings' expense.

### Conflicts of interest, indemnification of Directors and contracts of significance

The Board has established a policy and procedures relating to Directors' conflicts of interest. Where conflicts of interest arise, the Board has the power to authorise them. A review of those conflicts which have been authorised, and the terms of those authorisations, is undertaken by the Board annually.

The Articles of Association state that Directors are entitled to be indemnified out of the assets of HSBC Holdings against claims from third parties in respect of certain liabilities. All Directors have the benefit of directors' and officers' liability insurance.

None of the Directors had, during the year, a material interest, directly or indirectly, in any contract of significance with any HSBC company. Each Director is routinely reminded of their obligations in respect of transacting in HSBC Group securities and has confirmed that he or she has complied with regulatory requirements.

### Board performance evaluation

The Board is committed to regular, independent evaluation of its own effectiveness and that of its committees. For 2015/16, an independent review was undertaken by Heidrick & Struggles/JCA Group, an independent third-party firm that has no other connection with HSBC Holdings. The process involved an extensive series of interviews and meetings with the non-executive Directors, together with input from members of the Group Management Board. Actions arising from the review were presented and discussed in detail with the Board in February 2016 and then tracked throughout the remainder of the year and reported to the Board.

Given the ongoing nature of these actions, a follow-up review is to be conducted during the first half of 2017, the outcome of which will be published in the 2017 Annual Report. In the interim period, the performance evaluation of the individual Directors was conducted internally, as provided for under the UK Corporate Governance Code, by the Group Chairman and the SID.

Set out below are areas of particular focus from the 2015/16 review that the Board has addressed during the year:

Theme	Action taken
Agenda management	<p>Board agendas were revised to allow for a greater focus on business strategy and financial and operational performance.</p> <p>A rolling cycle of annual deep dives across each of the four global businesses and the Group's principal geographical regions was established. A detailed presentation of the technology and digital opportunities facing the Group was also arranged with an explanation of how the Group is currently responding to them and the Group's longer-term strategic response.</p> <p>Improvements were made to the process for the preparation, submission and distribution of management information and Board and Committee papers.</p>
Committee efficiency	The operation of the Committees was reviewed to improve efficiency and address overlaps and any gaps in their responsibilities.
Continued development of the cohesive relationship between non-executive Directors and senior management	More opportunities were created for senior management to interact with non-executive Directors both inside and outside formal Board meetings, and to increase Board exposure to other high potential managers in the Group.
Succession planning	There has been a continued focus by the Board, through the Nomination Committee, on executive and non-executive succession planning. A committee has been established to oversee succession planning for the Group Chairman.

### Director performance evaluation

Non-executive Directors' individual performance evaluation is undertaken annually by the Group Chairman. This involves a discussion about a Director's individual contribution, explores individual training and development needs, and the time commitment that is required to continue to deliver the role effectively. The Group Chairman has confirmed that all non-executive Directors continue to perform effectively, contribute positively to the governance of HSBC and are able to fully commit the time required for their roles.

Executive Directors' individual performance evaluation is undertaken as part of the performance management process for all employees. The results are considered by the Group Remuneration Committee when determining variable pay awards each year.

The Group Chairman's performance is evaluated by the non-executive Directors, led by the SID.

### Training and development

Training and development is provided for each Director, and is regularly reviewed by the Group Chairman supported by the Group Company Secretary. All executive Directors develop and refresh their skills and knowledge through day-to-day interactions and briefings with senior management of the Group's businesses and functions.

A two-day forum for all of the Group's non-executive Directors was held during the year. Awareness and discussion sessions were conducted by senior executives and subject matter experts on emerging technologies, financial crime compliance, regulatory initiatives and other business developments. The following Directors attended these sessions: David Nish, Joachim Faber, John Lipsky, Jonathan Symonds, Kathleen Casey and Paul Walsh. Jonathan Symonds and Joachim Faber hosted a separate forum for the Chairs of the Group's audit and risk committees globally.

In addition, all members of the Group Audit Committee ('GAC') received refresher training in IFRS 9 and the Committee Chairs received training in the requirements of the Senior Managers Regime. As part of their induction programme, David Nish, Henri de Castries and Paul Walsh received training on the Volcker Rule.

### Shareholder engagement

Communication with shareholders is given high priority by the Board and a copy of its policy is available at [www.hsbc.com](http://www.hsbc.com). Extensive information about HSBC and its activities is provided to shareholders in the *Annual Report and Accounts*, the *Strategic Report* and the *Interim Report* as well as at [www.hsbc.com](http://www.hsbc.com).

To compliment these, there is regular dialogue with institutional investors. Enquiries from individuals on matters relating to their shareholdings and HSBC's business are welcomed.

Directors are encouraged to develop an understanding of the views of major shareholders. Non-executive Directors are invited to attend analyst presentations and other meetings with institutional investors and their representative bodies. An annual governance breakfast is also held, which gives institutional investors an opportunity to engage with the non-executive Directors and senior management on governance matters. All executive Directors hold regular meetings with institutional investors and feedback from these meetings is routinely provided to the Board.

As SID, Rachel Lomax is available to shareholders if they have concerns that cannot be resolved or for which the normal channels would be inappropriate. She may be contacted via the Group Company Secretary at 8 Canada Square, London E14 5HQ.

### The AGM and other general meetings

The 2017 AGM will be held at the Queen Elizabeth II Conference Centre, Broad Sanctuary, Westminster, London SW1P 3EE on Friday 28 April at 11.00am and a live webcast will be available on [www.hsbc.com](http://www.hsbc.com). A recording of the proceedings will be available on [www.hsbc.com](http://www.hsbc.com) shortly after the conclusion of the AGM until 28 May 2017. An informal meeting of shareholders will be held at 1 Queen's Road Central, Hong Kong on Monday 24 April at 4.30pm. Shareholders are encouraged to attend these meetings. Shareholders may send enquiries to the Board in writing via the Group Company Secretary, HSBC Holdings plc, 8 Canada Square, London E14 5HQ or by sending an email to [shareholderquestions@hsbc.com](mailto:shareholderquestions@hsbc.com).

Shareholders may require the Directors to call a general meeting other than an AGM as provided by the UK Companies Act 2006. Requests to call a general meeting may be made by members representing at least 5% of the paid-up capital of HSBC Holdings that carries the right of voting at its general meetings (excluding any paid-up capital held as treasury shares). A request must state the general nature of the business to be dealt with at the meeting and may include the text of a resolution that may properly be moved and is intended to be moved at the meeting. A request may be in hard copy form or in electronic form and must be authenticated by the person or persons making it. A request may be made in writing to HSBC Holdings at its UK address, referred to in the paragraph above or by sending an email to [shareholderquestions@hsbc.com](mailto:shareholderquestions@hsbc.com). At any general meeting convened on such request, no business shall be transacted except that stated by the requisition or proposed by the Board.

## Board Committees

The Board has seven standing committees and a Chairman's Committee. In the case of the FSVC and the Philanthropic & Community Investment Oversight Committee, membership includes co-opted non-Director members as well as non-executive Directors.

The Chairs of each Committee report matters of significance to the Board after each meeting and the minutes of the meetings are made available to all Board members.

The detailed roles and responsibilities of each Committee are set out in its terms of reference, which can be found on the website at [www.hsbc.com/about-hsbc/corporate-governance/board-committees](http://www.hsbc.com/about-hsbc/corporate-governance/board-committees).

### Committee interaction

The Board places significant reliance on its Committees and delegates a broad range of responsibilities to them. It is therefore important that, while unnecessary duplications between each remit of the Committees should be avoided, effective links should exist between Committees and the Board where required.

## Principal subsidiaries

The GRC works closely with the GAC to strengthen alignment with the major regional and global business risk and audit committees.

The GAC and GRC make a number of recommendations to the Board in relation to the preparation of the financial statements which are supported by certificates from the principal subsidiaries.

### Whistleblowing

The GAC and the CVC are responsible for reviewing the Group's whistleblowing procedures and received regular updates on relevant concerns raised under these procedures, together with management actions taken in response.

### Committee effectiveness

The effectiveness of the Committees is evaluated as part of the overall performance evaluation of the Board as referred to above. In addition, the Committees review the papers and the effectiveness of each meeting as a standing agenda item to ensure that they continue to be effective, challenging and well-managed, and review a rolling planner of proposed committee business.

## 2016 Board and Committee attendance

	AGM	Board	Group Audit Committee	Group Risk Committee	Group Remuneration Committee	Nomination Committee	Financial System Vulnerabilities Committee	Conduct & Values Committee	Philanthropic & Community Investment Oversight Committee	
Number of meetings	1	8	8	9	9	7	7	6	3	
<b>Group Chairman</b>										
Douglas Flint	1	8	—	—	—	—	—	—	—	
<b>Executive Directors</b>										
Stuart Gulliver	1	8	—	—	—	—	—	—	—	
Iain Mackay	1	8	—	—	—	—	—	—	—	
Marc Moses	1	8	—	—	—	—	—	—	—	
<b>Non-executive Directors</b>										
Phillip Ameen	1	8	7	—	—	—	—	—	—	
Kathleen Casey	1	8	8	—	—	—	7	—	—	
Laura Cha	1	8	—	—	—	7	—	6	3	
Henri de Castries <sup>1</sup>	1	5/5	—	—	—	—	—	—	—	
Lord Evans of Weardale	1	8	—	—	—	—	7	6	3	
Joachim Faber	1	8	—	9	—	—	—	—	—	
Rona Fairhead <sup>2</sup>	1	4/4	—	—	—	3/4	1/2	—	—	
Sam Laidlaw	1	8	—	—	9	7	—	—	—	
Irene Lee	1	8	—	—	—	—	—	—	—	
John Lipsky	1	8	—	9	8	7	—	—	—	
Rachel Lomax <sup>3</sup>	1	8	2/2	8	—	7	—	6	—	
Heidi Miller	1	8	—	9	—	—	—	—	—	
David Nish <sup>4</sup>	1	4/4	3/4	—	—	—	—	—	—	
Sir Simon Robertson <sup>2</sup>	1	4/4	—	—	4/4	—	—	—	—	
Jonathan Symonds	1	8	8	—	—	—	—	5	—	
Jackson Tai <sup>5</sup>	—	2/2	—	2/2	—	—	1/2	—	—	
Pauline van der Meer Mohr <sup>6</sup>	1	7	—	—	9	3/3	—	6	—	
Paul Walsh <sup>7</sup>	1	7	—	—	8	3/3	—	—	—	

\* Board meetings in 2016 were held in London and Hong Kong. In addition to the Board meetings listed there were also 11 Chairman's Committee meetings held in 2016.

<sup>1</sup> Appointed to the Board 1 March 2016.

<sup>2</sup> Resigned from the Board 22 April 2016.

<sup>3</sup> Resigned from the Group Audit Committee 20 April 2016.

<sup>4</sup> Appointed to the Board 1 May 2016. Attended AGM as part of his induction.

<sup>5</sup> Appointed to the Board 12 September 2016.

<sup>6</sup> Appointed to the Group Nomination Committee 22 April 2016.

<sup>7</sup> Appointed to the Board 1 January 2016 and to the Group Nomination Committee 1 May 2016.

## Group Audit Committee

### Members

Jonathan Symonds (Chairman)  
 Phillip Ameen  
 Kathleen Casey  
 David Nish (appointed on 1 May 2016)  
 Rachel Lomax (resigned on 20 April 2016)

### Role and responsibilities

The GAC has non-executive responsibility for matters relating to financial reporting, including Pillar 3 disclosures and internal control over financial reporting.

### Governance

The Group Finance Director, Group Chief Accounting Officer, Group Head of Internal Audit and other members of senior management routinely attend meetings of the GAC. The external auditor, PwC, also attended all meetings. The Chairman of the GAC had regular meetings to discuss agenda planning and specific issues as they arose during the year.

### How the Committee discharges its responsibilities

#### Financial reporting

The GAC reviews HSBC's financial and reporting judgements and their application to the Group's financial reporting, including Pillar 3 disclosures. It also reviews presentations to external analysts including the key financial metrics relating to HSBC's strategic actions.

The GAC assesses the adequacy of resources of the accounting and financial reporting function. It also monitors the legal and regulatory environment.

#### Internal controls

The GAC assesses the effectiveness of the internal control system for financial reporting and any developments affecting it in support of the Board's assessment of internal control over financial reporting in accordance with section 404 of the Sarbanes-Oxley Act.

The GAC has received confirmation that executive management has taken or is taking the necessary actions to remedy any failings or weaknesses identified through the operation of the Groups framework of controls.

Further detail of how the Board reviews the effectiveness of key aspects of internal control can be found on page 145.

#### External audit

The GAC meets privately with the external auditor at every Committee meeting and the GAC Chairman maintains regular contact with the audit partner throughout the year.

The GAC reviews the external auditor's approach and strategy for the annual audit.

All non-audit services provided by PwC are pre-approved by the GAC in accordance with the auditor independence policy to ensure that services do not create a conflict. The auditor independence policy has been revised with effect from 1 January 2017 to take account of the UK implementation of new EU audit rules. Details of the significant engagements for non-audit services are contained in Note 6.

A policy is in place and monitored by the GAC on hiring employees or former employees of the external auditor.

#### Internal Audit

The GAC approves Internal Audit's annual plan, resource and budget, and reviews the performance of the Group Head of Internal Audit and the performance and effectiveness of its head. The Group Head of Internal Audit reports to the Chairman of the GAC and the Committee regularly meets with the Group Head of Internal Audit without other management present.

## Compliance with Regulatory Requirements

The Board is satisfied that each member of the GAC is independent according to SEC criteria, may be regarded as audit committee financial experts for the purposes of section 407 of the Sarbanes-Oxley Act and has recent and relevant financial experience for the purposes of the UK and Hong Kong Corporate Governance Codes.

The Committee has complied with the relevant parts of the Competition and Markets Authority Final Order on the statutory audit market for the year ended 31 December 2016.

### Principal activities and significant issues considered during 2016

#### External auditor

The Committee assessed the effectiveness of PwC as the Group's external auditor, using a questionnaire which focused on the overall audit process, its effectiveness and the quality of output. It concluded that PwC had performed a high-quality and effective audit in 2016.

Fees payable to PwC for the year ended 31 December 2016 totalled \$111.1m, of which \$39.8m or 35.8% was payable in respect of non-audit services. A further breakdown of the fees paid to the auditors for each of the last three financial years can be found in Note 6 on the Financial Statements.

The GAC considered PwC to be independent and PwC, in accordance with professional ethical standards, provided the GAC with written confirmation of its independence for the duration of 2016.

The GAC has therefore recommended to the Board that PwC be reappointed as auditor. Resolutions concerning the reappointment of PwC and their audit fee for 2017 will be proposed to shareholders at the 2017 AGM.

#### Internal Audit

The GAC concluded that the Internal Audit function remained effective.

#### Finance transformation project

The Finance function has embarked on a large scale three-year transformation project to respond to the future needs of a changing industry facing increased regulatory demands.

The project also included embedding internal controls and improving the consistency of critical financial processes across the Group.

#### Internal control framework

The GAC continued to monitor the progress being made to upgrade entity level controls and remediate issues identified in 2015.

In particular, the GAC continued to monitor the remediation of controls over access management in IT and the next phase in terms of the enhancement of strategic controls. The GAC was encouraged by the progress being made.

#### Changing regulatory landscape

Given the changing legal and regulatory landscape, the GAC continued to receive detailed presentations and updates from management on the Group's readiness to implement IFRS 9 Financial Instruments and the revised Basel framework's Pillar 3 disclosure requirements.

**Significant accounting judgements considered during 2016 included:**

<b>Key area</b>	<b>Action taken</b>
Appropriateness of provisioning for legal proceedings and regulatory matters	The GAC received reports from management on the recognition and amounts of provisions, the existence of contingent liabilities, and the disclosures relating to provisions and contingent liabilities for legal proceedings and regulatory matters. Specific areas addressed included provisioning arising from investigations by US regulators and law enforcement agencies relating to trading activities in the foreign exchange market and competition law investigations relating to foreign exchange activities in a number of jurisdictions; and management's judgement regarding provisions and contingent liabilities in connection with investigations of HSBC's Swiss Private Bank by a number of tax administration, regulatory and law enforcement authorities. The GAC also considered management's assumptions and judgements relating to the disclosure of a contingent liability in respect of investigations into historical sales of US mortgage securitisations by The United States Attorney for the District of Colorado for potential violations of The Financial Industry Reform, Recovery and Enforcement Act of 1989, 12 U.S.C. § 1833a.
Quarterly and annual reporting	The GAC considered key judgements in relation to quarterly and annual reporting. In addition, it considered external analysts' presentations and key financial metrics included in HSBC's strategic actions.
Loan impairment, allowances and charges	The GAC considered loan impairment allowances for personal and wholesale lending. Significant judgements and estimates for personal lending included a review of loss emergence periods across the retail loan portfolios and the potential impact of the UK electorate's vote to leave the EU. For wholesale lending, the GAC considered management's judgements and assumptions in respect of the recognition of judgemental collective impairment allowances for oil and gas exposures, and judgements relating to impairment allowances recognised for individual identified cases, as at 31 December 2016, and noted the ongoing monitoring for signs of credit deterioration that could result from the UK electorate's vote to leave the EU.
Valuation of financial instruments	The GAC considered the key valuation metrics and judgements involved in the determination of the fair value of financial instruments. The GAC considered the valuation control framework, valuation metrics, significant year-end judgements and emerging valuation topics.
Viability statement	Under the obligations of the UK Corporate Governance Code the Directors have carried out a robust assessment of the principal risks for the Group and parent company. The GAC has considered the Directors' judgement in concluding that the Group and parent company will be able to continue in operation and meet liabilities as they fall due, and that it is appropriate that the viability statement covers a period of three years.
UK customer remediation	The GAC considered the provisions for redress for mis-selling of payment protection insurance ('PPI') policies, in the UK, including management's judgements regarding the effect of the proposed time-bar for claims ending June 2019. The GAC also considered provisions in relation to the implications of a 2014 UK court case ('Plevin') for the non-disclosure of levels of commission regarding the historical sales of PPI products, pending finalised guidance from the Financial Conduct Authority ('FCA').
Bank of Communications Co., Limited ('BoCom') impairment testing	During the year, the GAC considered the regular impairment reviews of HSBC's investment in BoCom. When testing investments in associates for impairment, IFRS requires the carrying amount to be compared with the higher of fair value and value in use. The GAC reviewed a number of aspects of management's work in this area, including the sensitivity of the result of the impairment review to estimates and assumptions of projected future cash flows and the discount rate. It was concluded that the investment was not impaired.
Goodwill impairment testing	The GAC noted the process and results of the 1 July 2016 annual goodwill impairment test and the review of impairment indicators at 30 June 2016 and 31 December 2016. During the year, impairment indicators were noted for GPB Europe and GBM Europe. No impairment was recognised for GBM Europe. The GAC considered management's judgements in respect of the impairment charge of \$0.8bn relating to GPB Europe goodwill in H1 2016, and the further impairment charge of \$2.4bn in Q4 2016, resulting in the impairment of the entire balance of goodwill for GPB Europe in 2016. There were two main factors which led to indicators of impairment being identified: <ul style="list-style-type: none"><li>• during the year, revised forecast cash flows became available; and</li><li>• management adjusted the discount rates used in the goodwill tests due to the results of the UK EU Referendum decision.</li></ul>
Hedge accounting	The GAC considered management's judgements relating to the partial discontinuation of a hedging relationship in France in December 2016. The GAC discussed the control weaknesses, which were limited to France, and noted management's actions to address them.
Recognition of deferred tax assets	In considering the recoverability of the Group's deferred tax assets, the GAC reviewed the recognition of deferred tax assets in the US and, in the first half of 2016, in the Brazil operations which were sold in July 2016, and the associated projections of future taxable income.
Operating segments	The GAC considered the change in reportable segments during the year under IFRS 8, from regions to global businesses, and the introduction of a Corporate Centre segment.

**Group Risk Committee**

**Members**

Joachim Faber (Chairman)

John Lipsky

Rachel Lomax

Heidi Miller

Jackson Tai (appointed on 12 September 2016)

**Role and responsibilities**

The GRC has non-executive responsibility for the oversight of risk-related matters and the principal risks impacting the Group, risk governance and internal control systems (other than internal financial control systems). The GRC is updated on, but is not directly responsible for, overseeing risks relating to

financial crime, cyber-crime and information security, anti-bribery and corruption, and culture and conduct. These risks are overseen by the FSVC and the CVC.

**Governance**

The Group Chief Risk Officer, Group Finance Director, Chief Legal Officer, Group Head of Internal Audit, Global Head of Regulatory Compliance, Global Head of Financial Crime Compliance, Group Head of Financial Crime Risk and other members of senior management attended meetings of the GRC by invitation to contribute to discussions relating to their areas of expertise.

The GRC works closely with the GAC to ensure that any areas of significant overlap are appropriately addressed and to improve inter-committee communication.

The GRC holds meetings with the Group Chief Risk Officer and, separately, with the Group Head of Internal Audit without management present.

### How the Committee discharges its responsibilities

As a standing item on the rolling planner the GRC reviews the Group Risk Appetite Statement ('RAS'), the risk map (which describes the Group's risk profile by risk type across the global businesses) and a report on the top and emerging risks (together with mitigating actions for the identified risks). This also identifies any areas where management needed to assess vulnerabilities via stress testing.

Page 64 provides further information on the top and emerging risks, the risk map and the risk appetite for the Group.

The GRC receives presentations on a range of topics, including stress testing and briefings on developments in the regulatory environment. In addition, the GRC requests reports and updates from management on risk-related issues for in-depth consideration and receives regular reports on matters discussed at the Risk Management Meeting of the Group Management Board ('GMB'). It has continued to invite senior management from the global businesses and functions to present their risk control frameworks, which has led to enhanced discussions of the risk environment.

Any revisions to the RAS are reviewed bi-annually by GRC and any changes are recommended to the Board. The GRC regularly reviews the Group's risk profile against the key performance metrics set out in the RAS. It reviews management's assessment of risk and provides scrutiny of management's proposed mitigating actions.

Regular reports are received on legal and regulatory risks. Management actions to mitigate these risks are reviewed and the potential impact of future developments in this area on the Group are considered.

### Principal activities and significant issues considered during 2016

#### **The Group Risk Appetite Statement ('RAS') and monitoring of the Group risk profile against the RAS**

There were no significant changes to the RAS in 2016.

#### **Stress testing**

The PRA and EBA stress testing exercises and the results of stress testing were closely monitored and reviewed prior to submission. Reports were received over the course of the stress testing exercise and the Committee met an additional four times during the year solely to consider stress testing related matters, including additional stress tests specific to oil and gas exposures and the UK electorate's vote to leave the EU.

#### **Execution risk**

Regular reports were received from the Group Chief Operating Officer, who updated each meeting on the progress and status of the Group's highest-priority programmes and mitigating measures being introduced to manage the identified risks appropriately.

Monitoring of this risk and challenging management's assessment of execution risk and corresponding mitigating actions remains a priority for the GRC.

#### **Internal control and risk management**

The GRC reviewed the Group's risk management framework and system of internal control (other than internal financial control systems, which were covered by the GAC) and the developments affecting them over the course of 2016, as part of the Board's assessment of internal control.

In 2016 the Group Risk Committee appointed an external independent expert to assess the effectiveness of the committee.

*Further detail of how the Board reviews the effectiveness of key aspects of internal control can be found on page 145.*

### **Financial System Vulnerabilities Committee**

#### **Members**

Lord Evans of Weardale (Chairman)  
 Kathleen Casey  
 Jackson Tai (appointed on 12 September 2016)  
 Rona Fairhead (resigned on 22 April 2016)  
 Nick Fishwick, CMG (non-Director member)  
 Dave Hartnett, CB (non-Director member)  
 William Hughes, CBE QPM (non-Director member)  
 Nehchal Sandhu (non-Director member)  
 Leonard Schrank (non-Director member)  
 The Honourable Juan Zarate (non-Director member)  
 Sir William Patey (non-Director member appointed 1 November 2016)  
 David Irvine (non-Director member appointed 1 November 2016)

The eight non-Director members support the Committee's work and between them have extensive experience in geopolitical risk, financial crime risk, international security, cybersecurity and law enforcement matters.

#### **Role and responsibilities**

The Committee has non-executive responsibility for the oversight of matters related to financial crime and system abuse, in particular anti-money laundering; sanctions; terrorist financing and proliferation financing; anti-bribery and corruption; and cybersecurity. It is also responsible for monitoring, reviewing and advising the Board on the effectiveness of the policies and procedures established by Management to ensure that HSBC meets its obligations to regulatory and law enforcement agencies.

#### **Principal activities and significant issues considered during 2016**

##### **Financial crime**

During the year, the Committee monitored the Group's progress on the implementation of Global Standards and reviewed and discussed findings from country visits conducted by the Monitor.

##### **Anti-bribery and corruption**

The Committee reviewed the activities underway to address key bribery and corruption risks and management's progress with the implementation of a more robust anti-bribery and corruption compliance framework.

##### **Engaging with the Monitor**

The Committee was responsible for liaising with the Monitor to ensure his recommendations were acted on.

##### **The information security environment and cybersecurity risk**

During the year, the Committee reviewed HSBC's progress towards improving the Group's cybersecurity and the actions being taken to mitigate exposure to cyber risk. It also monitored significant developments in the information security environment and progress delivering strategic financial crime risk management IT solutions.

Further information on key activities of the Committee can be found in the 'Financial crime risk management' section on page 81.

## Conduct & Values Committee

### Members

Rachel Lomax (Chair)  
Laura Cha  
Lord Evans of Werdale  
Jonathan Symonds  
Pauline van der Meer Mohr

### Role and responsibilities

The CVC has non-executive responsibility for oversight of culture and conduct risk. It is responsible for HSBC's policies, procedures and standards and ensuring that the Group conducts business responsibly and consistently adheres to HSBC Values. The CVC is also responsible for Group policies and procedures for capturing and responding to whistleblowing reports. Reporting to the GAC where necessary in relation to allegations relating to accounting, internal controls over financial reporting or audit matters.

### Principal activities and significant issues considered during 2016

#### Conduct

During the year the Committee reviewed the implementation of the Group's conduct approach and, in particular, how effectively global programmes were being cascaded through the organisation.

#### Sustainability

The Committee was responsible for reviewing how effectively the Group sought to satisfy itself that it was meeting its sustainability commitments.

#### Modern Slavery Act

The Committee and Board reviewed and approved the Group's Human Rights and Modern Slavery Act statement.

Further information on conduct can be found in the 'How we do business' section of the Strategic Report and in the Financial Review.

## Group Remuneration Committee

### Members

Sam Laidlaw (Chairman)  
John Lipsky  
Pauline van der Meer Mohr  
Paul Walsh  
Sir Simon Robertson (resigned on 22 April 2016)

### Role and responsibilities

The Committee is responsible for setting the over-arching principles, parameters and governance framework of the Group's remuneration policy, and the remuneration of executive Directors and other senior Group employees. The Committee regularly reviews the Group's remuneration policy in the context of consistent and effective risk management and the regulatory requirements of multiple jurisdictions. No Directors are involved in deciding their own remuneration.

A full report on the role and activities of the Committee is set out on pages 153 to 172.

## Nomination Committee

### Members

Sam Laidlaw (Chairman)  
Laura Cha  
John Lipsky  
Rachel Lomax  
Pauline van der Meer Mohr (appointed on 22 April 2016)  
Paul Walsh (appointed on 1 May 2016)  
Rona Fairhead (resigned on 22 April 2016)

### Role and responsibilities

The Nomination Committee has non-executive responsibility for leading the Board appointment process and for identifying and nominating potential candidates for appointment to the Board. The Committee is responsible for succession planning for both executive and non-executive Directors and membership of Board committees.

The Nomination Committee regularly reviews the Board's structure, size and composition (including skills, knowledge, experience, independence and diversity). It recommends any changes to the Board.

An external search consultancy is used in relation to the appointment of non-executive Directors. It has no additional connection with HSBC. A separate external search consultancy is primarily used for certain senior executive hires.

### Principal activities and significant issues considered during 2016

#### Succession planning

A committee was established with specific responsibility for succession planning for the Group Chairman, comprising all the Nomination Committee members plus Jonathan Symonds, Jonathan Evans and Joachim Faber, being the chairs of the GAC, FSVC and GRC respectively.

#### Diversity

The Committee took responsibility for the implementation of the Board's diversity policy against two objectives: at least 30% of candidates being women and only using external search consultants signed up to the Voluntary Code of Conduct for Executive Search Firms.

## Philanthropic & Community Investment Oversight Committee

### Members

Laura Cha (Chair)  
Lord Evans of Werdale  
Sir Malcolm Grant (non-Director member)  
Stephen Moss (non-Director member)  
Lord Janvrin (non-Director member)

### Role and responsibilities

The Philanthropic & Community Investment Oversight Committee has non-executive responsibility for HSBC's philanthropic and community investment activities in support of the Group's corporate sustainability objectives. The Committee was established as a committee of the Board in 2014 to oversee activity which includes both the Group's monetary contributions and also employee volunteering.

### Principal activities and significant issues considered during 2016

#### Charitable giving

The Committee was responsible for reviewing the Group's risk appetite for charitable donations and the budget for future years and long-term committed funds.

## Community investment

During the year, the Committee reviewed and endorsed the Group's annual community investment budget and the proposed allocation of this budget across agreed sustainability themes.

## Chairman's Committee

The Chairman's Committee acts on behalf of the Board between scheduled Board meetings to facilitate ad hoc and other business requiring Board approval. It meets when necessary, with the required number of attendees determined by the nature of the proposed business to be discussed, as set out in its terms of reference.

## Group Management Board

The GMB is a forum chaired by the Group Chief Executive to provide him with recommendations and advice, and assist him in his day-to-day management of HSBC and its subsidiaries as delegated by the Board.

There are special meetings of the GMB that provide oversight of risk matters (the Risk Management Meeting, chaired by the Group Chief Risk Officer) and of Global Standards (the Global Standards Steering Meeting, chaired by the Group Head of Financial Crime Risk).

## Internal control

The Board is responsible for maintaining and reviewing the effectiveness of risk management and internal control systems, and for determining the aggregate level and types of risks the Group is willing to take in achieving its strategic objectives.

To meet this requirement and to discharge its obligations under the FCA Handbook and the PRA Handbook, procedures have been designed for safeguarding assets against unauthorised use or disposal; for maintaining proper accounting records; and for ensuring the reliability and usefulness of financial information used within the business or for publication.

These procedures can only provide reasonable assurance against material mis-statement, errors, losses or fraud. They are designed to provide effective internal control within the Group and accord with the Financial Reporting Council's guidance for directors issued in 2014, internal control and related financial and business reporting. The procedures have been in place throughout the year and up to 21 February 2017, the date of approval of this *Annual Report and Accounts 2016*.

In 2014, the GAC endorsed the adoption of the COSO 2013 framework for the monitoring of risk management and internal control systems to satisfy the requirements of Section 404 of the Sarbanes-Oxley Act of 2002.

The key risk management and internal control procedures include the following:

- The Group's Global Standards Manual ('GSM') outlines the core principles within which the Group must operate wherever we conduct business. The GSM overlays all other policies and procedures throughout the Group. The requirements of the GSM are mandatory, apply to and must be observed by all businesses within the Group, regardless of the nature or location of their activities.
- Delegation of authority within limits set by the Board: subject to certain matters reserved for the Board, the Group Chief Executive has been delegated authority limits and powers within which to manage the day-to-day affairs of the Group, including the right to sub-delegate those limits and powers. Each relevant group managing director or executive Director has delegated authority within which to manage the day-to-day affairs of the business or function for which he or she is accountable. Delegation of authority from the

Board requires those individuals to maintain a clear and appropriate apportionment of significant responsibilities and to oversee the establishment and maintenance of systems of control that are appropriate to their business or function. Authorities to enter into credit and market risk exposures are delegated with limits to line management of Group companies. The concurrence of the appropriate global function is required, however, to credit proposals with specified higher risk characteristics. Credit and market risks are measured and reported at subsidiary company level and aggregated for risk concentration analysis on a Group-wide basis.

- Risk identification and monitoring: Systems and procedures are in place to identify, assess, control and monitor the material risk types facing HSBC. Our risk measurement and reporting systems are designed to help ensure that risks are comprehensively captured with all the attributes necessary to support well-founded decisions, that those attributes are accurately assessed and that information is delivered in a timely manner for those risks to be successfully managed and mitigated.
- Changes in market conditions/practices: processes are in place to identify new risks arising from changes in market conditions/practices or customer behaviours, which could expose HSBC to heightened risk of loss or reputational damage. The Group employs a top and emerging risks framework at all levels of the organisation, which enables it to identify current and forward-looking risks and to take action which either prevents them materialising or limits their impact.
- Responsibility for risk management: All employees are responsible for identifying and managing risk within the scope of their role as part of the three lines of defence model, which is an activity-based model to delineate management accountabilities and responsibilities for risk management and the control environment. The second line of defence sets the policy and guidelines for managing specific risk areas, provides advice and guidance in relation to the risk, and challenges the first line of defence (the risk owners) on effective risk management.
- Strategic plans: strategic plans are prepared for global businesses, global functions and geographical regions within the framework of the Group's overall strategy. Annual Operating Plans, informed by detailed analysis of risk appetite describing the types and quantum of risk that the Group is prepared to take in executing its strategy, are prepared and adopted by all major HSBC operating companies and set out the key business initiatives and the likely financial effects of those initiatives.
- IT operations: centralised control is exercised over all IT developments and operations. Common systems are employed for similar business processes wherever practicable.
- Subsidiary certifications to GRC: half-yearly confirmations are provided to the GRC from the risk committees of principal subsidiary companies confirming that the committees have challenged management on the quality of the information provided, reviewed the actions proposed by management to address any emerging issues or trends indicating material divergence from the Group's risk appetite and that the risk management and internal control systems in place are operating effectively.

The key risk management and internal control procedures over financial reporting include the following:

- Disclosure Committee: the Disclosure Committee, which is chaired by the Group Company Secretary, supports the discharge of the Group's obligations under relevant legislation and regulation including the UK and Hong Kong Listing Rules, the Market Abuse Regulation and SEC rules.

In so doing the Committee is empowered to (i) determine whether a new event or circumstances should be disclosed, including the form and timing of such disclosure and (ii) review all material disclosures made or to be made by the Group. The membership of the Disclosure Committee includes the Group Finance Director, Group Chief Risk Officer, Chief Legal Officer, Group Chief Accounting Officer, Global Head of Public Affairs, Global Head of Investor Relations, Group Head of Strategy and Planning and Group Financial Controller. The integrity of disclosures is underpinned by structures and processes within the Global Finance and Global Risk functions that support rigorous analytical review of financial reporting and the maintenance of proper accounting records.

- Financial reporting: the Group's financial reporting process is controlled using documented accounting policies and reporting formats, supported by detailed instructions and guidance on reporting requirements, issued to all reporting entities within HSBC in advance of each reporting period end. The submission of financial information from each reporting entity is subject to certification by the responsible financial officer, and analytical review procedures at reporting entity and Group levels.
- Subsidiary certifications to the GAC: half-yearly confirmations are provided to the GAC from the audit committees of principal subsidiary companies regarding whether their financial statements have been prepared in accordance with Group policies, present fairly the state of affairs of the relevant principal subsidiary and are prepared on a going concern basis.

The internal control responsibilities of the GRC and GAC were complemented by the activities of the CVC and the FSVC which, respectively, oversaw internal control over conduct-related matters and financial crime compliance. Collectively, these controls are designed to provide effective internal control within the Group.

The GRC and the GAC have received confirmation that executive management has taken or is taking the necessary actions to remedy any failings or weaknesses identified through the operation of the Group's framework of controls. In 2015, deficiencies in the design and operational effectiveness of a number of controls associated with IT privileged access were identified. Significant improvement in the control environment has been observed as a result of management's progress on the execution of the IT privileged access remediation programme. Management has assessed the effectiveness of relevant IT, business, monitoring and period-end mitigating controls for 2016.

The Directors, through the GRC and the GAC, have conducted an annual review of the effectiveness of the Group's system of risk management and internal control covering all material controls, including financial, operational and compliance controls, risk management systems, the adequacy of resources, qualifications and experience of staff of the accounting and financial reporting function and the Global Risk function, and their training programmes and budget. The annual review of the effectiveness of the Group's system of risk management and internal control over financial reporting was conducted with reference to the COSO framework. The annual review of other controls was undertaken using the Group's risk management framework, further details of which can be found on pages 68 to 71. Based on the assessment performed, the Directors concluded that for the year ended 31 December 2016, the Group's internal controls were effective.

## **Internal audit**

The Global Internal Audit function, which is centrally controlled, provides independent and objective assurance of the design and operating effectiveness of the Group's framework of risk management, control and governance processes, focusing on

the areas of greatest risk. As mentioned previously, the Group Head of Internal Audit reports to the Chairman of the GAC and frequent meetings are held between them during the year. Administratively the Group Head of Internal Audit reports to the Group Chief Executive. Executive management is responsible for ensuring that issues raised by the Global Internal Audit function are addressed within an appropriate and agreed timetable. Confirmation to this effect must be provided to Global Internal Audit.

## **Going concern and viability**

The Directors considered it appropriate to prepare the financial statements on the going concern basis.

Under the UK Corporate Governance Code, the Directors must also provide a viability statement. They must state whether the Group will be able to continue in operation and meet its liabilities, taking into account its current position and the principal risks it faces. They must also specify the period covered by, and the appropriateness of, this statement.

The Directors have specified a period of three years to 31 December 2019. They are satisfied that a forward-looking assessment of the Group for this period is sufficient to enable a reasonable statement of viability. In addition, this period is covered by the Group's stress testing programmes, and its internal projections for profitability, key capital ratios and leverage ratios. Notwithstanding this, our stress testing programmes also cover scenarios out to five years and our assessment of risks are beyond three years where appropriate.

Based upon their assessment, the Directors have a reasonable expectation that the Group will be able to continue in operation and meet liabilities as they fall due over the next three years.

In making their going concern and viability assessments, the Directors have considered a wide range of detailed information relating to present and potential conditions, including projections for profitability, cash flows, capital requirements and capital resources.

The Directors have carried out a robust assessment of each risk facing the Group to determine the principal risks to the long-term viability of the Group, including those that would threaten its solvency and liquidity. They have determined that the principal risks are the Group's top and emerging risks as set out on pages 64 to 67, which includes the status of the Deferred Prosecution Agreement as described on page 66.

The Directors have assessed that all of the top and emerging risks identified are considered to be material and, therefore, appropriate to be classified as the principal risks to be considered in the assessment of viability. They also appraised the impact that these principal risks could have on the Group's risk profile, taking account of mitigating actions planned or taken for each, and compared this with the Group's risk appetite, as approved by the Board. At 31 December 2016, there were five heightened top and emerging risks: economic outlook and capital flows, geopolitical risk, cyber threat and unauthorised access to systems, IT systems infrastructure and resilience, and enhanced model risk management expectations.

In carrying out their assessment of the principal risks, the Directors considered a wide range of information including:

- Details of the Group's business and operating models, and strategy.
- Details of the Group's approach to managing risk and allocating capital.
- A summary of the Group's financial performance, and its capital position and annual operating plan.
- Enterprise-wide risk management reports, including the Group's risk appetite profile (see page 68), top and emerging risks (see page 64) and risk map (see page 70).

- Reports and updates regarding regulatory and internal stress testing exercises (see page 70). In 2016, the published Bank of England ('BoE') stress test results for HSBC showed that our capital ratios after taking account of CRD IV restrictions and strategic management actions exceeded the BoE's requirements. The results for HSBC included an assumed dividend payment in the first year of the severe stress projection period.

## Share capital and other disclosures

### Share buy-back

On 4 August 2016, HSBC Holdings commenced a share buy-back of its ordinary shares of \$0.50 each for up to a maximum consideration of \$2.5bn which concluded on, 19 December 2016. The purpose of the buy-back was to reduce HSBC's number of outstanding ordinary shares, and was funded from a portion of the proceeds received from the sale of the Group's operations in Brazil in July 2016. Further information on this disposal can be found on page 241.

- Reports and updates from management on risk-related issues selected for in-depth consideration.
- Reports and updates on the Group's compliance-related initiatives connected to the resolution of the investigations by US and UK regulatory and law enforcement authorities in December 2012, and also regulatory developments more generally.
- Legal reports.

The nominal value of shares purchased during 2016 was \$162,636,704 and the aggregate consideration paid by HSBC was £1,970,091,769.

The table that follows outlines details of the shares purchased on a monthly basis during 2016. At 31 December 2016, the total number of shares purchased was 325,273,407, representing 1.61% of the shares in issue and 1.64% of the shares in issue (excluding treasury shares).

Month	Number of shares	Highest price paid per share	Lowest price paid per share	Average price paid per share	Aggregate price paid	Maximum value of shares that may yet be purchased
		£	£	£	£	\$
Aug-16	<b>37,287,407</b>	<b>5.6950</b>	<b>5.1140</b>	<b>5.4551</b>	<b>203,408,308</b>	<b>2,233,620,166</b>
Sep-16	<b>79,160,560</b>	<b>5.9420</b>	<b>5.5650</b>	<b>5.7336</b>	<b>453,876,095</b>	<b>1,636,117,416</b>
Oct-16	<b>72,211,730</b>	<b>6.3210</b>	<b>5.7850</b>	<b>6.1503</b>	<b>444,125,860</b>	<b>1,085,362,266</b>
Nov-16	<b>82,231,879</b>	<b>6.4560</b>	<b>5.8840</b>	<b>6.2433</b>	<b>513,399,612</b>	<b>448,362,392</b>
Dec-16	<b>54,381,831</b>	<b>6.7530</b>	<b>6.2010</b>	<b>6.5331</b>	<b>355,281,894</b>	<b>58</b>

### Dividends

#### Dividends for 2016

First, second and third interim dividends for 2016, each of \$0.10 per ordinary share, were paid on 6 July 2016, 28 September 2016 and 6 December 2016, respectively. Note 8 on the Financial Statements gives more information on the dividends declared in 2016. On 21 February 2017, the Directors declared a fourth interim dividend for 2016 of \$0.21 per ordinary share in lieu of a final dividend, which will be payable on 6 April 2017 in cash in US dollars, or in sterling or Hong Kong dollars at exchange rates to be determined on 27 March 2017, with a scrip dividend alternative. As the fourth interim dividend for 2016 was declared after 31 December 2016 it has not been included in the balance sheet of HSBC as a liability. The reserves available for distribution at 31 December 2016 were \$42bn.

A quarterly dividend of \$15.50 per 6.20% non-cumulative US dollar preference share, Series A ('Series A dollar preference share'), (equivalent to a dividend of \$0.3875 per Series A American Depository Share ('ADS'), each of which represents one-fortieth of a Series A dollar preference share), and £0.01 per Series A sterling preference share was paid on 15 March, 15 June, 15 September and 15 December 2016.

#### Dividends for 2017

Quarterly dividends of \$15.50 per Series A dollar preference share (equivalent to a dividend of \$0.3875 per Series A American Depository Share, each of which represents one-fortieth of a Series A dollar preference share) and £0.01 per Series A sterling preference share was declared on 8 February 2017 for payment on 15 March 2017.

### Share capital

#### Issued share capital

The nominal value of HSBC Holdings' issued share capital paid up at 31 December 2016 was \$10,095,807,607 divided into 20,191,586,214 ordinary shares of \$0.50 each, 1,450,000 non-cumulative preference shares of \$0.01 each and one non-cumulative preference share of £0.01, representing approximately 99.9999%, 0.0001%, and 0%, respectively,

of the nominal value of HSBC Holdings' total issued share capital paid up at 31 December 2016.

#### Rights, obligations and restrictions attaching to shares

The rights and obligations attaching to each class of ordinary and non-cumulative preference shares in our share capital are set out in full in our Articles of Association. The Articles of Association may be amended by special resolution of the shareholders and can be found on our website at [www.hsbc.com/about-hsbc/corporate-governance/corporate-governance-codes](http://www.hsbc.com/about-hsbc/corporate-governance/corporate-governance-codes).

#### Ordinary shares

HSBC Holdings has one class of ordinary share, which carries no right to fixed income. There are no voting restrictions on the issued ordinary shares, all of which are fully paid. On a show of hands, each member present has the right to one vote at general meetings. On a poll, each member present or voting by proxy is entitled to one vote for every \$0.50 nominal value of share capital held. There are no specific restrictions on transfers of ordinary shares, which are governed by the general provisions of the Articles of Association and prevailing legislation.

At the 2016 AGM, shareholders gave authority to the Directors to offer a scrip dividend alternative on any dividend (including interim dividends) declared up to the conclusion of the AGM in 2019.

*Information on the policy adopted by the Board for paying interim dividends on the ordinary shares may be found on page 274, under the heading 'Shareholder Information'.*

#### Dividend waivers

HSBC Holdings employee benefit trusts, holding shares in HSBC Holdings in connection with the operation of its share plans, have lodged standing instructions to waive dividends on shares held by them that have not been allocated to employees. The total amount of dividends waived during 2016 was \$2.9m.

### Preference shares

The preference shares, which have preferential rights to income and capital, do not, in general, confer a right to attend and vote at general meetings.

There are three classes of preference shares in the share capital of HSBC Holdings: non-cumulative preference shares of \$0.01 each ('dollar preference shares'); non-cumulative preference shares of £0.01 each ('sterling preference shares'); and non-cumulative preference shares of €0.01 ('euro preference shares').

### Share capital changes in 2016

The following events occurred during the year in relation to the ordinary share capital of HSBC Holdings:

#### Scrip dividends

<b>Issued in lieu of</b>	<b>HSBC Holdings ordinary shares issued</b>		<b>Aggregate nominal value</b>	<b>Market value per share</b>	
	<b>on</b>	<b>number</b>	<b>\$</b>	<b>\$</b>	<b>£</b>
Fourth interim dividend for 2015	<b>20 Apr 2016</b>	<b>63,677,983</b>	<b>31,838,992</b>	<b>6.4120</b>	<b>4.5069</b>
First interim dividend for 2016	<b>6 Jul 2016</b>	<b>111,088,990</b>	<b>55,544,495</b>	<b>6.3288</b>	<b>4.3274</b>
Second interim dividend for 2016	<b>28 Sep 2016</b>	<b>139,914,936</b>	<b>69,957,468</b>	<b>7.1015</b>	<b>5.4468</b>
Third interim dividend for 2016	<b>6 Dec 2016</b>	<b>122,620,319</b>	<b>61,310,160</b>	<b>7.6227</b>	<b>6.2420</b>

#### All-employee share plans

<b>HSBC Holdings savings-related share option plans</b>	<b>Number</b>	<b>Aggregate nominal value</b>	<b>Exercise price</b>		
			<b>\$</b>	<b>from</b>	<b>to</b>
HSBC ordinary shares issued in £	<b>4,230,999</b>	<b>2,115,500</b>	<b>£</b>	<b>4.0472</b>	<b>5.4738</b>
HSBC ordinary shares issued in HK\$	<b>63,091</b>	<b>31,546</b>	<b>HK\$</b>	<b>55.4701</b>	<b>63.9864</b>
HSBC ordinary shares issued in \$	<b>17,053</b>	<b>8,527</b>	<b>\$</b>	<b>7.1456</b>	<b>8.2094</b>
HSBC ordinary shares issued in €	<b>42,880</b>	<b>21,440</b>	<b>€</b>	<b>5.3532</b>	<b>6.0657</b>
Options over HSBC ordinary shares lapsed	<b>15,437,427</b>	<b>7,718,714</b>			
Options over HSBC ordinary shares granted in response to approximately 15,500 applications from HSBC employees in the UK on 21 Sep 2016	<b>15,043,601</b>				
<b>HSBC International Employee Share Purchase Plan</b>	<b>102,252</b>	<b>51,126</b>	<b>£</b>	<b>4.1750</b>	<b>6.6010</b>

#### HSBC share plans

<b>Vesting of awards under the HSBC Share Plan and HSBC Share Plan 2011</b>	<b>HSBC Holdings ordinary shares issued</b>	<b>Aggregate nominal value</b>	<b>Market value per share</b>		
			<b>\$</b>	<b>from</b>	<b>to</b>
	<b>64,730,777</b>	<b>32,365,389</b>	<b>4.3000</b>	<b>4.3000</b>	<b>6.7380</b>

#### Compliance with Hong Kong Listing Rule 13.25A(2)

HSBC Holdings has been granted a waiver from strict compliance with Rule 13.25A(2) of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong.

Under this waiver, HSBC's obligation to file a Next Day Return following the issue of new shares pursuant to the vesting of share awards granted under its share plans to persons who are not Directors, would only be triggered where it falls within one of the circumstances set out under Rule 13.25A(3).

#### Authorities to allot and to purchase shares and pre-emption rights

At the AGM in 2016, shareholders renewed the general authority for the Directors to allot new shares up to 13,138,649,236 ordinary shares, 15,000,000 non-cumulative preference shares of £0.01 each, 15,000,000 non-cumulative preference shares of \$0.01 each and 15,000,000 non-cumulative preference shares of €0.01 each. Within this, the Directors have authority to allot up to a maximum of 1,970,797,386 ordinary shares wholly for cash to persons other than existing shareholders. Shareholders also renewed the authority for the Directors to make market purchases of up to 1,970,797,386 ordinary shares. The Directors exercised this authority during the year and purchased 325,273,407 ordinary shares.

shares'). The dollar preference shares in issue are Series A dollar preference shares and the sterling preference share in issue is a Series A sterling preference share. There are no euro preference shares in issue.

*Information on dividends declared for 2016 and 2017 may be found on page 215, under the heading 'Dividends' and in Note 8 on the Financial Statements.*

*Further details of the rights and obligations attaching to the HSBC Holdings' issued share capital may be found in Note 32 on the Financial Statements.*

The following events occurred during the year in relation to the ordinary share capital of HSBC Holdings:

<b>HSBC Holdings savings-related share option plans</b>	<b>Number</b>	<b>Aggregate nominal value</b>	<b>Exercise price</b>		
			<b>\$</b>	<b>from</b>	<b>to</b>
HSBC ordinary shares issued in £	<b>4,230,999</b>	<b>2,115,500</b>	<b>£</b>	<b>4.0472</b>	<b>5.4738</b>
HSBC ordinary shares issued in HK\$	<b>63,091</b>	<b>31,546</b>	<b>HK\$</b>	<b>55.4701</b>	<b>63.9864</b>
HSBC ordinary shares issued in \$	<b>17,053</b>	<b>8,527</b>	<b>\$</b>	<b>7.1456</b>	<b>8.2094</b>
HSBC ordinary shares issued in €	<b>42,880</b>	<b>21,440</b>	<b>€</b>	<b>5.3532</b>	<b>6.0657</b>
Options over HSBC ordinary shares lapsed	<b>15,437,427</b>	<b>7,718,714</b>			
Options over HSBC ordinary shares granted in response to approximately 15,500 applications from HSBC employees in the UK on 21 Sep 2016	<b>15,043,601</b>				
<b>HSBC International Employee Share Purchase Plan</b>	<b>102,252</b>	<b>51,126</b>	<b>£</b>	<b>4.1750</b>	<b>6.6010</b>

In addition, shareholders gave authority for the Directors to grant rights to subscribe for, or to convert any security into, no more than 3,941,594,772 ordinary shares in relation to any issue by HSBC Holdings or any member of the Group of contingent convertible securities that automatically convert into or are exchanged for ordinary shares in HSBC Holdings in prescribed circumstances. Further details about the issue of contingent convertible securities may be found in Note 32 on the Financial Statements.

Other than as disclosed in the tables above headed 'Share capital changes in 2016', the Directors did not allot any shares during 2016.

#### Debt securities

In 2016, following its capital plan, HSBC Holdings issued the equivalent of \$36.0bn of debt securities in the public capital markets in a range of currencies and maturities, including \$2.0bn of contingent convertible, \$2.6bn of subordinated and \$31.4bn of senior securities to ensure it meets the current and proposed regulatory rules, including those relating to the availability of adequate total loss-absorbing capacity. For additional information on capital instruments and bail-inable debt, refer to Notes 28 and 32 on pages 244 and 253 and to the Fixed Income Securities section in the HSBC Investor Relations website.

## Treasury shares

In accordance with the terms of a waiver granted by the Hong Kong Stock Exchange on 19 December 2005, HSBC Holdings will comply with the applicable law and regulation in the UK in relation to the holding of any shares in treasury and with the conditions of the waiver in connection with any shares it may hold in treasury. Pursuant to Chapter 6 of the UK Companies Act 2006, 325,273,407 ordinary shares are currently held in treasury. This was the maximum number of shares held at any time during 2016; representing 1.61% of the shares in issue. The nominal value of shares purchased during 2016 was \$162,636,704.

## Notifiable interests in share capital

At 31 December 2016, HSBC Holdings had received the following notification of major holdings of voting rights pursuant to the requirements of Rule 5 of the Disclosure and Transparency Rules:

- BlackRock, Inc. gave notice on 25 October 2016 that on 24 October 2016 it had the following: an indirect interest in HSBC Holdings ordinary shares of 1,172,083,824; qualifying financial instruments with 1,794,677 voting rights that may be acquired if the instruments are exercised or converted; and financial instruments with similar economic effect to qualifying financial instruments which refer to 4,861,174 voting rights, each representing 5.89%, 0.00% and 0.02%, respectively, of the total voting rights at that date.

At 31 December 2016, according to the register maintained by HSBC Holdings pursuant to section 336 of the Securities and Futures Ordinance of Hong Kong:

- JPMorgan Chase & Co. gave notice on 27 October 2016 that on 24 October 2016 it had the following interests in HSBC Holdings ordinary shares: a long position of 924,250,502 shares; a short position of 162,867,748 shares; and a lending pool of 437,566,359 shares, each representing 4.60%, 0.81% and 2.18%, respectively, of the ordinary shares in issue at that date; and
- BlackRock, Inc. gave notice on 25 October 2016 that on 21 October 2016 it had the following interests in HSBC Holdings ordinary shares: a long position of 1,305,933,089 shares and a short position of 14,892,793 shares, each representing 6.51% and 0.07%, respectively, of the ordinary shares in issue at that date.

Since 31 December 2016 to date, no further such notifications had been received.

## Sufficiency of float

In compliance with the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited at least 25% of the total issued share capital has been held by the public at all times during 2016 and up to the date of this report.

## Dealings in HSBC Holdings listed securities

HSBC Group has policies and procedures that, except where permitted by statute and regulation, prohibit specified transactions in respect of its securities listed on The Stock Exchange of Hong Kong Limited. Except for dealings as intermediaries or as trustees by subsidiaries of HSBC Holdings, neither HSBC Holdings nor any of its subsidiaries has purchased, sold or redeemed any of its securities listed on The Stock Exchange of Hong Kong Limited during the year ended 31 December 2016.

## Directors' interests

Pursuant to the requirements of the UK Listing Rules and according to the register of Directors' interests maintained by HSBC Holdings pursuant to section 352 of the Securities and Futures Ordinance of Hong Kong, the Directors of HSBC Holdings at 31 December 2016 had interests, all beneficial unless otherwise stated, in the shares or debentures of HSBC Holdings and its associated corporations as shown below. Save as stated no further interests were held by Directors and no Directors or their connected persons were awarded or exercised any right to subscribe for any shares or debentures in any HSBC corporation during the year.

No Directors held any short position as defined in the Securities and Futures Ordinance of Hong Kong in the shares or debentures of HSBC Holdings and its associated corporations.

Directors' interests – shares and debentures

Footnotes	At 31 Dec 2016						Total interests <sup>1</sup>
	At 1 Jan 2016	Beneficial owner	Child under 18 or spouse	Jointly with another person	Trustee		
<b>HSBC Holdings ordinary shares</b>							
Phillip Ameen	<sup>2</sup> 2	<b>5,000</b>	<b>5,000</b>	—	—	—	<b>5,000</b>
Kathleen Casey	<sup>2</sup> 2	<b>3,540</b>	<b>8,620</b>	—	—	—	<b>8,620</b>
Laura Cha		<b>5,200</b>	<b>5,200</b>	—	—	—	<b>5,200</b>
Henri de Castries		—	<b>16,165</b>	—	—	—	<b>16,165</b>
Lord Evans of Weardale		<b>7,416</b>	<b>9,170</b>	—	—	—	<b>9,170</b>
Joachim Faber		<b>45,778</b>	<b>66,605</b>	—	—	—	<b>66,605</b>
Douglas Flint	<sup>3</sup> 3	<b>401,450</b>	<b>402,158</b>	—	—	—	<b>402,158</b>
Stuart Gulliver		<b>2,861,265</b>	<b>3,167,323</b>	<b>176,885</b>	—	—	<b>3,344,208</b>
Sam Laidlaw	<sup>4</sup> 4	<b>38,012</b>	<b>39,444</b>	—	—	<b>1,416</b>	<b>40,860</b>
Irene Lee		—	<b>10,000</b>	—	—	—	<b>10,000</b>
John Lipsky	<sup>2</sup> 2	<b>16,165</b>	<b>16,165</b>	—	—	—	<b>16,165</b>
Rachel Lomax		<b>18,900</b>	<b>18,900</b>	—	—	—	<b>18,900</b>
Iain Mackay		<b>223,872</b>	<b>345,469</b>	—	—	—	<b>345,469</b>
Heidi Miller	<sup>2</sup> 2	<b>3,695</b>	<b>3,975</b>	—	—	—	<b>3,975</b>
Marc Moses		<b>624,643</b>	<b>824,241</b>	—	—	—	<b>824,241</b>
David Nish		—	—	<b>50,000</b>	—	—	<b>50,000</b>
Jonathan Symonds		<b>21,771</b>	<b>16,886</b>	<b>4,885</b>	—	—	<b>21,771</b>
Jackson Tai	<sup>2</sup> 2	—	<b>10,160</b>	—	<b>21,445</b>	—	<b>31,605</b>
Pauline van der Meer Mohr		—	<b>15,000</b>	—	—	—	<b>15,000</b>
Paul Walsh		—	<b>5,079</b>	—	—	—	<b>5,079</b>

<sup>1</sup> Executive Directors' other interests in HSBC Holdings ordinary shares arising from the HSBC Holdings savings-related share option plans and the HSBC Share Plan 2011 are set out in the Scheme interests in the Directors' Remuneration Report on page 153. At 31 December 2016, the aggregate interests under the Securities and Futures Ordinance of Hong Kong in HSBC Holdings ordinary shares, including interests arising through employee share plans were: Douglas Flint – 405,077; Stuart Gulliver – 6,576,482; Iain Mackay – 1,842,063; and Marc Moses – 2,626,463. Each Director's total interests represents less than 0.04% of the shares in issue and 0.04% of the shares in issue (excluding treasury shares).

<sup>2</sup> Phillip Ameen has an interest in 1,000, Kathleen Casey has an interest in 1,724, John Lipsky has an interest in 3,233, Heidi Miller has an interest in 795 and Jackson Tai has an interest in 6,321 listed ADS, which are categorised as equity derivatives under Part XV of the Securities and Futures Ordinance of Hong Kong. Each ADS represents five HSBC Holdings ordinary shares.

<sup>3</sup> Since the end of the year, the number of HSBC Holdings ordinary shares held by Douglas Flint has increased by 22, following an acquisition, through regular monthly contributions in the HSBC Holdings UK Share Incentive Plan.

<sup>4</sup> Sam Laidlaw has a non-beneficial interest in 1,416 shares that he holds as a trustee.

There have been no changes in the shares or debentures of the Directors from 31 December 2016 to the date of this report excluding those disclosed in footnote 3 of the above table.

### **Listing Rule 9.8.4**

The information to be disclosed in the *Annual Report and Accounts* pursuant to UK Listing Rule 9.8.4 is contained within the Corporate Governance Report.

### **Employees**

At 31 December 2016, HSBC had a total workforce of 241,000 full and part-time employees compared with 264,000 at the end of 2015 and 266,000 at the end of 2014. Our main centres of employment were the UK with approximately 45,000 employees, India 37,000, Hong Kong 29,000, mainland China 24,000, Mexico 16,000, the US 13,000 and France 9,000.

We encourage employees to perform at their best, and create an environment to make that possible. We also encourage employees to speak up, and reflect our purpose and values in the decisions we make and how we make them, as these decisions shape the future of our customers and colleagues.

### **Employee relations**

We consult with and, where appropriate, negotiate with employee representative bodies. It is our policy to maintain well-developed communications and consultation programmes with all employee representative bodies and there have been no material disruptions to our operations from labour disputes during the past five years.

### **Diversity and inclusion**

HSBC is committed to building a culture where individuals are valued, respected and supported; where different ideas, backgrounds, styles and perspectives are actively sought out to create business value; and where advancement is based on objective criteria. Focus continues on the diversity profile of our workforce to help ensure it is reflective of the communities in which we operate and the customers we serve.

Building a more inclusive workplace is part of everyone's role at HSBC. Our Global Diversity Policy makes clear the responsibility of all employees and workers to treat colleagues with dignity and respect and to create an inclusive environment free from discrimination, bullying, harassment or victimisation, irrespective of their age, colour, disability, ethnic or national origin, gender, gender identity/expression, marital status, pregnancy, race, religion or belief, or sexual orientation. Our employees are expected to demonstrate openness to different ideas and cultures, and their performance in this respect is reviewed in our year-end review process.

Diversity and inclusion carries the highest level of executive support at HSBC, and oversight of our diversity agenda and related activities resides with the Global Diversity and Inclusion sub-function. We also operate governance forums covering diversity and inclusion at global line, regional and country levels.

### **Employee development**

The development of our employees is essential to the future strength of our business. We continue to develop and implement practices that build employee capability, and identify, develop and deploy talented employees to ensure an appropriate supply of high calibre individuals with the values, skills and experience for current and future senior management positions.

In 2016, we focused on developing technical skills, experiences and behaviours necessary to deliver against our Global Standards commitments, along with several Group-wide cultural programmes for employees and managers as part of our 'At Our Best' initiative.

### **Employment of people with a disability**

We believe in providing equal opportunities for all employees. The employment of people with a disability is included in this commitment and the recruitment, training, career development and promotion of people with a disability is based on the aptitudes and abilities of the individual. Should employees become disabled during their employment with us, efforts are made to continue their employment and, if necessary, appropriate training and reasonable equipment and facilities are provided.

### **Health and safety**

HSBC is committed to providing a safe physical environment for our customers and employees, as well as those who work with us. We aim always to meet the minimum health and safety standards required by law wherever we operate and, where reasonably practical, to exceed them.

Everyone at HSBC has a responsibility for helping to create a safe working environment. Employees are expected to take ownership of their safety and are encouraged and empowered to report any concerns.

Chief operating officers have overall responsibility for ensuring that the correct policies, procedures and safeguards are put into practice. This includes making sure that everyone in HSBC has access to appropriate information, instruction, training and supervision.

In 2016, we completed three major global projects to help us understand the risks we face, educate and inform our staff, and improve the buildings in which we operate. We have:

- Concluded a survey of earthquake resilience in more than 1,500 HSBC buildings located in countries at medium to high risk of earthquakes;
- Conducted more than 250 asbestos surveys in countries without bans or controls on the use of the potentially harmful material; and
- Completed more than 1,800 fire risk assessments of our buildings around the world.

### **Employee health and safety**

<i>Footnote</i>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Number of employee workplace fatalities	<b>1</b>	<b>1</b>	—
Accidents involving more than three days' absence	<b>75</b>	110	96
All accident rate per 100,000 employees	<b>241</b>	274	388

1 Non-HSBC staff working on HSBC-related activity.

### **Remuneration policy**

The quality and commitment of our employees is fundamental to our success and accordingly the Board aims to attract, retain and motivate the very best people. As trust and relationships are vital in our business our goal is to recruit those who are committed to making a long-term career with the Group.

HSBC's reward strategy supports this objective through balancing both short-term and sustainable performance. Our remuneration strategy is designed to reward competitively the achievement of long-term sustainable performance and attract and motivate the very best people who are committed to maintaining a long-term career with the Group while performing their role in the long-term interests of our stakeholders.

In order to ensure alignment between remuneration and our business strategy, individual remuneration is determined through assessment of performance delivered against both annual and long-term objectives summarised in performance scorecards, and adherence to the HSBC Values of being 'open, connected and dependable' and acting with 'courageous integrity'. Altogether, performance is judged, not only on what is achieved over the short and long term, but also on how it is achieved, as the latter contributes to the sustainability of the Group.

The financial and non-financial measures incorporated in the annual and long-term scorecards are carefully considered to ensure alignment with the long-term strategy of the Group.

*Further information on the Group's approach to remuneration is given on page 153.*

### **Employee share plans**

Share options and discretionary awards of shares granted under HSBC share plans align the interests of employees with the creation of shareholder value. The table below sets out the particulars of outstanding options, including those held by employees working under employment contracts that are regarded as 'continuous contracts' for the purposes of the Hong Kong Employment Ordinance. The options were granted at nil consideration. No options have been granted to substantial shareholders and suppliers of goods or services, nor in excess of the individual limit for each share plan. No options were cancelled by HSBC during the year.

A summary for each plan of the total number of the options which were granted, exercised or lapsed during 2016 is shown in the table below. Further details required to be disclosed pursuant to Chapter 17 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited are available on our website at <http://www.hsbc.com/about-hsbc/corporate-governance/employee-share-plans> and on the website of The Stock Exchange of Hong Kong Limited at [www.hkex.com.hk](http://www.hkex.com.hk), or can be obtained upon request from the Group Company Secretary, 8 Canada Square, London E14 5HQ.

*Particulars of options held by Directors of HSBC Holdings are set out on page 165.*

*Note 5 on the Financial Statements gives details of share-based payments, including discretionary awards of shares granted under HSBC share plans.*

### **All-employee share plans**

HSBC operates all-employee share option plans under which options are granted over HSBC ordinary shares. Subject to leaver provisions, options are normally exercisable after three to five years. During 2016, options were granted at the mid-market price for HSBC Holdings ordinary shares quoted on the London Stock Exchange which, as derived from the Daily Official List on 20 September 2016, the day prior to grant, was £5.83.

The UK Sharesave will terminate on 23 May 2025 unless the Directors resolve to terminate the plans at an earlier date. There will be no further grants under the HSBC Holdings Savings-Related Share Option Plan: International.

The HSBC International Employee Share Purchase Plan was introduced in 2013 and now includes employees based in 26 jurisdictions.

**HSBC Holdings All-employee Share Option Plans**

Dates of awards from	to	Exercise price from	to	Exercisable from	to	Footnotes	<b>HSBC Holdings ordinary shares</b>				
							<b>At 1 Jan 2016</b>	<b>Granted during year</b>	<b>Exercised during year</b>	<b>Lapsed during year</b>	<b>At 31 Dec 2016</b>
<b>Savings-Related Share Option Plan</b>											
21 Apr 2010	21 Sep 2016	(£) 4.0472	(£) 5.4738	1 Aug 2015	30 Apr 2022	1	<b>71,709,819</b>	<b>15,043,601</b>	<b>3,834,045</b>	<b>14,141,959</b>	<b>68,777,416</b>
<b>Savings-Related Share Option Plan: International</b>											
21 Apr 2010	24 Apr 2012	(£) 4.4621	(£) 5.4573	1 Aug 2014	31 Jan 2018	2	<b>1,130,991</b>	—	<b>396,954</b>	<b>293,728</b>	<b>440,309</b>
21 Apr 2010	24 Apr 2012	(\\$) 7.1456	(\\$) 8.2094	1 Aug 2014	31 Jan 2018		<b>665,445</b>	—	<b>17,053</b>	<b>430,654</b>	<b>217,738</b>
21 Apr 2010	24 Apr 2012	(€) 5.3532	(€) 6.0657	1 Aug 2015	31 Jan 2018		<b>153,610</b>	—	<b>42,880</b>	<b>23,814</b>	<b>86,916</b>
21 Apr 2010	24 Apr 2012	(HK\$) 55.4701	(HK\$) 63.9864	1 Aug 2015	31 Jan 2018		<b>1,114,830</b>	—	<b>63,091</b>	<b>547,272</b>	<b>504,467</b>

1 The weighted average closing price of the shares immediately before the dates on which options were exercised was £5.75.

2 The weighted average closing price of the shares immediately before the dates on which options were exercised was £5.10.



On behalf of the Board

**Douglas Flint**

**Group Chairman**

HSBC Holdings plc

Registered number 617987

21 February 2017

# Directors' Remuneration Report

	Page
Annual Statement from the Group Remuneration Committee Chairman	153
Directors' remuneration policy	155
Remuneration policy for all employees	156
Annual report on remuneration	159
Additional remuneration disclosures	170

*All disclosures in the Directors' Remuneration Report are unaudited unless otherwise stated.*

*Disclosures marked as audited should be considered audited in the context of financial statements taken as a whole.*

## Annual Statement from the Group Remuneration Committee Chairman

Dear Shareholder,

The Group Remuneration Committee ('the Committee') is guided by a series of principles. These are set out in the Strategic Report on page 28, but it is worth mentioning a few here to help explain our work.

To attract and retain talent, remuneration at HSBC must be competitive. However, we place a strong emphasis on linking pay to performance. We particularly emphasise the need for performance that benefits the Group over the long-term, and reflects HSBC Values and the highest standards of conduct.

In 2016, we introduced a new remuneration policy for our executive Directors. It reflected feedback from shareholders, especially in its introduction of a long-term incentive ('LTI') award with a three-year forward-looking performance period, a seven-year deferral period, and a reduction in the cash in lieu of pension allowance for the executive Directors. I believe the new policy achieves strong alignment between the interests of our executive Directors and shareholders, and the performance measures for the new LTI award will reward long-term sustainable performance.

We were pleased that the new policy received strong support at our Annual General Meeting ('AGM') in April 2016, with over 96% of shareholders voting in favour.

This year's Remuneration Report shows how the Committee has applied the new policy, aligning executive pay with the Group's performance, both for the year and against its long-term strategic objectives.

### Performance achieved during 2016

Reported profit before tax for the year fell 62% to \$7.1bn. However, on an adjusted basis, excluding significant items and currency translation differences, profit before tax was \$19.3bn, broadly in line with prior-year. The Group's cost performance improved as prior-year initiatives gained traction and substantially offset higher loan impairment charges and marginally lower revenues.

The Group is now more than a year into implementing the strategic actions set out in its Investor Update in June 2015. These aim to improve returns, deliver cost savings, reduce RWAs, rebuild profitability in Mexico and the US, optimise and capture value from our international network, and complete the implementation of Global Standards programme to help combat financial crime.

Measures were incorporated into the 2016 annual incentive scorecards of the executive Directors to align their pay with progress against achievement of these objectives.

The Group made strong progress in a number of areas. It reduced RWAs by \$143bn in 2016, taking it more than 97% of the way towards its target for the end of 2017. It achieved cost savings of \$2.25bn, despite continued investment in

compliance, regulatory programmes and growth. Furthermore, it is on its way to restoring profitability in Mexico. In the second half of 2016, it executed a share buy-back worth approximately \$2.5bn as a way of distributing capital to shareholders. In 2016, in sterling terms, our share price increased by 23% and the total shareholder return was 32%.

### Group variable pay pool and risk adjustments

The Group variable pay pool is used to fund performance-related pay across the Group. In determining the size of the pool for 2016, the Committee took into consideration the Group's financial performance, fines, penalties and customer redress costs, as well as progress implementing and embedding Global Standards.

The total value of the pool for 2016 was \$3,035m, which was 12.3% lower than the \$3,462m figure for 2015.

In particular, the 2016 pool included the following reductions of:

- \$194m for the fines, penalties and cost of customer redress faced by the Group; and
- \$309m for:
  - financial performance in certain key areas, in particular, profit before tax, return on risk-weighted assets and adjusted jaws;
  - performance against certain metrics in our Group risk appetite profile; and
  - continued work required to address financial crime compliance issues and the embedding of Global Standards within our businesses.

In addition to the pool adjustments, we reduced variable pay awards to certain individuals by \$12.1m in aggregate to reflect their involvement in certain notable events and individual transgressions.

### Executive Directors' remuneration for 2016

In line with the policy approved by shareholders, we have reduced the cash in lieu of pension from 50% of base salary to 30% for executive Directors. This has resulted in fixed pay, including allowances, reducing by 7% in 2016. No increases in fixed pay are proposed for 2017.

The 2016 annual incentive scorecard outcome for financial measures was 35.3% for Stuart Gulliver, 30.0% for Iain Mackay and 15.0% for Marc Moses, reflecting their individual scorecards and the performance achieved in cost savings, reductions in RWAs and achievements against our strategic objectives.

Since establishing the new Financial Crime Risk function in July 2016, there has been a significant focus on transition from a programme of change to business-as-usual financial crime management across all countries, regions and global businesses. But there is more to be done. The Committee exercised its discretion to reduce the Global Standards assessments for executive Directors down to 65%. This was based on feedback received from the Monitor, matters arising from risk and compliance incidents, and a number of unsatisfactory internal audits covering anti-money laundering ('AML') and sanctions-related issues.

Details of the annual incentive scorecard outcome are provided on page 161.

In line with the new policy, no Group Performance Share Plan ('GPSP') awards were made in respect of the year ended 31 December 2016. This has resulted in a significant decrease in the total single figure of remuneration for executive Directors when compared with the year ending 31 December 2015.

The new LTI award for our executives, awarded while taking into account performance in the financial year ended 31 December 2016, is subject to a forward-looking three-year performance period (1 January 2017 to 31 December 2019) and a seven-year

deferral period. This ensures a significant proportion of executive Directors' pay continues to be deferred. This, together with the fact that the majority of compensation is awarded in shares, helps ensure it is aligned with the achievement of our long-term strategic objectives, and the long-term interests of shareholders and other stakeholders. Details of the performance measures for the LTI award to be granted in 2017 in respect of 2016, and the relevant targets for each measure, are provided on page 164.

### Implementation of policy for 2017

This year will be the final one for implementing the strategic actions set out in the Investor Update. The 2017 annual incentive scorecards for the executive Directors are designed to drive delivery against these objectives.

Details of the performance measures for the 2017 annual incentive scorecards are on page 169. However, for reasons of commercial sensitivity, the specific targets for each measure will not be disclosed until the end of the 2017 performance period, when performance against the targets will also be disclosed.

Fees for non-executive Directors were reviewed by the Committee in 2016. Recognising the growing regulatory responsibilities and time commitment required from our non-executive Directors, their fees have been increased with effect from 1 January 2017. A travel allowance has also been introduced for non-UK based non-executive Directors to reflect the additional time commitment required for travel. The details of the increases are provided on page 156.

The Committee will continue to monitor the remuneration arrangements for executive Directors, and meet with our major

shareholders on implementation of the policy in 2017. The Committee will also continue to monitor any reform proposed for corporate governance and executive pay, and will consider any changes that may be required to our approach on remuneration in this regard.

### Our annual report on remuneration

The following sections of this Remuneration Report provide an overview of the policy for executive Directors, which was approved by shareholders at the 2016 AGM, and details of remuneration decisions made for executive Directors in 2016. The report also covers the application of the 2016 policy to other Group employees.

As Chairman of the Committee, I hope you will support the report.

Finally, I will be retiring as a non-executive Director of the Group and as chairman of this Committee at the conclusion of the 2017 AGM. I am delighted that Pauline van der Meer Mohr, who is already a member of the Committee, has agreed to succeed me as chairman at that time.

**Sam Laidlaw**

**Chairman**

Group Remuneration Committee

21 February 2017

## Directors' Remuneration policy

The tables below summarise our remuneration policy for executive and non-executive Directors. The policy was approved at the AGM on 22 April 2016 and is intended to apply for three performance years until the AGM in 2019. The full remuneration

policy can be found on pages 288 to 299 of our *Annual Report and Accounts 2015* and in the *Directors' Remuneration Policy Supplement 2016* of this *Annual Report and Accounts 2016*, which is available in the Investor Relations section of [www.hsbc.com](http://www.hsbc.com).

### Remuneration policy summary – executive Directors

Elements	Operation	Implementation in 2017
<b>Base salary</b> To attract and retain key talent by being market competitive and rewarding ongoing contribution to role.	<ul style="list-style-type: none"> <li>Paid in cash on a monthly basis.</li> <li>Base salary increases will not exceed 15% in total during the three-year term of the policy.</li> </ul>	No change from 2016. <ul style="list-style-type: none"> <li>Douglas Flint: £1,500,000</li> <li>Stuart Gulliver: £1,250,000</li> <li>Iain Mackay: £700,000</li> <li>Marc Moses: £700,000</li> </ul>
<b>Fixed pay allowance</b> To deliver fixed pay required to reflect the role, skills and experience of the Directors and to maintain a competitive total remuneration package for retention of key talent.	<ul style="list-style-type: none"> <li>Non-pensionable and paid in shares.</li> <li>Released annually on a pro rata basis over five years, starting from the March immediately following the end of the financial year in which the shares were granted.</li> <li>Dividends paid on the vested shares held during the retention period.</li> </ul>	No change from 2016. <ul style="list-style-type: none"> <li>Douglas Flint: Nil</li> <li>Stuart Gulliver: £1,700,000</li> <li>Iain Mackay: £950,000</li> <li>Marc Moses: £950,000</li> </ul>
<b>Pension</b> To attract and retain key talent by being market competitive.	<ul style="list-style-type: none"> <li>Directors receive cash in lieu of a pension equal to 30% of base salary.</li> </ul>	No change from 2016.
<b>Benefits</b> To provide benefits in accordance with local market practice.	<ul style="list-style-type: none"> <li>Include, for example, the provision of medical insurance, income protection insurance, health assessment, life assurance, club membership, tax return assistance, car benefit and travel assistance, including any tax due on the benefit.</li> <li>Additional benefits may also be provided where an executive is relocated or spends a substantial proportion of their time in more than one jurisdiction for business purposes.</li> </ul>	No change from 2016.
<b>Annual incentive</b> To drive and reward performance against annual financial, non-financial and personal objectives which are consistent with the strategy and align to shareholder interests.	<ul style="list-style-type: none"> <li>Maximum opportunity for annual incentive award is 215% of base salary.</li> <li>Performance is measured against an annual scorecard and varies by individual.</li> <li>On vesting, shares are subject to a minimum retention period of at least six months.</li> </ul>	<ul style="list-style-type: none"> <li>See page 169 for details of performance measures.</li> <li>Shares issued are subject to a retention period of up to one year after vesting.</li> </ul>
<b>Long-term incentive ('LTI')</b> To incentivise sustainable long-term alignment with shareholder interests.	<ul style="list-style-type: none"> <li>Maximum opportunity for LTI award is 320% of base salary.</li> <li>Award is subject to a three-year forward-looking performance period.</li> <li>Performance is measured against a long-term scorecard. 60% is based on financial outcomes and 40% is based on non-financial outcome, including risk and strategy-related measures.</li> <li>Awards vest in five equal instalments with the first vesting on or around the third anniversary of the grant date, and the last vesting on or around the seventh anniversary of the grant date.</li> <li>Awards are discretionary and subject to malus during the vesting period and claw-back for a period of seven to 10 years from the date of award.</li> </ul>	<ul style="list-style-type: none"> <li>Details of the performance measures and targets for awards to be made in 2017 (in respect of 2016) are set out on page 164.</li> <li>For awards to be made in respect of 2017, the measures and targets will be determined at the end of 2017 for the performance period commencing on 1 January 2018.</li> <li>On vesting, awards are subject to a retention period of up to one year.</li> <li>Number of shares to be awarded can be determined using a share price discounted for dividend yield.</li> </ul>
<b>Shareholding guideline</b> To ensure appropriate alignment with the interest of our shareholders.	The shareholding guidelines as a percentage of base salary are: <ul style="list-style-type: none"> <li>Group Chairman: 100%</li> <li>Group Chief Executive: 400%</li> <li>Group Finance Director and Group Chief Risk Officer: 300%</li> </ul>	No change from 2016.

Executive Directors are also entitled to participate in all employee share plans, such as HSBC Sharesave, on the same basis as all other employees. The policy on payment for loss of

office is detailed online in the *Directors' Remuneration Policy Supplement 2016*.

### Remuneration policy summary – non-executive Directors

Non-executive Directors are not employees and receive a fee for their services. The policy for non-executive Directors is to pay:

- base fees; and
- further fees for the role of Senior Independent Director ('SID') and additional Board duties such as chairmanship or membership of a committee.

Expenses incurred in performing their roles and any related tax due are also reimbursed. All non-executive Directors have a shareholding guideline of 15,000 shares, which has to be

achieved within five years from 2014 or their appointment if later.

The Committee has reviewed the fee levels payable to non-executive Directors and decided an increase will be applied to reflect growing regulatory responsibilities and time commitment. A travel allowance of £4,000 will also be introduced for non-UK based non-executive Directors to reflect the additional time commitment required for travel. The increases in fees is within the 20% maximum increase during the three-year term of the remuneration policy. Fees for 2017 are detailed below.

Category		2016 fees £	2017 fees £
Base fee		<b>95,000</b>	110,000
SID		<b>45,000</b>	54,000
Audit, Risk, Remuneration, Financial System Vulnerabilities and Conduct & Values Committees	Chairman	<b>50,000</b>	60,000
	Member	<b>30,000</b>	30,000
Nomination Committee	Chairman	<b>40,000</b>	40,000
	Member	<b>25,000</b>	25,000
Philanthropic & Community Investment Oversight Committee	Chairman	<b>25,000</b>	25,000
	Member	<b>15,000</b>	15,000

### Service contracts

#### Executive Directors

	Douglas Flint	Stuart Gulliver	Iain Mackay	Marc Moses
Contract date (rolling)	<b>14 Feb 2011</b>	<b>10 Feb 2011</b>	<b>4 Feb 2011</b>	<b>27 Nov 2014</b>
Notice period (Director & HSBC)	<b>12 months</b>	<b>12 months</b>	<b>12 months</b>	<b>12 months</b>

Letters setting out the terms of appointment of each executive Director are available for inspection at HSBC Holdings' registered office. Consistent with the best interests of the Group, the Committee will seek to minimise termination payments. Directors may be eligible for a payment in relation to statutory rights.

The Directors' biographies are set out on pages 133 to 136, and include those directorships provided for under Capital Requirement Directive IV ('CRD IV').

#### Non-executive Directors

Non-executive Directors are appointed for fixed terms not exceeding three years, which may be renewed subject to their re-election by shareholders at AGMs. Non-executive Directors do not have service contracts, but are bound by letters of appointment issued for and on behalf of HSBC Holdings. There are no obligations in the non-executive Director's letters of appointment which could give rise to remuneration payments or payments for loss of office.

Non-executive Directors' current terms of appointment will expire as follows:

2017 AGM	2018 AGM	2019 AGM	2020 AGM
Kathleen Casey	Phillip Ameen	Henri de Castries	David Nish
Laura Cha	Joachim Faber	Irene Lee	Jackson Tai
Lord Evans of Weardale	John Lipsky	Pauline van der Meer Mohr	
Sam Laidlaw	Rachel Lomax	Paul Walsh	
Jonathan Symonds	Heidi Miller		

### Remuneration policy for all employees

The Committee oversees the Group's remuneration policy and its application to the wider employee population. The Committee periodically reviews the adequacy and effectiveness of the policy and ensures that it:

- meets the commercial requirement to remain competitive;
- is affordable;
- allows flexibility in response to prevailing circumstances;
- is compliant with regulatory requirements;
- aligns with the long-term interests of our stakeholders; and
- is consistent with effective risk management.

The mix of fixed and variable pay granted to an employee corresponds to the individual's role, local market factors and regulatory requirements. The variable pay for all material risk takers ('MRTs') is restricted to a maximum of 200% of their fixed pay. Individuals are identified as MRTs based on the qualitative and quantitative criteria set out in the Regulatory Technical Standard EU 604/2014 and additional criteria determined by the Committee. The table provides an overview of the different remuneration elements for our employees.

Component of remuneration	Application
<b>Fixed pay</b>	<ul style="list-style-type: none"> <li>Attract and retain employees by paying market-competitive pay for the role, skills and experience required by the business.</li> <li>This may include salary, fixed pay allowance, cash in lieu of pension and other cash allowances in accordance with local market practices.</li> <li>These payments are fixed and do not vary with performance.</li> </ul>
<b>Pension and benefits</b>	<ul style="list-style-type: none"> <li>Provided in accordance with local market practice. They include, but are not limited to, the provision of pensions, medical coverage, life insurance, health assessment, tax return preparation, legal fees and relocation allowances.</li> </ul>
<b>Annual incentive</b>	<ul style="list-style-type: none"> <li>Awards to drive and reward performance based on annual financial and non-financial measures consistent with the medium-to-long-term strategy, shareholder interests and adherence to HSBC Values.</li> <li>For MRTs, awards are normally subject to a 40% or 60% deferral, delivered in cash and/or shares, subject to a minimum six-month retention period. From 2016 onwards, the deferral period could be three, five or seven years, depending on the regulatory status of the employee. Deferred awards are subject to malus. All awards are subject to claw-back and compliance with local laws.</li> <li>For all other employees, awards can be in the form of cash and/or shares. Awards above a specified threshold are subject to deferral based on a deferral table. All deferred awards are subject to malus.</li> <li>HSBC operates an anti-hedging policy for all employees who are required to certify each year that they have not entered into any personal hedging strategies.</li> </ul>

### Link between performance and reward

Under our remuneration framework, pay decisions are based on a number of factors: business results, individual performance against scorecard objectives and adherence to HSBC Values, business principles, policies, procedures and Global Standards.

At the end of each performance year, assessment of performance against scorecard objectives, including non-financial and risk objectives, forms the basis of remuneration decisions. This helps ensure risk management is embedded and forms an integral part of all our activities.

The performance and remuneration of individuals in control functions is assessed according to a balanced scorecard of objectives specific to the functional role they undertake, to ensure their remuneration is determined independent of the performance of the business areas they control.

HSBC Values play a key role in ensuring the Group remains sound and sustainable. All employees are given a separate values-aligned behavioural rating, which informs their eligibility for variable pay and influences their variable pay determinations.

Regular reviews are undertaken to assess instances of non-compliance with risk procedures and expected behaviours. Instances of non-compliance are escalated for consideration in variable pay decisions, using our adjustment, malus and claw-back policies (see the next section).

The key features of our remuneration framework that enable us to achieve alignment between risk, reward and performance are set out below.

Key feature	Application
<b>Scorecards</b>	<ul style="list-style-type: none"> <li>Assessment of performance with reference to clear and relevant objectives set within a performance scorecard framework.</li> <li>Global Standards including risk and compliance measures and conduct, set at a minimum of 25% of the scorecard for Group Management Board members.</li> </ul>
<b>Group variable pay pool calculation</b>	<ul style="list-style-type: none"> <li>Fines and penalties are automatically included in the Committee's definition of profit.</li> <li>Performance against metrics in the Group Risk Appetite Statement and Conduct Framework is taken into consideration.</li> </ul>
<b>Deferral of variable pay</b>	<ul style="list-style-type: none"> <li>Deferral of a significant proportion of variable pay into HSBC shares and/or other instruments to tie recipients to the future performance of the Group and business units.</li> </ul>
<b>Malus/adjustment policy</b>	<ul style="list-style-type: none"> <li>Allows cancellation/reduction of unvested deferred variable pay awards. Longer deferral period under PRA Remuneration Rules increases the time period over which malus can be applied.</li> <li>This is in addition to our in-year variable pay adjustments and other disciplinary actions that can be taken under our global consequence management policy.</li> </ul>
<b>Claw-back policy</b>	<ul style="list-style-type: none"> <li>Subject to compliance with local labour laws, allows us to recoup/reclaim paid awards in certain circumstances as defined by the PRA for a period of up to seven-years from grant (can be extended to 10 years for individuals in PRA designated Senior Management Function roles).</li> </ul>
<b>Retail/wealth compensation</b>	<ul style="list-style-type: none"> <li>We removed commission based sales plans globally for Wealth in 2013 and Retail in 2014.</li> </ul>

The following policies help embed values in our remuneration structure while ensuring greater global consistency in our

approach to achieving alignment between risk and reward.

Programmes	Application
<b>Values rating for all employees</b>	<ul style="list-style-type: none"> <li>To ensure performance is judged not only on what is achieved in the short and long term but also on how it is achieved, which contributes to the sustainability of the Group.</li> </ul>
<b>Performance management</b>	<ul style="list-style-type: none"> <li>Strong correlation is expected between performance and values.</li> <li>No discretionary variable pay for an unacceptable behaviour rating.</li> <li>2016 focus on moving away from traditional cycle-based performance management towards a culture of everyday performance and development.</li> </ul>
<b>Global consequence management policy</b>	<ul style="list-style-type: none"> <li>Introduced to increase consistency in approach and actions taken.</li> <li>Clear messaging to employees on impact of breaches as part of reward communications (through pay statements, manager guidelines, etc.).</li> </ul>
<b>Positive adjustments</b>	<ul style="list-style-type: none"> <li>To focus on positive behaviours in the context of Global Standards through in-year positive variable pay adjustments.</li> </ul>
<b>Global recognition programme</b>	<ul style="list-style-type: none"> <li>Circa 80% of the global employee population can now access a single HSBC recognition platform to perform values-based peer-to-peer recognition.</li> <li>Includes communication of positive stories on our intranet (HSBC Now).</li> </ul>

### Variable pay adjustment, malus and claw-back

Where there are instances of conduct breaches, the actions below can be taken. The Committee has discretion to apply malus and claw-back under the policies it has adopted, taking into consideration an individual's proximity to, and responsibility

for, the issue in question. Where possible, an adjustment will be made to current-year variable pay, before the application of malus, then claw-back. This is in line with regulatory requirements.

Type of action	Type of variable pay award affected	Circumstances where it may apply (including, but not limited to)
<b>Adjustment</b>	<ul style="list-style-type: none"> <li>Current-year variable pay.</li> </ul>	<ul style="list-style-type: none"> <li>Detrimental conduct, including conduct which brings the business into disrepute.</li> <li>Involvement in events resulting in significant operational losses, or events which have caused or have the potential to cause significant harm to HSBC.</li> <li>Non-compliance with HSBC Values and other mandatory requirements or policies.</li> </ul>
<b>Adjustment under the downward override policy</b>	<ul style="list-style-type: none"> <li>Current-year variable pay for executive Directors and certain other senior executives.</li> </ul>	<ul style="list-style-type: none"> <li>Downward override policy was introduced in 2014, based on the recommendations received from the independent Monitor as appointed by the US Deferred Prosecution Agreement ('DPA').</li> <li>A downward adjustment can be applied where there is: <ul style="list-style-type: none"> <li>insufficient yearly progress in developing an effective AML and sanctions compliance programme; or</li> <li>non-compliance with the DPA and other relevant orders.</li> </ul> </li> <li>In deciding the application and degree of any such downward override to reduce variable pay awards, the Committee considers feedback from the Financial System Vulnerabilities Committee, the Monitor in relation to cooperation with their review and Legal.</li> </ul>
<b>Malus</b>	<ul style="list-style-type: none"> <li>Unvested deferred awards granted in prior years.</li> </ul>	<ul style="list-style-type: none"> <li>Detrimental conduct, including conduct which brings the business into disrepute.</li> <li>Past performance being materially worse than originally reported.</li> <li>Restatement, correction or amendment of any financial statements.</li> <li>Improper or inadequate risk management.</li> </ul>
<b>Claw-back</b>	<ul style="list-style-type: none"> <li>Vested or paid awards granted to MRTs on or after 1 January 2015 for seven years.</li> <li>From 2016 onwards, this period may be extended to 10 years for employees under the PRA's Senior Manager Regime in the event of ongoing internal/regulatory investigation at the end of the seven-year period.</li> </ul>	<ul style="list-style-type: none"> <li>Participation in, or responsibility for, conduct which results in significant losses.</li> <li>Failing to meet appropriate standards and propriety.</li> <li>Reasonable evidence of misconduct or material error that would justify, or would have justified, summary termination of a contract of employment.</li> <li>HSBC or a business unit suffers a material failure of risk management in the context of Group risk-management standards, policies and procedures.</li> </ul>

## Annual report on remuneration

### Remuneration Committee

Details of the roles, responsibility and membership of the Committee are set out on page 144. No executive Directors are involved in deciding their own remuneration.

#### Details of the Committee's key activities

Month	Activities	Month	Activities
Jan	<ul style="list-style-type: none"> <li>Reviewed and approved pay review matters and regulatory filings.</li> <li>Received updates on notable events.</li> <li>Received updates on regulatory changes.</li> </ul>	Jul	<ul style="list-style-type: none"> <li>Reviewed and approved regulatory filing for 2016.</li> <li>Received updates on notable events.</li> </ul>
Feb	<ul style="list-style-type: none"> <li>Approved 2015 performance year pay review matters.</li> <li>Considered progress update on 2015 Monitor recommendations.</li> <li>Approved 2015 Directors' Remuneration Report and Strategic Report including new policy for Directors.</li> <li>Received updates on notable events.</li> <li>Received updates on regulatory changes.</li> </ul>	Sept	<ul style="list-style-type: none"> <li>Updated on high-priority programmes progress.</li> <li>Reviewed 2016 performance year pay review matters.</li> <li>Received updates on notable events.</li> <li>Noted progress updates from 2016 Monitor recommendations.</li> <li>Reviewed fixed pay framework.</li> <li>Reviewed executive Directors' scorecards.</li> <li>Approved Group-wide variable pay deferral policy.</li> </ul>
Apr	<ul style="list-style-type: none"> <li>Met with Monitor to discuss incentivisation workstream.</li> <li>Considered matters discussed with regulators and reviewed regulatory filings.</li> </ul>	Oct and Nov	<ul style="list-style-type: none"> <li>Committee Chairman met with shareholders.</li> <li>Reviewed 2016 performance year pay review matters.</li> <li>Reviewed 2016 regulatory submissions.</li> <li>Received updates on notable events.</li> <li>Reviewed long-term incentive scorecard.</li> <li>Received updates on investor guidelines.</li> </ul>
May	<ul style="list-style-type: none"> <li>Approved 2016 MRT list.</li> <li>Received updates on notable events.</li> <li>Considered shareholder feedback received on executive remuneration policy matters.</li> </ul>	Dec	<ul style="list-style-type: none"> <li>Approved 2016 performance year pay matters.</li> <li>Approved 2016 regulatory submissions.</li> <li>Reviewed executive Directors' scorecards and pay proposals.</li> <li>Approved long-term incentive scorecard measures.</li> </ul>

### Advisers

The Committee received input and advice from different advisers on specific topics during 2016. Deloitte LLP ('Deloitte') was appointed by the Committee in 2015 as an objective, independent adviser to support the Committee on specific remuneration matters for executive Directors. The Committee made the appointment after considering invited proposals from a number of consultancy firms. In 2016, the Committee agreed to extend Deloitte's appointment for a further period of one year. Deloitte provided benchmarking data on remuneration policy matters and independent advice to the Committee. The Committee may request ad-hoc assistance from Deloitte.

Deloitte also provided services to the Group, comprising tax compliance and other advisory services. To ensure the advice from Deloitte was objective, the Committee required the advice to be independent and distinct from any internal review and analysis on remuneration policy matters. The Committee was satisfied the advice provided by Deloitte was objective and independent in 2016. Deloitte is a founding member of the Remuneration Consultants Group and voluntarily operates under the Code of Conduct in relation to executive remuneration consulting in the UK.

For 2016, total fees of £168,150 were incurred in relation to its remuneration advice provided by Deloitte. This was based on pre-agreed fees and a time and materials basis.

During the year, the Group Chief Executive provided regular briefings to the Committee. In addition, the Committee received updates from the following employees as part of their roles with HSBC:

### Activities

The Committee met nine times during 2016. The following is a summary of the Committee's key activities during 2016. A copy of the Committee's terms of reference can be found on our website at [www.hsbc.com/about-hsbc/corporate-governance/board-committees](http://www.hsbc.com/about-hsbc/corporate-governance/board-committees).

- Pierre Goad, Group Head of Human Resources (until August 2016);
- Donna Wong, Acting Group Head of Human Resources (from September 2016);
- Alexander Lowen, Group Head of Performance and Reward;
- Marc Moses, Group Chief Risk Officer;
- Iain Mackay, Group Finance Director;
- Colin Bell, Group Head of Financial Crime Risk;
- Robert Werner, Former Global Head of Financial Crime Compliance and Group Money Laundering Reporting Officer;
- Ralph Nash, Global Head of Financial Crime Compliance;
- John Flint, Chief Executive Retail Banking and Wealth Management;
- Stuart Levey, Chief Legal Officer; and
- Andy Maguire, Group Chief Operating Officer.

The Committee also received feedback and input from the Group Risk Committee, the Financial System Vulnerabilities Committee and the Conduct & Values Committee on risk and compliance-related matters relevant to remuneration. This included input from the Financial System Vulnerabilities Committee on the implementation and annual assessment of progress on the AML and sanctions compliance programme for the purposes of the Committee's determination on any adjustments to be made under the downward override policy.

# Directors' Remuneration Report

## Single figure of remuneration

The following table shows the single figure total remuneration of each executive Director for 2016, together with comparative figures for 2015.

(Audited) (£'000)	Base salary	Fixed pay allowance	Pension	Annual incentive	GPSP/LTI	Sub-total	Taxable benefits	Non- taxable benefits	Notional returns	Total
Douglas Flint	<b>2016</b> 1,500	—	450	—	—	<b>1,950</b>	100	86	—	<b>2,136</b>
	2015	1,500	—	750	—	2,250	151	95	—	2,496
Stuart Gulliver	<b>2016</b> 1,250	<b>1,700</b>	<b>375</b>	<b>1,695</b>	—	<b>5,020</b>	<b>557</b>	<b>71</b>	<b>27</b>	<b>5,675</b>
	2015	1,250	1,700	625	1,072	1,969	6,616	662	53	9
Iain Mackay	<b>2016</b> 700	<b>950</b>	<b>210</b>	<b>987</b>	—	<b>2,847</b>	<b>52</b>	<b>37</b>	<b>17</b>	<b>2,953</b>
	2015	700	950	350	1,068	1,101	4,169	54	28	5
Marc Moses	<b>2016</b> 700	<b>950</b>	<b>210</b>	<b>1,005</b>	—	<b>2,865</b>	<b>15</b>	<b>38</b>	<b>18</b>	<b>2,936</b>
	2015	700	950	350	827	1,101	3,928	6	29	5

## Year-on-year single figure comparison

(Unaudited)

The GPSP was replaced by the LTI in 2016. As such, no GPSP award was made for 2016 and the value for 2016 is nil.

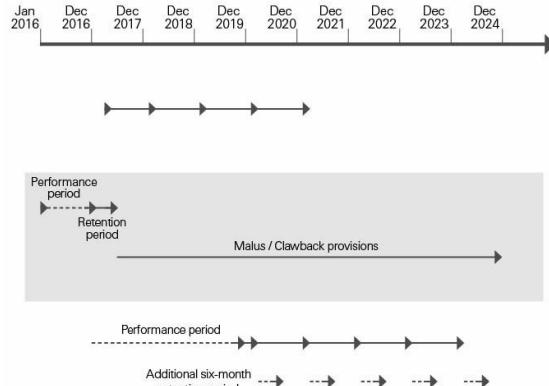
The first LTI award will be made in March 2017, with a performance period ending in 2019. Vesting of the first LTI award will be included in the single figure table for the financial year ending on 31 December 2019. For year-on-year

comparison purposes, if target performance is achieved over the three-year performance period, LTI payout for the 2016 award would be 50% of grant value. In this case, the 2016 single figure total remuneration of the executive Directors for year-on-year comparison would be (in £'000) £7,670 for Stuart Gulliver, £4,069 for Iain Mackay and £4,052 for Marc Moses.

## Illustration of release profile

The following chart provides an illustrative release profile for executive Directors.

## Illustration of release profile



- Fixed pay allowance**
  - Released in five equal annual instalments starting from March 2017.
- Annual incentive**
  - Paid in immediately vested shares subject to minimum six-month retention period.
  - Subject to claw-back provisions for seven-years, which may be extended in the event of an ongoing internal/regulatory investigation.
- Long-term incentive**
  - Award subject to three-year forward-looking performance period.
  - Subject to satisfaction of performance conditions, awards will vest in five equal annual instalments starting from the third anniversary of the grant date.
  - On vesting, shares are subject to a minimum six-month retention period.

## Notes to the single figure of remuneration

(Audited)

### Benefits

In the single figure of remuneration table above, 'Benefits' refers to:

- all taxable benefits (gross value before payment of tax) including provision of medical insurance, accommodation

and car, club membership, tax gross-up for accommodation and car benefit; and

- non-taxable benefits including the provision of life assurance and other insurance cover.

The values of the significant benefits in the above table are set out below.

(Audited)

(£'000)	Car benefit (UK and Hong Kong)	Hong Kong bank-owned accommodation <sup>2</sup>	Tax expense on car benefit and Hong Kong bank-owned accommodation	Insurance benefit (non-taxable) <sup>1</sup>
Douglas Flint	<b>2016</b> —	—	—	<b>75</b>
	2015	69	—	57
Stuart Gulliver	<b>2016</b> 64	<b>263</b>	<b>211</b>	<b>63</b>
	2015	87	281	275
Iain Mackay	<b>2016</b> —	—	—	—
	2015	—	—	—
Marc Moses	<b>2016</b> —	—	—	—
	2015	—	—	—

<sup>1</sup> The car benefits, tax on car benefits and insurance benefits for Iain Mackay and Marc Moses are not included in the above table as they were not significant.

<sup>2</sup> Based on the current market rental value of the bank-owned property in Hong Kong, as estimated by an external lease service provider, plus utility costs, rates, the taxable value of furniture and taking into account the business use of the property. The taxable value of the accommodation is considered to be 70% of the total of these amounts.

## Notional returns

In the single figure of remuneration table above, 'Notional returns' refers to the notional return on deferred cash.

The deferred cash portion of the annual incentive also includes a right to receive notional returns for the period between grant date and vesting date, which is determined by reference to the dividend yield on HSBC shares, calculated annually.

A payment of notional return is made annually in the same proportion as the vesting of the deferred awards on each vesting date. The amount is disclosed on a paid basis in the year in which the payment is made.

## Determining executive Directors' annual performance

(Audited)

Awards made to executive Directors reflected the Committee's assessment of the extent to which they had achieved personal and corporate objectives set within their performance scorecard as agreed at the beginning of the year, which had been set to reflect the risk appetite and strategic priorities. In accordance with the downward override policy, the Committee also

consulted the Financial System Vulnerabilities Committee and took into consideration their feedback in relation to progress on enhancing AML and sanctions compliance along with progress in meeting the Group's obligations under the US DPA and other relevant orders. The Committee also took into consideration the report of the independent Monitor in determining the scorecard outcomes.

In order for any annual incentive award to be made, each executive Director must meet a required behavioural rating which is assessed with reference to the HSBC Values. For 2016, all executive Directors met the required behavioural rating.

For 2016, the Committee exercised its discretion and reduced the Global Standards assessments from 75% to 65% for Stuart Gulliver, from 86% to 65% for Iain Mackay and from 74% to 65% for Marc Moses. This was based on feedback received from the Monitor, matters arising from risk and compliance incidents, and a number of unsatisfactory internal audits covering AML and sanctions-related issues.

The performance achieved by executive Directors in the year is shown in the table below.

### Annual assessment

	Stuart Gulliver			Iain Mackay			Marc Moses		
	Weighting (%)	Assessment (%)	Outcome (%)	Weighting (%)	Assessment (%)	Outcome (%)	Weighting (%)	Assessment (%)	Outcome (%)
Profit before tax <sup>1</sup>	<b>20.00</b>	<b>0.00</b>	<b>0.00</b>	<b>20.00</b>	<b>0.00</b>	<b>0.00</b>	<b>10.00</b>	<b>0.00</b>	<b>0.00</b>
Deliver cost savings	<b>20.00</b>	<b>100.00</b>	<b>20.00</b>	<b>20.00</b>	<b>100.00</b>	<b>20.00</b>	–	–	–
Reduce Group RWAs	<b>10.00</b>	<b>100.00</b>	<b>10.00</b>	<b>10.00</b>	<b>100.00</b>	<b>10.00</b>	<b>15.00</b>	<b>100.00</b>	<b>15.00</b>
Strategic growth	<b>10.00</b>	<b>52.70</b>	<b>5.27</b>	–	–	–	–	–	–
Global Standards including risk and compliance	<b>25.00</b>	<b>65.00</b>	<b>16.25</b>	<b>25.00</b>	<b>65.00</b>	<b>16.25</b>	<b>50.00</b>	<b>65.00</b>	<b>32.50</b>
Personal objectives	<b>15.00</b>	<b>81.27</b>	<b>12.19</b>	<b>25.00</b>	<b>80.00</b>	<b>20.00</b>	<b>25.00</b>	<b>80.00</b>	<b>20.00</b>
<b>Total</b>	<b>100.00</b>		<b>63.71</b>	<b>100.00</b>			<b>66.25</b>	<b>100.00</b>	<b>67.50</b>
Maximum annual incentive opportunity (£'000)			<b>£2,660</b>				<b>£1,490</b>		<b>£1,490</b>
Annual incentive (£'000)			<b>£1,695</b>				<b>£987</b>		<b>£1,005</b>

<sup>1</sup> Adjusted profit before tax, as defined for Group annual bonus pool calculation. This excludes the year-on-year effects of foreign currency translation differences, fair value movements on our own debt, business disposal gains and losses, acquisitions and goodwill, debt valuation adjustments, restructuring costs included in costs to achieve and variable pay expense. The adjusted profit before tax includes the cost of fines, penalties and costs of customer redress.

### Financial performance

#### Annual assessment

Measure	Minimum (25% payout)	Maximum (100% payout)	Performance	Assessment
Profit before tax	\$19.7bn	\$20.6bn	\$18.2bn	0%
Deliver cost savings <sup>1</sup>	\$34.0bn	\$32.9bn	\$30.7bn	100%
Reduce Group RWAs	\$100.0bn	\$110.0bn	\$143.0bn	100%
Strategic growth <sup>2</sup>	Various	Various	Partly met targets for seven measures and did not meet minimum targets for two measures.	5.27%

<sup>1</sup> Measured by reference to Group adjusted cost base.

<sup>2</sup> Strategic growth measures on optimising global network, rebuilding NAFTA region profitability, delivering growth above GDP from international network, pivot to Asia and renminbi internationalisation.

### Non-financial performance

The table below provides an overview of the non-financial performance achieved by each executive Director.

#### Stuart Gulliver

	Performance	Assessment
<b>Global Standards including risk and compliance</b>	<ul style="list-style-type: none"> <li>Effective risk management in compliance with AML, sanctions and anti-bribery and corruption policies.</li> <li>Enhancement of customer due diligence.</li> <li>Implementation and embedding of global conduct programme.</li> <li>Progress on embedding Global Standards.</li> </ul>	65.0%
<b>Personal objectives</b>	<ul style="list-style-type: none"> <li>Progress transactions in Brazil and Turkey.</li> <li>Progress key milestones on set-up of UK ring-fenced bank.</li> <li>Delivery of other high-priority projects.</li> <li>People development including diversity.</li> </ul>	81.3%

#### Iain Mackay

	Performance	Assessment
<b>Global Standards including risk and compliance</b>	<ul style="list-style-type: none"> <li>Strengthen governance and control around financial processes.</li> <li>Delivery of controls optimisation project.</li> <li>Implementation and embedding of global conduct programme.</li> <li>Enhancement of operational risk management framework.</li> <li>Successful delivery of stress testing in key markets.</li> </ul>	65.0%
<b>Personal objectives</b>	<ul style="list-style-type: none"> <li>Deliver cost savings.</li> <li>Implementation of consistent capital management framework.</li> <li>Progress key milestones on set-up of UK ring-fenced bank.</li> <li>People development including diversity.</li> </ul>	80.0%

## Marc Moses

	Performance	Assessment
<b>Global Standards including risk and compliance</b>	<ul style="list-style-type: none"> <li>Effective risk management in compliance with AML, sanctions and anti-bribery and corruption policies.</li> <li>Enhancement of customer due diligence.</li> <li>Implementation and embedding of global conduct programme.</li> <li>Enhancement of operational risk management framework.</li> <li>Implementation of US risk management measures.</li> </ul>	65.0%
<b>Personal objectives</b>	<ul style="list-style-type: none"> <li>Deliver cost savings.</li> <li>Successful delivery of stress testing.</li> <li>Support business growth and improve RWA effectiveness/efficiency.</li> <li>People development including diversity.</li> </ul>	80.0%

## Directors' Remuneration Report

### Awards under the long-term incentives

(Audited)

Under the new policy approved by shareholders, executive Directors are eligible to receive an LTI award. For the 2016 performance year, the award will be made in March 2017 with a three-year performance period starting 1 January 2017. For 2016, all executive Directors will be awarded an LTI grant

equivalent to 319% of base salary. The details of the measures that will be used to assess performance and payout are provided below. To the extent performance conditions are satisfied, the awards will vest in five equal annual instalments commencing from around the third anniversary of the grant date. On vesting, awards are subject to a minimum six-month retention period.

#### Performance conditions

Measures	Minimum (25% payout)	Target (50% payout)	Maximum (100% payout)	Weighting %
<b>Average return on equity<sup>1</sup></b>	7.0%	8.5%	10.0%	20
<b>Cost efficiency (adjusted jaws)</b>	Positive	1.5%	3.0%	20
<b>Relative total shareholder return<sup>2</sup></b>	At median of the peer group.	Straight-line vesting between minimum and maximum.	At upper quartile of the peer group.	20
<b>Global Standards including risk and compliance</b>	Not applicable	Not applicable	Met all commitments to achieve closure of the DPA and protect HSBC from further regulatory censure for financial crime compliance failings.	25
• Status of DPA.				
• Achieve and sustain compliance with Global Financial Crime Compliance policies and procedures.		Performance will be assessed by the Committee based on a number of qualitative and quantitative inputs such as feedback from the Financial System Vulnerabilities Committee, Group Financial Crime Risk assessment against Financial Crime Compliance objectives, outcome of assurance and audit reviews, and achievement of the long-term Group objectives and priorities during the performance period.		
<b>Strategy</b>				15
• International client revenues. (Share of revenues supported by international network)	50%	51%	52%	
• Revenue synergies. (Share of revenues supported by universal banking model)	22%	23%	24%	
• Employee engagement. (Results of employee survey)	65%	67%	70%	
• Customer. (Based on customer recommendation in home country markets)	Rank within top three in at least two of the four RBWM and CMB customer segments in home country markets.	Rank within top three in three of the four RBWM and CMB customer segments in home country markets.	Rank within top three in all four RBWM and CMB customer segments in home country markets.	
<b>Total</b>				100

<sup>1</sup> Significant items are excluded from the profit attributable to ordinary shareholders of the company for the purpose of computing adjusted return on equity.

<sup>2</sup> The peer group for the 2016 award is: Australia and New Zealand Banking Group, Bank of America, Barclays, BNP Paribas, Citigroup, Credit Suisse Group, DBS Group Holdings, Deutsche Bank, JPMorgan Chase & Co., Lloyds Banking Group, Standard Chartered and UBS Group.

### Payments to past Directors

(Audited)

No payments were made to or in respect of former Directors in the year in excess of the minimum threshold of £50,000 set for this purpose.

### Total pension entitlements

(Audited)

No employees who served as executive Directors during the year have a right to amounts under any HSBC final salary pension scheme for their services as executive Directors or are entitled to additional benefits in the event of early retirement. There is no retirement age set for Directors, but the normal retirement age for employees is 65.

### External appointments

During 2016, Stuart Gulliver received S\$10,000 in fees as a member of the Monetary Authority of Singapore International Advisory Panel, which was donated to charity.

### Exit payments made in year

(Audited)

No payments for loss of office were made in 2016 to any person serving as a Director in the year or any previous years.

### Scheme interests awarded during 2016

(Audited)

The table below sets out the scheme interests awarded to Directors in 2016 (for performance in 2015) as disclosed in the 2015 Directors' Remuneration Report. No non-executive Directors received scheme interests during the financial year.

## Scheme awards in 2016

(Audited)

	Type of interest awarded	Basis on which award made	Date of award	Face value awarded £'000	Percentage receivable for minimum performance <sup>1</sup>	Number of shares awarded	Share price on date of grant <sup>2</sup>	End of performance period
Stuart Gulliver	Deferred cash	Annual incentive 2015	29 Feb 2016	322	—	n/a	n/a	31 Dec 2015
	Deferred shares	Annual incentive 2015	29 Feb 2016	322	—	68,845	£4.6735	31 Dec 2015
	Deferred shares	GPSP 2015	29 Feb 2016	1,969	—	421,232	£4.6735	31 Dec 2015
Iain Mackay	Deferred cash	Annual incentive 2015	29 Feb 2016	320	—	n/a	n/a	31 Dec 2015
	Deferred shares	Annual incentive 2015	29 Feb 2016	320	—	68,556	£4.6735	31 Dec 2015
	Deferred shares	GPSP 2015	29 Feb 2016	1,101	—	235,654	£4.6735	31 Dec 2015
Marc Moses	Deferred cash	Annual incentive 2015	29 Feb 2016	248	—	n/a	n/a	31 Dec 2015
	Deferred shares	Annual incentive 2015	29 Feb 2016	248	—	53,065	£4.6735	31 Dec 2015
	Deferred shares	GPSP 2015	29 Feb 2016	1,101	—	235,654	£4.6735	31 Dec 2015

1 Unvested awards determined based on performance achieved during the period to 31 December 2015. The overall award level could have been 0% of the maximum opportunity if minimum performance was achieved for the period to 31 December 2015. After grant, awards are subject to service condition and malus provisions.

2 Share price used is the closing mid-market price on the last working day preceding the date of grant.

GPSP awards were made based on performance up to the financial year-end preceding the grant date with no further performance conditions after grant. Vesting occurs five years after grant date and is normally subject to the Director remaining an employee until the vesting date. The net of tax shares which the Director becomes entitled to on the vesting date are subject to a retention requirement.

The above table does not include details of shares issued as part of the fixed pay allowances, as those shares vest immediately and are not subject to any service or performance conditions.

## Directors' interests in shares

(Audited)

The shareholdings of all persons who were Directors in 2016, including the shareholdings of their connected persons, at 31 December 2016 are set out below. The table below shows the comparison of shareholdings to the company shareholding guidelines. There have been no changes in the shareholdings of the Directors from 31 December 2016 to the date of this report excluding those disclosed in footnote 8 of the below table.

## Shares

(Audited)

	Shareholding guidelines (% of salary)	Current shareholding as at Dec 2016 <sup>3</sup> (% of salary)	Share interests <sup>4</sup> (number of shares)	At 31 Dec 2016		
				Scheme interests		
				Shares awarded subject to deferral <sup>5</sup>		
Executive Directors				Share options <sup>5</sup>	without performance conditions <sup>4,6</sup>	with performance conditions
Douglas Flint <sup>8</sup>	100%	170%	402,158	2,919	—	—
Stuart Gulliver	400%	1,691%	3,344,208	—	3,132,917	99,357
Iain Mackay	300%	312%	345,469	3,469	1,424,437	68,688
Marc Moses	300%	744%	824,241	—	1,735,488	66,734
Group Managing Directors <sup>9</sup>	250,000 shares	250,000 shares	n/a	n/a	n/a	n/a

1 The gross number of shares is disclosed. A portion of these shares will be sold at vesting to cover any income tax and social security which falls due at the time of vesting.

2 The current shareholding guideline does not count unvested share-based incentives.

3 An average of three-month closing share price as on 31 December 2016 (£6.3224) has been used to calculate current shareholding as a percentage of salary.

4 Under the annual incentive, in line with regulatory requirements, any deferred shares (net of tax) which the Director becomes entitled to are subject to a retention requirement, such that they must be held for a predefined period of time. To provide the executive Directors with appropriate flexibility, the Committee determined that, the requirement to hold these shares could be met either by (i) retaining the shares that vested from the underlying award (net of tax) or (ii) by separately retaining a number of shares equivalent to those that vested under the award. The Committee consider that such an arrangement results in the employee holding the same number of shares as per the original intention of the retention period as set out in the remuneration policy approved by shareholders in 2014.

5 All share options are unvested and unexercised.

6 Includes GPSP awards, which were made following an assessment of performance over the relevant period ending on 31 December immediately before the grant date but are subject to a five-year vesting period.

7 Awards granted in March 2013 are subject to service conditions and satisfactory completion of the DPA, as determined by the Committee. The DPA condition ends on the fifth anniversary of the award date unless the DPA is extended or otherwise continues beyond that date, in which case the awards will vest on the date on which the DPA expires and otherwise ceases to operate. This award will lapse if the Committee determines that the performance conditions are not satisfied.

8 Since the end of the year, the number of HSBC Holdings ordinary shares held by Douglas Flint has increased by 22, following an acquisition, through regular monthly contributions in the HSBC Holdings UK Share Incentive Plan.

9 All Group Managing Directors are expected to meet their minimum shareholding guideline by 2019 or within five years of the date of their appointment, whichever is later.

## Share options

(Audited)

	Date of award	Exercise price £	Exercisable		At 1 Jan 2016	Exercised in year	At 31 Dec 2016
			from <sup>1</sup>	until			
Douglas Flint	23 Sep 2014	5.1887	1 Nov 2019	30 April 2020	2,919	—	2,919
Iain Mackay	23 Sep 2014	5.1887	1 Nov 2017	30 April 2018	3,469	—	3,469

1 May be advanced to an earlier date in certain circumstances, such as retirement.

The above awards were made under HSBC UK Sharesave, an all-employee share plan under which eligible employees may be granted options to acquire HSBC Holdings ordinary shares. The exercise price is set at a 20% discount to the share price

immediately prior to the start of the invitation period. Employees may make contributions of up to £500 each month over a period of three or five years. The market value per ordinary share at 31 December 2016 was £6.5690. Market value is the mid-

market price derived from the London Stock Exchange Daily Official List on the relevant date. Under the Securities and Futures Ordinance of Hong Kong, the options are categorised as unlisted physically settled equity derivatives.

### Summary of shareholder return and Group Chief Executive remuneration

The following graph shows the total shareholder return ('TSR') performance against the FTSE 100 Total Return Index for the

eight-year period that ended on 31 December 2016. The FTSE 100 Total Return Index has been chosen as this is a recognised broad equity market index of which HSBC Holdings is a member. The single figure remuneration over the past eight years together with the outcomes of the respective annual incentive and long-term incentive awards are also presented below.

**HSBC TSR and FTSE 100 Total Return Index**



	2009	2010	2011	2012	2013	2014	2015	2016
Group Chief Executive	Michael Geoghegan	Michael Geoghegan	Stuart Gulliver					
Total single figure £'000	7,580	7,932	8,047	7,532	8,033	7,619	7,340	<b>5,675</b>
Annual incentive <sup>1</sup> (% of max.)	94%	82%	58%	52%	49%	54%	45%	<b>64%</b>
Long-term incentive <sup>2,3</sup> (% of max.)	25%	19%	50%	40%	49%	44%	41%	—

<sup>1</sup> The 2012 annual incentive figure for Stuart Gulliver used for this table includes 60% of the annual incentive disclosed in the 2012 Directors' Remuneration Report which was deferred for five years and subject to service conditions and satisfactory completion of the DPA, as determined by the Committee. The DPA condition ends on the fifth anniversary of the award date unless the DPA is extended or otherwise continues beyond that date, in which case the awards will vest on the date on which the DPA expires and otherwise ceases to operate. This award will lapse if the Committee determines that the performance conditions are not satisfied.

<sup>2</sup> Long-term incentive awards are included in the single figure for the year in which the performance period is deemed to be substantially completed. For GPSP awards this is the end of the financial year preceding the date of grant (GPSP awards shown in 2011 to 2015 therefore relate to awards granted in 2012 to 2016). For performance share awards that were awarded before introduction of GPSP, the value of awards that vested subject to satisfaction of performance conditions attached to those awards are included at the end of the third financial year following the date of grant (for example, performance share awards shown in 2010 relates to awards granted in 2008).

<sup>3</sup> The GPSP was replaced by the LTI in 2016 and the value for GPSP is nil for 2016 as no GPSP award was made for 2016. The first LTI award will be made in March 2017, with a performance period ending in 2019. Vesting of the first LTI award will be included in the single figure table for the financial year ending on 31 December 2019. For year-on-year comparison purposes, if target performance is achieved over the three-year performance period, LTI payout for the 2016 award would be 50% of grant value. In this case, the single figure total remuneration of the executive Directors for year-on-year comparison would be (in £'000) £7,670 for Stuart Gulliver.

## Comparison of Group Chief Executive and all-employee pay

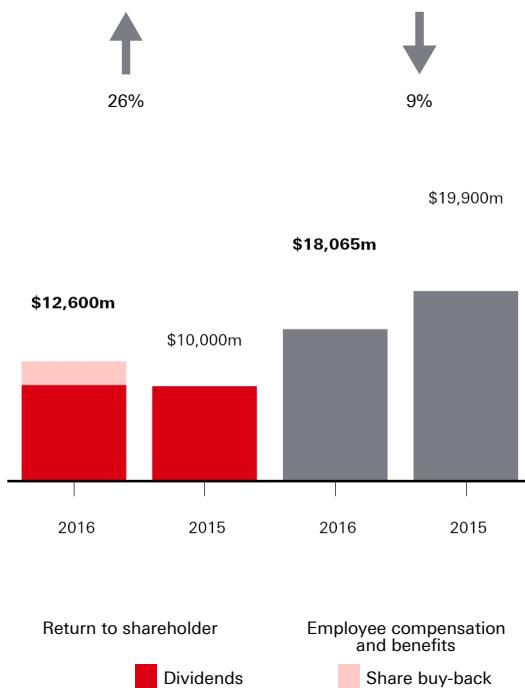
The following charts compare the changes in Group Chief Executive pay to changes in employee pay between 2015 and 2016, and provide a breakdown of total staff pay relative to the amount paid out in dividends.

### Percentage change in remuneration between 2015 and 2016

	Group Chief Executive	Employee Group
Base salary <sup>1</sup>	0%	4%
Benefits <sup>2, 3</sup>	(12)%	(11)%
Annual incentive <sup>4</sup>	58 %	(5)%

- 1 Employee group consists of local full-time UK employees as representative of employees from different businesses and functions across the Group. Group Chief Executive's total fixed pay has not increased since 1 January 2014.
- 2 There has been no change in the benefits provided to the Group Chief Executive. The change in the value of the benefit is due to the change in the taxable value of the benefit as reported in the single figure table.
- 3 Employee group consists of UK employees eligible for taxable benefits which was deemed the most appropriate comparison for the Group Chief Executive given varying local requirements. There has been no change in the benefit coverage for employees from 2015 to 2016. The reduction in the average cost of benefits per employee is reflective of the decrease in the cost of providing such benefit on average.
- 4 Employee group consists of all employees globally, based on annual incentive pool as disclosed on page 29 and staff numbers (full-time equivalents at the financial year-end). The percentage change in annual incentive award of the Group Chief Executive is primarily driven by the difference in the 2015 and 2016 scorecard outcome, reflecting performance achieved in those years, and change in policy. Details of the 2016 total single figure of remuneration for the Group Chief Executive are on page 160.

### Relative importance of spend on pay



The chart above shows the change in:

- total staff pay between 2015 and 2016; and
- dividends paid out in respect of 2015 and 2016.

We also executed a share buy-back worth approximately \$2.5bn in the second half of 2016, and completed this early in the first quarter of 2017.

## Non-executive Directors

The table below shows the total fees of non-executive Director for 2016, together with comparative figures for 2015.

Fees and benefits		Fees		Benefits <sup>9</sup>		Total	
(Audited) (£'000)	Footnotes	2016	2015	2016	2015	2016	2015
Philip Ameen	1	440	403	43	13	483	416
Kathleen Casey		155	155	24	29	179	184
Henri de Castries (Appointed 1 Mar 2016)		79	—	4	—	83	—
Laura Cha	2	247	238	23	14	270	252
Lord Evans of Weardale		190	190	5	9	195	199
Joachim Faber	3	152	151	12	14	164	165
Rona Fairhead (Retired on 22 Apr 2016)	4	78	510	9	14	87	524
Sam Laidlaw		185	174	13	13	198	187
Irene Lee	5	268	184	10	2	278	186
John Lipsky		180	180	21	49	201	229
Rachel Lomax		254	253	6	11	260	264
Heidi Miller	6	536	175	35	31	571	206
David Nish (Appointed 1 May 2016)		83	—	22	—	105	—
Sir Simon Robertson (Retired on 22 Apr 2016)		49	195	2	12	51	207
Jonathan Symonds	7	520	520	7	1	527	521
Jackson Tai (Appointed 12 Sep 2016)		48	—	4	—	52	—
Pauline van der Meer Mohr	8	172	32	10	5	182	37
Paul Walsh (Appointed 1 Jan 2016)		142	—	6	—	148	—
<b>Total</b>		<b>3,778</b>	3,360	<b>256</b>	217	<b>4,034</b>	3,577
<b>Total (\$'000)</b>		<b>5,097</b>	5,135	<b>345</b>	332	<b>5,442</b>	5,467

1 Includes fees of £315,000 in 2016 (£278,000 in 2015) as a Director, Chairman of the Audit Committee and member of the Risk Committee of HSBC North America Holdings Inc.

2 Includes fees of £72,000 for 2016 (£63,000 for 2015) as a Director, Deputy Chairman and member of the Nomination Committee of The Hongkong and Shanghai Banking Corporation Limited.

3 Includes £7,000 (inclusive of VAT) in respect of his membership of a verwaltungsrat (advisory body) to HSBC Trinkaus & Burkhardt AG. These fees were received in respect of 2015 also, although they were not included in the disclosure.

4 Includes fees of £31,000 for 2016 (£360,000 in 2015) as Chairman of HSBC North America Holdings Inc.

5 Includes fees of £173,000 in 2016 as Director and member of the Audit Committee and the Risk Committee of The Hongkong and Shanghai Banking Corporation Limited and as Director, member of the Audit Committee and Chairman of the Risk Committee of Hang Seng Bank Limited.

6 Includes a fee of £411,000 as Chairman of HSBC North America Holdings Inc. following appointment on 1 January 2016.

7 Includes a fee of £345,000 in 2016 (£345,000 in 2015) as non-executive Chairman of HSBC Bank plc.

8 Appointed as a Director on 1 September 2015 and as a member of the Conduct & Values Committee and Group Remuneration Committee on 1 January 2016 and the Nomination Committee on 22 April 2016.

9 Benefits include accommodation and travel-related expenses relating to attendance at Board and other meetings at HSBC Holdings' registered office. Amounts disclosed have been grossed up using a tax rate of 45%, where relevant.

## Non-executive Directors' interests in shares

(Audited)

The shareholdings of persons who were non-executive Directors in 2016, including the shareholdings of their connected persons,

at 31 December 2016 are set out below. The table below shows the comparison of shareholdings to the company shareholding guidelines.

	Shareholding guidelines (number of shares)	Share interests (number of shares)
Phillip Ameen	15,000	5,000
Kathleen Casey	15,000	8,620
Laura Cha	15,000	5,200
Henri de Castries	15,000	16,165
Lord Evans of Weardale	15,000	9,170
Joachim Faber	15,000	66,605
Sam Laidlaw	15,000	40,860
Irene Lee	15,000	10,000
John Lipsky	15,000	16,165
Rachel Lomax	15,000	18,900
Heidi Miller	15,000	3,975
David Nish	15,000	50,000
Jonathan Symonds	15,000	21,771
Jackson Tai	15,000	31,605
Pauline van der Meer Mohr	15,000	15,000
Paul Walsh	15,000	5,079

## Voting results from 2016 Annual General Meeting

The table below summarises the voting results at our last AGM.

	For	Against	Withheld
Remuneration Report	90.49%	9.51%	54,280,789
(8,327,033,672)	(875,494,490)		
Remuneration Policy	96.05%	3.95%	35,165,873
(8,887,168,002)	(365,908,568)		

## Implementation of remuneration policy in 2017 for executive Directors

Implementation of fixed remuneration is disclosed on page 156 along with the remuneration policy summary. Further details on performance measures and weightings for the 2017 annual incentive award are provided below.

### Annual incentive scorecards

The weightings and performance measures to apply to the 2017 annual incentive award for Stuart Gulliver, Iain Mackay and Marc Moses are disclosed below. These align to the Group's

strategic and financial objectives set out in our Investor Update in June 2015. The performance targets for the annual incentive are commercially sensitive and it would be detrimental to the Group's interests to disclose them at the start of the financial year. Subject to commercial sensitivity, we will disclose the targets after the end of a relevant financial year in that year's remuneration report.

### 2017 annual incentive scorecards

Executive Directors will be eligible for an annual incentive award of up to 213% of base salary.

Measures	Stuart Gulliver	Iain Mackay	Marc Moses
	%	%	%
Profit before tax <sup>1</sup>	20	10	10
Capital management	—	25	—
Deliver cost savings	20	10	—
Reduce Group RWAs	10	10	15
Strategic growth	10	—	—
Global Standards including risk and compliance	25	25	50
Personal objectives	15	20	25
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

1 Adjusted profit before tax as defined for Group annual bonus pool calculation.

Details of the Global Standards and personal objectives measures are provided below.

	Stuart Gulliver	Iain Mackay	Marc Moses
<b>Measures</b>			
Global Standards including risk and compliance	<ul style="list-style-type: none"> <li>Achieve and sustain compliance with global financial crime compliance policies and procedures, and/or have approved dispensations in place.</li> <li>Implement the operational risk management framework.</li> <li>Implementation of global conduct programme and maturity level achieved against the required conduct outcomes.</li> <li>Effective risk management with AML, sanctions, anti-bribery and corruption policies and Global Standards.</li> </ul>	<ul style="list-style-type: none"> <li>Effective management of material operational risks.</li> <li>Implementation of the operational risk management framework.</li> <li>Proactively review and challenge the first line of defence to assess the adequacy of risk management activities relating to accounting and tax.</li> <li>Implementation of global conduct programme and maturity level achieved against the required conduct outcomes.</li> <li>Successful delivery of regulatory and internal stress tests in 2017.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure the Global Risk function enables and supports Financial Crime Risk function to achieve and sustain compliance with global financial crime compliance policies and procedures.</li> <li>Effective management of material operational risks.</li> <li>Implementation of the operational risk management framework.</li> <li>Proactively review and challenge the first line of defence to assess the adequacy of risk management activities and fulfil risk steward responsibilities.</li> <li>Manage credit and market risk, and oversee liquidity risk within the Board approved risk appetite.</li> <li>Implementation of global conduct programme and maturity level achieved against the required conduct outcomes.</li> <li>Successful delivery of regulatory and internal stress tests in 2017.</li> </ul>
Personal objectives	<ul style="list-style-type: none"> <li>Ensure climate change is reflected across the Group's activities.</li> <li>Optimise global network and reduce complexity.</li> <li>Set-up UK ring-fenced bank headquartered in Birmingham and move the business to be ready for a UK departure from the EU.</li> <li>Delivery of high-priority projects.</li> <li>Improve customer satisfaction and employee diversity.</li> <li>Complete succession and transition planning.</li> </ul>	<ul style="list-style-type: none"> <li>Enhanced environmental, social and governance ('ESG') disclosures in collaboration with External Affairs function and global businesses.</li> <li>Deliver Global Finance transformation.</li> <li>Set-up UK ring-fenced bank headquartered in Birmingham and move the business to be ready for a UK departure from the EU.</li> <li>Improve employee diversity.</li> <li>Complete succession and transition planning.</li> </ul>	<ul style="list-style-type: none"> <li>Develop processes to measure exposure to carbon-intensive and low-carbon-intensive activities.</li> <li>Define opportunities to develop risk management policies and procedures consistent with Group risk appetite to protect the Group from climate change risk, and enable business activities supporting a transition to a low-carbon economy.</li> <li>Pivot to Asia and support growth of customer lending.</li> <li>Deliver Global Risk transformation.</li> <li>Improve RWA effectiveness and efficiency.</li> <li>Improve employee diversity.</li> <li>Complete succession and transition planning.</li> </ul>

### Long-term incentives

Details of the performance measures and targets for LTI awards to be made in 2017, in respect of 2016, are provided on page 164.

The performance measures and targets for awards to be made in respect of 2017, granted in 2018, will be provided in the *Annual Reports and Accounts 2017*.

### Implementation of remuneration policy in 2017 for non-executive Directors

The Committee has reviewed the fee levels payable to the non-executive Directors and details can be found on page 155.

	Douglas Flint		Stuart Gulliver		Iain Mackay		Marc Moses	
	2016	2015	2016	2015	2016	2015	2016	2015
	£000	£000	£000	£000	£000	£000	£000	£000
Basic salaries, allowances and benefits in kind	<b>2,136</b>	2,496	<b>3,953</b>	4,290	<b>1,949</b>	2,082	<b>1,913</b>	2,035
Pension contributions	—	—	—	—	—	—	—	—
Performance-related pay paid or receivable <sup>1,2</sup>	—	—	<b>1,695</b>	3,041	<b>987</b>	2,169	<b>1,005</b>	1,928
Inducements to join paid or receivable	—	—	—	—	—	—	—	—
Compensation for loss of office	—	—	—	—	—	—	—	—
Notional return on deferred cash	—	—	<b>27</b>	9	<b>17</b>	5	<b>18</b>	5
<b>Total</b>	<b>2,136</b>	2,496	<b>5,675</b>	7,340	<b>2,953</b>	4,256	<b>2,936</b>	3,968
<b>Total (\$000)</b>	<b>2,882</b>	3,815	<b>7,656</b>	11,218	<b>3,984</b>	6,505	<b>3,961</b>	6,065

1 For the 2016 performance year, Stuart Gulliver, Iain Mackay and Marc Moses will receive an LTI award with a face value of £3,990,000, £2,232,000 and £2,232,000, respectively, which is not included in the amount above. Vesting of the award is subject to the performance conditions detailed on page 164.

2 For the 2015 performance year, performance-related pay includes annual incentives and GPSP.

3 Deferred compensation accrued in 2016 for awards granted in prior years was £3,630,102 (\$4,897,447) for Stuart Gulliver, £1,806,500 (\$2,437,187) for Iain Mackay and £2,033,451 (\$2,743,371) for Marc Moses. Deferred compensation accrued in 2015 for awards granted in prior years was £3,179,883 (\$4,860,042) for Stuart Gulliver, £1,378,660 (\$2,107,104) for Iain Mackay and £1,674,155 (\$2,558,730) for Marc Moses.

The aggregate amount of Directors' emoluments as defined above (including both executive Directors and non-executive Directors) for the year ended 31 December 2016 was \$23,925,335. As per our policy, benefits in kind may include, but are not limited to, the provision of medical insurance, income protection insurance, health assessment, life assurance, club membership, tax assistance, Hong Kong accommodation for Stuart Gulliver, car benefit, travel assistance, and relocation costs (including any tax due on the benefit, where applicable). Medical insurance benefit of £1,605 (\$2,165) was provided to a past director, Alexander Flockhart, during the year ended 31 December 2016. Amounts are converted into US dollars based on the average year-to-date exchange rates for the respective year.

### Emoluments

	Five highest paid employees		Senior management	
	£000	£000	£000	£000
Basic salaries, allowances and benefits in kind	<b>15,474</b>		<b>34,101</b>	
Pension contributions	82		251	
Performance-related pay paid or receivable <sup>1</sup>	<b>17,916</b>		<b>32,818</b>	
Inducements to join paid or receivable	—		—	
Compensation for loss of office	—		2,669	
<b>Total</b>	<b>33,472</b>		<b>69,839</b>	
<b>Total (\$000)</b>	<b>45,158</b>		<b>94,222</b>	

1 Includes the face value of LTI awards at grant.

### Additional remuneration disclosures

This section provides disclosures required under the Hong Kong Ordinances, Hong Kong Listing Rules, the US Securities and Exchange Commission Form 20-F and the Pillar 3 remuneration disclosures.

### Employee compensation and benefits

#### Executive Directors

Set out below are details of compensation paid to executive Directors for the year ended 31 December 2016.

The emoluments of senior management were within the following bands:

Hong Kong dollars	US dollars	Number of highest paid employees	Number of senior management
HK\$5,500,001 – 6,000,000	\$708,536 – 772,948	–	1
HK\$10,000,001 – 10,500,000	\$1,288,246 – 1,352,658	–	1
HK\$16,500,001 – 17,000,000	\$2,125,606 – 2,190,018	–	1
HK\$22,000,001 – 22,500,000	\$2,834,142 – 2,898,554	–	1
HK\$23,500,001 – 24,000,000	\$3,027,379 – 3,091,791	–	1
HK\$29,500,001 – 30,000,000	\$3,800,326 – 3,864,738	–	1
HK\$30,500,001 – 31,000,000	\$3,929,151 – 3,993,563	–	1
HK\$34,500,001 – 35,000,000	\$4,444,449 – 4,508,862	–	1
HK\$39,500,001 – 40,000,000	\$5,088,572 – 5,152,985	–	1
HK\$44,500,001 – 45,000,000	\$5,732,695 – 5,797,108	–	1
HK\$46,000,001 – 46,500,000	\$5,925,932 – 5,990,345	–	1
HK\$47,500,001 – 48,000,000	\$6,119,169 – 6,183,581	–	1
HK\$53,500,001 – 54,000,000	\$6,892,117 – 6,956,529	1	1
HK\$54,000,001 – 54,500,000	\$6,956,529 – 7,020,941	1	1
HK\$61,000,001 – 61,500,000	\$7,858,302 – 7,922,714	1	1
HK\$80,000,001 – 80,500,000	\$10,305,969 – 10,370,381	1	1
HK\$100,500,001 – 101,000,000	\$12,946,874 – 13,011,286	1	1

### Pillar 3 remuneration disclosures

The following tables show the remuneration awards made by HSBC to its MRTs for 2016. Individuals have been identified as

MRTs based on the qualitative and quantitative criteria set out in the Regulatory Technical Standard EU 604/2014 and additional criteria determined by the Committee.

#### Aggregate remuneration expenditure

	Global business aligned					Total \$m
	Retail Banking and Wealth Management	Commercial Banking	Global Banking and Markets	Global Private Banking	Corporate Centre	
	\$m	\$m	\$m	\$m	\$m	
<b>2016</b>	<b>94.2</b>	<b>67.4</b>	<b>756.9</b>	<b>66.8</b>	<b>391.1</b>	<b>1,376.4</b>

*Includes salary and incentives awarded in respect of the performance year 2016 (including deferred component) and any pension or benefits outside of policy.*

#### Remuneration – fixed and variable amounts – Group-wide

Number of MRTs	Senior management <sup>1</sup>	MRTs (non-senior management)	Total
	114	1,203	1,317
	\$m	\$m	\$m
<b>Fixed</b>			
Cash-based	<b>116.8</b>	<b>619.8</b>	<b>736.6</b>
Shares-based	<b>13.6</b>	<b>7.9</b>	<b>21.5</b>
Total fixed	<b>130.4</b>	<b>627.7</b>	<b>758.1</b>
<b>Variable<sup>2</sup></b>			
Cash	<b>20.9</b>	<b>138.2</b>	<b>159.1</b>
Non-deferred shares <sup>3</sup>	<b>25.9</b>	<b>127.7</b>	<b>153.6</b>
Deferred cash	<b>29.1</b>	<b>116.3</b>	<b>145.4</b>
Deferred shares	<b>40.5</b>	<b>119.7</b>	<b>160.2</b>
<b>Total variable pay<sup>4</sup></b>	<b>116.4</b>	<b>501.9</b>	<b>618.3</b>

<sup>1</sup> Definition of senior management for Pillar 3 disclosure includes our members of the Group Management Board, Group General Managers and non-executive Directors.

<sup>2</sup> Variable pay awarded in respect of 2016.

<sup>3</sup> Vested shares, subject to a six-month retention period.

<sup>4</sup> In accordance with shareholder approval received on 23 May 2014, for each MRT the variable component of remuneration for any one year is limited to 200% of fixed component of the total remuneration of the MRT.

## Directors' Remuneration Report

### Remuneration – fixed and variable amounts – UK based

	Senior management <sup>1</sup>	MRTs (non-senior management)	Total
<b>Number of MRTs</b>	<b>76</b>	<b>522</b>	<b>598</b>
	\$m	\$m	\$m
<b>Total fixed</b>	<b>80.4</b>	<b>255.8</b>	<b>336.2</b>
<b>Variable<sup>2</sup></b>			
Cash	11.6	57.3	68.9
Non-deferred shares <sup>3</sup>	16.6	51.4	68.0
Deferred cash	16.3	47.7	64.0
Deferred shares	27.7	48.4	76.1
<b>Total variable pay<sup>4</sup></b>	<b>72.2</b>	<b>204.8</b>	<b>277.0</b>

1 Definition of senior management for Pillar 3 disclosure includes our members of the Group Management Board, Group General Managers and non-executive Directors.

2 Variable pay awarded in respect of 2016.

3 Vested shares, subject to a six-month retention period.

4 In accordance with shareholder approval received on 23 May 2014, for each MRT the variable component of remuneration for any one year is limited to 200% of fixed component of the total remuneration of the MRT.

### Deferred remuneration<sup>1</sup>

	Senior management \$m	MRTs (non-senior management) \$m	Total \$m
<b>Deferred remuneration at 31 Dec</b>			
Outstanding, unvested	280.3	657.1	937.4
Awarded during the year	86.2	331.1	417.3
Paid out <sup>2</sup>	53.2	216.8	270.0
Reduced through malus	—	—	—

1 This table provides details of actions taken during performance year 2016. For details of variable pay awards granted for 2016, please refer to both the 'remuneration' tables above.

2 Vested shares are valued using the closing share price on the business day immediately preceding the vesting day.

### Sign-on and severance payments

	Senior management	MRTs (non-senior management)	Total
<b>Sign-on payments<sup>1</sup></b>			
Made during year (\$m)	1.6	11.7	13.3
Number of beneficiaries	1	18	19
<b>Severance payments<sup>2</sup></b>			
Awarded and made during year (\$m)	3.2	4.0	7.2
Number of beneficiaries	1	7	8
Highest such award to a single person (\$m)	3.2	1.8	5.0

1 Guaranteed variable pay awards granted to new hires and limited to their first year of service.

2 Represents non-standard termination payments made in excess of any local policies, standards or statutory amounts.

### Material risk takers' remuneration by band<sup>1</sup>

	Senior management	MRTs (non-senior management)	Total
€0 – 1,000,000	37	917	954
€1,000,000 – 1,500,000	20	180	200
€1,500,000 – 2,000,000	13	53	66
€2,000,000 – 2,500,000	12	29	41
€2,500,000 – 3,000,000	10	13	23
€3,000,000 – 3,500,000	6	3	9
€3,500,000 – 4,000,000	3	2	5
€4,000,000 – 4,500,000	3	5	8
€4,500,000 – 5,000,000	1	–	1
€5,000,000 – 6,000,000	5	1	6
€6,000,000 – 7,000,000	2	–	2
€7,000,000 – 8,000,000	–	–	–
€8,000,000 – 9,000,000	1	–	1
€9,000,000 – 10,000,000	–	–	–
€10,000,000 – 11,000,000	1	–	1

1 Table prepared in euros in accordance with Article 450 of the European Union Capital Requirements Regulation, using the rates published by the European Commission for financial programming and budget for December of the reported year as published on its website.

### Directors' Responsibility Statement

The Directors are responsible for preparing the *Annual Report and Accounts*, the Directors' Remuneration Report and the financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare financial statements for each financial year. Under that law the Directors have prepared the parent company ('Company') and Group financial statements in accordance with International Financial Reporting Standards ('IFRSs') as adopted by the European Union. In preparing these financial statements, the Directors have also elected to comply with IFRSs, issued by the International Accounting Standards Board ('IASB'). Under company law the Directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Company and Group and of the profit or loss of the Company and Group for that period. In preparing these financial statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- state whether applicable IFRSs as adopted by the European Union and IFRSs issued by IASB have been followed, subject to any material departures disclosed and explained in the financial statements; and
- prepare the financial statements on a going concern basis unless it is inappropriate to presume that the Company and Group will continue in business.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position of the Company and the Group and enable them to ensure that the financial statements and the Directors' Remuneration Report comply with the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation. They are also responsible for safeguarding the assets of the Company and the Group and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Directors are responsible for the maintenance and integrity of the *Annual Report and Accounts 2016* as they appear on the Company's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

The Directors consider that the *Annual Report and Accounts 2016*, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's position, performance, business model and strategy.

Each of the Directors, whose names and functions are listed in the 'Report of the Directors: Corporate Governance' section on pages 133 to 137 of the *Annual Report and Accounts 2016*, confirm that, to the best of their knowledge:

- the Group financial statements, which have been prepared in accordance with IFRSs as adopted by the EU, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group; and
- the management report represented by the Report of the Directors includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal risks and uncertainties that it faces.

In accordance with Section 418 of the Companies Act 2006, the Directors' report includes a statement, in the case of each Director in office as at the date the Report of the Directors is approved, that:

- so far as the Director is aware, there is no relevant audit information of which the Company's auditors are unaware; and
- they have taken all the steps they ought to have taken as a Director in order to make themselves aware of any relevant audit information and to establish that the Company's auditors are aware of that information.



On behalf of the Board

Douglas Flint

**Group Chairman**

21 February 2017

## Report of the independent auditors to the members of HSBC Holdings plc

### Report on the financial statements<sup>1</sup>

#### Our opinion on the financial statements

In our opinion HSBC Holdings plc's ('HSBC') Group financial statements and parent company financial statements:

- give a true and fair view of the state of the Group's and parent company's affairs at 31 December 2016 and of the Group's and parent company's profit and cash flows for the year then ended;
- have been properly prepared in accordance with International Financial Reporting Standards as adopted by the European Union ('IFRS'); and
- have been prepared in accordance with the requirements of the Companies Act 2006, and as regards the Group financial statements, Article 4 of the IAS Regulation.

#### Performing the audit

On behalf of PricewaterhouseCoopers LLP ('PwC'), it is my responsibility to form these opinions. This was the second year that you have appointed PwC as HSBC's auditors, and I have therefore provided information on how PwC approached the audit, how it changed from the previous year and details of the significant discussions on key audit matters that I, and my senior colleagues, had with the Group Audit Committee ('GAC').

#### How the audit approach was structured

The audit approach was structured to reflect how HSBC is organised. It incorporated 4 important aspects.

(1) Risk assessment and audit planning at a Group level, having regard to HSBC's global businesses and its key legal entities:

In 2015 I appointed partners to lead the audits for each global business. These partners continued in their roles and met regularly with the relevant HSBC management to understand strategy and matters which arose throughout the year that could have impacted financial reporting. The partners are specialists in the nature of the relevant businesses and were best placed to design the appropriate audit approach for that part of HSBC. They oversaw each PwC member firm involved in the audit of that global business and assisted me in my review of their work.

(2) Audit work performed at global shared service centres:

A significant amount of HSBC's operational processes which are critical to financial reporting are undertaken in global shared service centres across 10 individual sites in 6 countries. Additionally, many financial reporting processes required to produce the financial statements are performed in HSBC's Global Finance Centre based in Gurugram and Hyderabad, India. Working closely with me, a partner coordinated the audit work performed by PwC member firms in each of the global shared service locations. This work established an end-to-end picture of the key processes that supported material balances, classes of transactions and disclosures within the HSBC financial statements. We then evaluated the effectiveness of the controls over these processes and considered the implications for the remainder of our audit work.

(3) Audit work executed on individual legal entities:

We received opinions from PwC member firms which have been appointed as the external auditors of The Hongkong and Shanghai Banking Corporation Limited, HSBC Bank plc, HSBC North America Holdings Inc, HSBC Mexico S.A., HSBC Bank Argentina S.A., HSBC Bank Middle East Limited, HSBC Bank Canada and HSBC Private Banking Holdings (Suisse) S.A.

I was in active dialogue throughout the year with the partners responsible for these audits; this included consideration of how well they planned and performed their work. My senior colleagues and I visited these subsidiaries, and attended Audit Committees meetings for most of them. We also visited businesses in a further 5 countries. I also attended meetings with management in each of these key subsidiaries at the year-end.

The audits of these key subsidiaries relied upon work performed by PwC member firms in Bahrain, China, France, Germany, India, Qatar and Turkey. I considered how my subsidiary audit teams instructed and reviewed the work undertaken in these locations in order to ensure the quality and adequacy of their work. Collectively, the PwC member firms completed procedures covering 85% of assets, 85% of total operating income and 92% of profit before tax.

(4) Audit procedures undertaken at a Group level and on the parent company:

I ensured that appropriate further work was undertaken for the HSBC parent company. This work included auditing, for example, the consolidation of the Group's results, the preparation of the financial statements, certain disclosures within the Directors' Remuneration Report, litigation provisions and exposures, and management's entity level and oversight controls relevant to financial reporting. A consideration was also made of all changes to, and pending changes to, financial reporting standards and requirements. As an example, we considered the parent company's decision to adopt the provisions of IFRS 9 'Financial Instruments' relating to the fair value of its own debt, and work continues to be performed as part of wider preparations for the full implementation of the standard.

In aggregate, these four areas provided me with the evidence required to form an opinion on the consolidated financial statements of HSBC.

<sup>1</sup> HSBC Holdings plc's financial statements comprise the consolidated and parent company balance sheets as at 31 December 2016, the consolidated and parent company income statements and the consolidated statement of comprehensive income for the year then ended, the consolidated and parent company statement of cash flows for the year then ended, the consolidated and parent company statements of changes in equity for the year then ended, and the notes to the financial statements, which include a summary of significant accounting policies and other explanatory information. Certain required disclosures have been presented elsewhere in the Annual Report and Accounts 2016, rather than in the notes to the financial statements. These are cross-referenced from the financial statements and are identified as audited.

## Changes to the approach in 2016

In March, I chaired a two-day meeting in London of the partners and staff from PwC member firms who undertake audits of the most significant HSBC subsidiaries. This meeting provided an opportunity for those partners and staff to hear directly from HSBC management and the Chair of the GAC. We considered during this meeting how our view of significant audit risks had changed. In doing so, we used our experience in 2015 and considered how the strategic actions and their related targets may influence areas of significant judgement.

The amount of work required to perform the audit was lower because of the audit knowledge that we had acquired during the previous 18 months, and many of the transition processes were not repeated.

More detailed changes in the approach arose because of 4 areas:

### (1) Changes in the structure and strategy of the HSBC Group

The presentation of the financial statements has been amended to reflect the new operating segments adopted by HSBC. Audit work has been completed to ensure that this change is both appropriate, and that previously reported information has been represented correctly.

During the year, HSBC Bank Brazil was sold. As a consequence the audit work undertaken on this business was limited to detailed procedures on the loss on disposal and an assessment of whether it is appropriately classified in the Group's income statement.

In assessing the subsidiaries which were significant in 2016, I concluded that HSBC Insurance (Bermuda) Limited was no longer material, and therefore the scope of the audit was changed.

### (2) Changes to HSBC processes and controls

As part of the efforts to streamline controls and reduce costs, more activities continued to be migrated to the global shared service centres. This resulted in work moving between PwC member firms. In July, a workshop was held in Paris for significant subsidiaries and service centre teams so that they could understand the impact of these changes. The other objective was to further standardise controls tested and understand the end to end process for significant classes of transaction.

### (3) Assessment of controls

I reported to the GAC detailed observations on controls over financial reporting in relation to our work in 2015. The audit was designed to consider the work that HSBC management undertook to address these observations. For example, in my 2015 report to you I referenced the improvements management was making to controls around privileged access to systems. During 2016, my team performed extensive work on management's actions in this area.

### (4) Changes in the macro environment

I considered other macro factors to determine if changes in the approach were required, for example the impact of the United Kingdom's decision to leave the European Union, the devaluation of the Mexican Peso and changes in the credit environment. I reported to the GAC in December that I did not believe that these changed my original risk assessment.

## The purpose and scope of the audit

An audit has an important role in providing confidence in the financial statements that are provided by companies to their members. The audit opinion does not provide assurance over any particular number or disclosure, but over the financial statements taken as a whole. It is the Directors' responsibility to prepare the financial statements and to be satisfied that they give a true and fair view. These responsibilities have been recognised on behalf of the Board of Directors on page 173.

The scope of an audit is sometimes not fully understood. I believe that it is important that you understand the scope in order to understand the assurance that my opinion provides. My responsibility is to undertake my work and express my opinion in accordance with applicable law and the International Standards on Auditing (UK and Ireland) as issued by the Financial Reporting Council of the United Kingdom. These standards also require me to comply with the Auditing Practices Board's Ethical Standards for Auditors. A description of the scope of an audit is provided on the Financial Reporting Council's website at [www.frc.org.uk/auditscopeukprivate](http://www.frc.org.uk/auditscopeukprivate); I recommend that you read this description carefully. It is also important that you understand the inherent limitations of the audit which are disclosed in this description, for example the possibility that an approach based upon sampling and other audit techniques may not identify all issues.

In order for me to perform my work, I had regard to the concept of materiality. I determined materiality as follows:

<b>Overall Group materiality</b>	\$950m.
<b>How I determined it</b>	5% of adjusted profit before tax excluding the debit valuation adjustment and non-qualifying hedges.
<b>Why I believe this is appropriate</b>	Given the geographically dispersed nature of HSBC and the diversity of its banking activities, I believe a standard benchmark of 5% of adjusted profit before tax is an appropriate quantitative indicator of materiality, although of course an item could also be material for qualitative reasons. I selected adjusted profit before tax, because as discussed on page 48, management believes it best reflects the performance of HSBC. I excluded the debit valuation adjustment and non-qualifying hedges as they are recurring items that in my view form part of ongoing business performance.

When planning the audit, I considered if multiple errors might exist which, when aggregated, could exceed \$950m. In order to reduce the risk of multiple errors that could aggregate to this amount, I used a lower level of materiality, known as performance materiality, of \$710m to identify the individual balances, classes of transactions and disclosures that were subject to audit. I asked each of the partners reporting to me on the subsidiaries of HSBC to work to assigned materiality levels reflecting the size of the operations they audited. These ranged from \$67m (HSBC Mexico S.A.) to \$760m (The Hongkong and Shanghai Banking Corporation Limited).

## **Report of the independent auditors to the members of HSBC Holdings plc**

Where the audit identified some items that were not reflected appropriately in the audited financial information, I considered these items carefully to assess if they were individually or in aggregate material. I reported any such items which exceeded \$50m to the GAC. The Directors have concluded that all items which remained unadjusted were not material to the financial statements, either individually or in aggregate. I agree with their conclusion.

### **Matters discussed with the GAC**

I attended each of the 8 GAC meetings held during the year. Part of each meeting involved a discussion with me without management present. I also met with members of the Committee on an ad hoc basis. During these various conversations we discussed my observations on a variety of accounting matters and observations on controls over financial reporting.

During the April meeting, the audit plan was presented to the Committee. The plan included the matters which I considered presented the highest risk to the audit and other information, such as our approach to the audit of journals, interest income and financial instrument valuation, and where the latest technology would be used to obtain better quality audit evidence. Throughout the year, this plan was refreshed and revised to account for changes in the external and internal environment at HSBC. As a result of operational issues in the US we changed our view of the risks associated with the accounting for pensions. This change led to a change in our audit approach which was discussed with the GAC.

In December, the GAC held a meeting with a particular focus on control matters. We also discussed their impact on our audit approach, for example we explored how our audit approach would be amended to focus more on the controls used by management over key spreadsheets and system-generated information used in financial reporting.

The areas of highest audit risk, where I focused most effort and resource, were:

- IT access management;
- impairment of loans and advances;
- goodwill;
- investment in Bank of Communications Co., Ltd (BoCom);
- application of hedge accounting;
- litigation and regulatory enforcement actions;
- impact of the deferred prosecution agreement (DPA); and
- pension liabilities.

To help you understand their impact on the audit, I have listed them in order of decreasing audit effort. Some of them are common to other international banks, and some are specific to HSBC. I have included at the end of this report an explanation of each item, why it was considered an area of audit focus and how the audit approach was tailored to address the risk of misstatement.

### **Going concern**

The Directors have made a statement on page 146 regarding going concern. This statement is based on their belief that the Group and parent company intend to, and have sufficient resources to, remain in business for 12 months from the date of this report. I am required to review this statement, and in doing so I have considered HSBC's budgets, cash flows, capital plan and stress tests. I have nothing to report as a result of my review. I also have nothing material to add or draw attention to in relation to the statement.

### **Other reporting**

The *Annual Report and Accounts 2016* also contains a considerable amount of other information that is required by various regulators or standard setters. In respect of this information, my responsibilities and my reporting are set out in the table below.

Area of the Annual Report and Accounts 2016	My responsibility	My reporting
<b>Directors' Remuneration Report on pages 153 to 172</b>		
Those parts of which are clearly marked as audited.	Consider whether the information is properly prepared.	In my opinion, this information has been properly prepared in accordance with the Companies Act 2006.
Other remuneration report disclosures.	Consider whether certain other disclosures specified by the Companies Act have been made.	The other required disclosures have been made.
<b>Other areas</b>		
Strategic Report and the Directors' Report (as defined on page 30).	Consider whether they are consistent with the audited financial statements. Consider whether they are prepared in accordance with applicable legal requirements. Report if I have identified any material misstatements in either report. This is based on my knowledge and understanding of the Group and parent company that was obtained during the audit, and the environment they operate in.	In my opinion, the information in these reports is consistent with the audited financial statements and prepared in accordance with applicable legal requirements. I have no material misstatements to report.
Viability statement on page 146 which considers the longer term sustainability of the Group's business model.	Review the statement in the light of the knowledge gathered during the audit.	I have nothing material to draw attention to or to add to the statement.
Directors' confirmation of their robust assessment of principal risks, and disclosures describing those risks and how they are managed or mitigated on page 146.	Review the confirmation and description in the light of the knowledge gathered during the audit.	I have nothing material to draw attention to or to add to the confirmation or description.
GAC Report on page 141.	Consider whether it deals appropriately with those matters that I reported to the GAC.	No exceptions to report.
Directors' statement (on page 173) that they consider the HSBC <i>Annual Report and Accounts 2016</i> , taken as a whole, to be fair, balanced and understandable and provides the information necessary for you to assess HSBC's position and performance, business model and strategy.	Consider whether any information found during the course of the audit would cause me to disagree.	No disagreements to report.
Corporate governance report (on pages 132 to 173).	Review the remaining 10 provisions of the UK Corporate Governance Code specified for our review by the UK Listing Rules.	Nothing to report following our review.
All other information in the <i>Annual Report and Accounts 2016</i> aside from the audited financial statements.	Consider whether it is materially inconsistent or materially incorrect based on the knowledge gained in my audit, or otherwise misleading. Consider whether it is materially inconsistent with the audited financial statements.	No exceptions to report.

In addition, I am required to report to you if:

- I have not received all of the information and explanations required for my audit;
- adequate accounting records have not been kept by the parent company;
- returns adequate for my audit have not been received from branches not visited by PwC; and
- the parent company financial statements and the audited part of the Directors' Remuneration Report do not agree with the accounting records and returns.

I have no exceptions to report as a result of any of these responsibilities.

#### Use of this report

This report, including the opinions, has been prepared for and only for you, the parent company's members as a body in accordance with Chapter 3 of Part 16 of the Companies Act 2006, and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come except where expressly agreed by our prior written consent.

**Richard Oldfield**

(Senior Statutory Auditor)

for and on behalf of **PricewaterhouseCoopers LLP**

Chartered Accountants and Statutory Auditors

London, United Kingdom

21 February 2017

## **Appendix: Key audit matters discussed with the Group Audit Committee ('GAC')**

Those areas which presented the greatest risk of material misstatement in the financial statements are required to be discussed with the GAC. They had the greatest effect on the audit, including the allocation of resources and effort and are discussed below together with an explanation of how the audit was tailored to address these specific areas.

### **IT Access Management**

<b>Nature of area of focus</b>	<b>Matters discussed with the GAC</b>
All banks are highly dependent on technology due to the significant number of transactions that are processed daily. The audit approach relies extensively on automated controls and therefore procedures are designed to test access and control over IT systems. As reported in the prior year, controls over individuals' access rights to operating systems, applications and data used in the financial reporting process required improvement. Access rights are important as they ensure that changes to applications and data are authorised and made in an appropriate manner. Ensuring staff only have appropriate access, and that the access is monitored, are key controls to mitigate the potential for fraud or error as a result of a change to an application or underlying data. A number of enhancements to the control environment have been made by management since our last report but some controls were not fully remediated by the year end and we continued to assess the risk of a material misstatement arising from access to technology as significant for the audit.	The original approach discussed with the GAC was based on the control enhancements proposed by management, and involved the testing of new and improved control processes. This was supplemented with other control and substantive procedures required for the periods of the year when the changes would not yet have been effective. As the timing of the enhancements to controls changed during the year, we reflected this in the nature and extent of testing, and our final approach was discussed with the GAC in October. At each GAC meeting, there was a discussion on the status of the control remediation programme, work performed by management and results of testing performed.
<b>Procedures performed to support our discussions and conclusions</b>	
Access rights were tested over the various aspects of technology relied upon for financial reporting. Specifically, the audit tested that:	
<ul style="list-style-type: none"> <li>• new access requests for joiners were properly reviewed and authorised;</li> <li>• application user access rights were removed on a timely basis when an individual left or moved role;</li> <li>• access rights to applications were periodically monitored for appropriateness; and</li> <li>• highly privileged access was restricted to appropriate personnel.</li> </ul>	
Other areas that were independently assessed included password policies, security configurations, controls over changes to applications and databases and that business users, developers and production support did not have access to change applications, the operating system or databases in the production environment.	
As a consequence of the deficiencies identified a range of other procedures were performed:	
<ul style="list-style-type: none"> <li>• where inappropriate access was identified, we understood the nature of the access, and, where possible, obtained additional evidence on the appropriateness of the activities performed;</li> <li>• additional substantive testing was performed on specific year-end reconciliations (i.e. custodian, bank account and suspense account reconciliations) and confirmations with external counterparties;</li> <li>• testing was performed on other compensating controls such as business performance reviews; and</li> <li>• a list of users with access to systems was obtained and manually compared to other access lists where segregation of duties was deemed to be of higher risk, for example users having access to both core banking and payments systems.</li> </ul>	
<b>Relevant references in the Annual Report and Accounts 2016</b>	
GAC Report, page 141. Effectiveness of internal controls, page 145.	

### **Impairment of loans and advances**

<b>Nature of the area of focus</b>	<b>Matters discussed with the GAC</b>
Impairment allowances represent management's best estimate of the losses incurred within the loan portfolios at the balance sheet date. They are calculated on a collective basis for portfolios of loans of a similar nature and on an individual basis for significant loans. The calculation of both collective and individual impairment allowances is inherently judgemental for any bank. Collective impairment allowances are calculated using models which approximate the impact of current economic and credit conditions on large portfolios of loans. The inputs to these models are based on historical loss experience with judgement applied to determine the assumptions used to calculate impairment. Model overlays are applied where data driven parameters or calculations are not considered representative of current risks or conditions of the loan portfolios. For specific impairments, judgement is required to determine when an impairment event has occurred and then to estimate the expected future cash flows related to that loan. The audit was focused on impairment due to the materiality of the loan balances and associated impairment allowances and the subjective nature of the impairment calculation. The largest loan portfolios are in Europe and Asia with the more significant impairment allowances being in Europe, North America and Latin America.	At each GAC and Group Risk Committee meeting there was a discussion on changes to risk factors and other inputs within the collective allowance models as well as discussions on individually significant loan impairments. We discussed a number of specific risks that changed or emerged during the course of the year, including the impact of the UK's decision to leave the European Union; the economic slowdown in China; volatility in the oil price which impacted individual credits; and the increased macroeconomic uncertainty in North America. In all of these cases we discussed the performance of the existing credit exposures, and the potential need for changes to modelling approaches. We also discussed any significant changes made to the inputs or models impacting the collective impairment allowance as well as changes in the control environment. These included key assumptions over the retail impairment models and improvements in the way higher risk loans were identified and escalated within the organisation.

## Impairment of loans and advances

### Procedures performed to support our discussions and conclusions

The controls management has established to support their collective and specific impairment calculations were tested.

- For collective impairment, this included controls over the appropriateness of models used to calculate the charge, the process of determining key assumptions and the identification of loans to be included within the calculation.
- For specific impairment charges on individual loans, this included controls over the monitoring of the credit watch list, credit file review processes, approval of external collateral valuation vendors and review controls over the approval of significant individual impairments.
- For collective allowances, the appropriateness of the modelling policy and methodology used for material portfolios was independently assessed by reference to the accounting standards and market practices. Model calculations were tested through reperformance and code review. Specifically with respect to the collective impairment models for the retail portfolios, we reviewed the enhancements made to the models and methodology to ensure they were appropriate.
- The appropriateness of management's judgements was also independently considered in respect of calculation methodologies, segmentation, economic factors and judgemental overlays, the period of historical loss rates used, loss emergence periods, cure rates for impaired loans, and the valuation of recovery assets and collateral.
- For specific allowances, the appropriateness of provisioning methodologies and policies was independently assessed for a sample of loans across the portfolio selected on the basis of risk. An independent view was formed on the levels of provisions booked based on the detailed loan and counterparty information in the credit file. Calculations within a sample of discounted cash flow models were reperformed.

### Relevant references in the Annual Report and Accounts 2016

Impaired loans, page 90.

GAC Report, page 141.

Note 1 (d): Financial instruments measured at amortised cost, page 198.

## Goodwill

Nature of the area of focus	Matters discussed with the GAC
<p>The Group had goodwill of \$15.5bn from a number of historical acquisitions across cash-generating units (CGUs). An assessment is required annually to establish whether a CGU's goodwill should continue to be recognised, or if any impairment exists. At each reporting period, management is also required to identify any potential indicators, and to perform an impairment assessment if any are identified. The impairment assessment calculation used for the tests were based on estimated future cash flows for each CGU discounted at an appropriate cost of equity rate. HSBC used its Annual Operating Plan as the basis for the first five years of cash flows and then extrapolated returns into perpetuity using a terminal growth factor. Cost of equity rates were based on the investment rates used within the global business and approved by the Board. The estimation of future cash flows and the level to which they are discounted is inherently uncertain and requires significant judgement. The extent of judgement and the size of the goodwill, resulted in this matter being identified as an area of focus.</p>	<p>We discussed the conclusions of goodwill assessments with the GAC when they considered the annual test and at each reporting period when they considered whether indicators of impairment existed. At 30 June, indicators of impairment were identified in GPB – Europe and GB&amp;M – Europe, which prompted a full impairment test for these two CGUs. This led to an impairment of \$800m of goodwill in GPB – Europe. The annual assessment was performed in the third quarter based on 1 July data. This assessment concluded no further impairment of goodwill was required. The discussions with the GAC focused on the key assumptions, both individually and when combined together. During these discussions, management confirmed their view that the forecasts for each CGU remained appropriate. Subsequently, we discussed with the GAC the impact of changing segments on the CGUs, particularly the decision to change the CGU associated with GB&amp;M, as disclosed on page 240. The discussion also covered the decision not to change the other CGUs. At 31 December, management identified further indicators of impairment in the GPB - Europe CGU. A retest was performed and it was concluded that all remaining goodwill for the CGU should be written off. In reaching this conclusion, a view was taken on the future performance of the business, and the risk associated with these forecasts. We discussed the approach and adjustments with the GAC.</p>

### Procedures performed to support our discussions and conclusions

- Goodwill was assessed immediately before and after the new reporting segments were established. Both bases of the assessment were considered in the audit.
- PwC's independent valuation experts critically assessed the discount rate and terminal growth rates used in the discounted cash flow models. The focus was on the methodology used to estimate discount rates of a CGU; and whether the use of the nominal GDP growth rates was the most appropriate in estimating the terminal growth rates into perpetuity for each CGU.
- The calculations used in the model were reperformed to check accuracy and the key inputs in the model were agreed to underlying sources.
- Management's future cash flow forecasts used in the model were assessed by:
  - testing that the forecasts agreed to the latest Annual Operating Plan approved by management;
  - considering current year performance against plan and the reasons for any deviation, and key drivers or strategies underlying the plan. These were discussed with management of the Global Businesses for each sensitive CGU;
  - reviewing the historical achievement of the Annual Operating Plan. Given the uncertainties in forecasting, this identified that forecasts have been less accurate for prior periods, and we considered if this was appropriately factored into the valuation model;
  - independent sensitivity analysis was performed to identify any further CGUs with a risk of impairment. The reasonableness of management's threshold of sensitive CGUs was assessed; and
  - the appropriateness of disclosures made in relation to goodwill was also considered.

### Relevant references in the Annual Report and Accounts 2016

GAC Report, page 141.

Note 20: Goodwill and intangible assets, page 239.

# Report of the independent auditors to the members of HSBC Holdings plc

## Investment in associate – Bank of Communications Company, Limited ('BoCom')

Nature of the area of focus	Matters discussed with the GAC
HSBC's investment in BoCom is accounted for as an associate, using the equity method.  This is the fourth consecutive year end that the market value of BoCom has been below the carrying value. At 31 December, the market value based on the share price was \$11.1bn compared with the carrying value of \$15.8bn.  This is considered an indicator of potential impairment under IFRS. An impairment test was performed by HSBC using a value in use model to estimate the investment's value assuming it continues to be held in perpetuity rather than sold (\$16.1bn). On this basis no impairment was recorded and the share of BoCom's profits has been recognised in the consolidated income statement.  The value in use model determines the present value of HSBC's share of BoCom's future cash flows. The model is dependent on many assumptions, both short-term and long-term in nature. These assumptions are derived from a combination of management estimates, analysts' forecasts and market data, and are highly judgemental.	Discussions with the GAC were focused on: <ul style="list-style-type: none"><li>• the continued appropriateness of the value in use model given the period of time that the carrying value has been in excess of market value;</li><li>• the key assumptions used in the model with a particular focus on the assumptions with the highest level of uncertainty including the long-term growth rate and the long term loan loss rate;</li><li>• the reasonably possible alternative assumptions that were considered to identify those assumptions to which the value in use was most sensitive and to demonstrate the impact on the value in use of a movement in those assumptions; and</li><li>• the overall justifications for the divergence between the value in use and market value.</li></ul> During these discussions, HSBC confirmed its view that the model, assumptions and cash flow forecasts remained appropriate.
Procedures performed to support our discussions and conclusions	
<ul style="list-style-type: none"><li>• The conclusions on the appropriateness of the model were reviewed and the discount rate used within the model was independently recalculated with the assistance of our valuation experts.</li><li>• Inputs used in the determination of assumptions within the model were challenged and corroborating information was obtained with reference to external market information, third-party sources, including analyst reports, and historical publicly available BoCom information.</li><li>• The controls in place over the model were tested.</li><li>• The year-end meeting between management and senior BoCom executive management, held specifically to identify facts or circumstances impacting management assumptions, was observed.</li><li>• The mathematical accuracy of the model was tested.</li><li>• Disclosures made in the <i>Annual Report and Accounts 2016</i> in relation to BoCom were reviewed.</li></ul>	

### Relevant references in the *Annual Report and Accounts 2016*

Note 1.1(f): Critical accounting estimates and judgements, page 196.

Note 17: Interests in associates and joint ventures, page 232.

## Application of hedge accounting

Nature of the area of focus	Matters discussed with the GAC
To qualify for hedge accounting, certain criteria must be met including documenting the nature and purpose of the hedge and performing regular testing over its effectiveness.  Due to the complex nature of the hedge accounting rules this is often an area of significant risk for banks.  In our prior report to you, we noted that audit testing had identified a number of instances where hedging was applied, but the accounting rules had not been adequately met. This resulted in the remediation of existing controls and the implementation of new controls in the last quarter of 2015.  In light of the prior year matters, we determined this to be an area of significant audit risk.	We discussed with the GAC during the year, the progress made by management in the implementation of the new controls.  During December 2016, management in France identified a further issue with an established hedging relationship, which resulted in a partial discontinuation of the hedge. A discussion was held with the GAC regarding both the root cause of the matter, the period in which the adjustment should be recognised and over which controls that had not operated effectively.  As indicated by the above matter, not all of the hedge accounting controls operated effectively in the year. The exceptions noted were limited to France.
Procedures performed to support our discussions and conclusions	
<ul style="list-style-type: none"><li>• For all significant macro cash flow hedges, documentation was examined and the relationships assessed to determine if the hedges had been appropriately designated. This included consideration of the hedge objectives and specific compliance with IFRS.</li><li>• A sample of new hedging relationships was examined and the relationships assessed to determine if they had been appropriately designated. This included consideration of the hedge objectives and specific compliance with IFRS.</li><li>• Management's hedge effectiveness reviews, and the measurement and recording of hedge ineffectiveness, were tested for a sample of hedge relationships.</li><li>• Understood and tested controls over the documentation and review of the hedge relationships and their initial and ongoing effectiveness.</li><li>• Additional substantive audit procedures were performed over the partial discontinuation of the hedging relationship in France.</li></ul>	

### Relevant references in the *Annual Report and Accounts 2016*

GAC Report, page 141.

Note 14: Derivatives, page 227.

## Litigation and regulatory enforcement actions

Nature of the area of focus	Matters discussed with the GAC
<p>HSBC, like other global banking institutions, is exposed to a significant number of open legal cases and regulatory investigations in a number of its markets. Given the business is geographically dispersed, the same matter could be subject to investigation in multiple jurisdictions. Provisions of \$2.4bn have been established to account for legal settlements and regulatory fines. The most significant provisions relate to tax-related investigations and foreign exchange market manipulation.</p> <p>There are a number of legal and regulatory matters for which no provision has been established, as discussed on page 257.</p> <p>There is an inherent risk that legal exposures are not identified and considered for financial reporting purposes on a timely basis. Importantly, the decision to recognise a provision and the basis of measurement are judgemental.</p>	<p>Group Legal provided to each GAC meeting an update on the status of legal cases. These updates considered whether all related litigation or investigations about a specific matter had been identified.</p> <p>Material matters were discussed during each meeting and the need for changes to provisions considered. We participated in these discussions, including consideration of whether any constructive obligation had arisen in individual cases.</p>
Procedures performed to support our discussions and conclusions	
<ul style="list-style-type: none"> <li>Controls designed to ensure the completeness and adequacy of current legal and regulatory provisions were tested. Regulatory correspondence from material markets was also read, and a sample of legal expenses were reviewed.</li> <li>Open legal cases were discussed with Group Legal and in certain instances we obtained and reviewed the relevant regulatory and litigation documents in order to assess the facts and circumstances.</li> <li>The range of reasonably possible outcomes was considered for material provisions to independently assess the appropriateness of the judgement made by HSBC.</li> <li>The disclosures of legal exposures and provisions were assessed for completeness and accuracy.</li> </ul>	
Relevant references in the Annual Report and Accounts 2016	
GAC Report, page 141. Note 27: Provisions, page 244. Note 35: Legal proceedings and regulatory matters, page 257.	

## Impact of the deferred prosecution agreement ('DPA')

Nature of the area of focus	Matters discussed with the GAC
<p>HSBC and HSBC Bank USA, N.A., ('HBUS') entered into a DPA with the US Department of Justice (DoJ), Federal Reserve Board and Financial Conduct Authority in 2012 regarding non-compliance with the US Bank Secrecy Act, anti-money laundering rules, and sanctions laws. The duration of the DPA is five years.</p> <p>If the DoJ were to conclude that a breach of the DPA had occurred, there are a number of potential penalties that could be imposed that could have a material adverse effect on HSBC's business. This could include loss of business and withdrawal of funding, restrictions on US dollar clearing functions through HSBC Bank USA or revocation of bank licences. The loss of this ability could have a significant adverse impact on the going concern status of HSBC and its individual subsidiaries in the future.</p>	<p>In considering going concern as the basis of preparation of the financial statements, a discussion was held with the GAC about the progress being made in responding to the requirements of the DPA. The conversation specifically considered the 2016 report of the Monitor.</p> <p>In the report, he expressed significant concerns about the pace of progress, instances of potential financial crime and systems and control deficiencies, whether HSBC is on track to meet its goal to the Monitor's satisfaction within the five-year period and, pending further review and discussion with HSBC, did not certify as to HSBC's implementation of, and adherence to, remedial measures specified in the DPA.</p> <p>Assurances were sought from the Directors that they were not aware of any information to suggest that the DoJ had concluded that the DPA had been breached.</p>
Procedures performed to support our discussions and conclusions	
<ul style="list-style-type: none"> <li>The likelihood of the DPA being breached and a restriction to US dollar clearing imposed was independently assessed through: <ul style="list-style-type: none"> <li>inquiry with the Monitor, whose role is explained on page 82, to understand the status of his work, the outcome of his most recent country reviews, his assessment of management's progress against the requirements of the DPA and his reporting to the DoJ and FCA;</li> <li>reading the 2016 Monitor annual report and the 11 country reports issued during the year; and</li> <li>reading a sample of reports produced by the compliance function that undertook a Global Standards operational effectiveness exercise, and an assessment of the findings.</li> </ul> </li> <li>Each Group Risk Committee meeting was attended during the year. At each meeting a report was provided by Group Risk on the status of the Global Standards programme, which aims to address the DPA recommendations. The related discussion was observed.</li> <li>The papers supporting the Financial System Vulnerabilities Committee meeting at the year-end were read. This meeting discussed the 2016 Monitor report and management's response.</li> <li>Compliance with the DPA was discussed with Group Legal and other members of senior management.</li> </ul>	
Relevant references in the Annual Report and Accounts 2016	
Top and emerging risks, page 64. Areas of special interest: the Monitor, page 82. Financial System Vulnerabilities Committee, page 143. Going concern and viability statements, page 146. Note 35: Legal proceedings and regulatory matters, page 257.	

## Report of the independent auditors to the members of HSBC Holdings plc

### Pension liabilities

Nature of the area of focus	Matters discussed with the GAC
HSBC has \$39.8bn of pension liabilities as a result of defined benefit pension schemes.	The change in the assessment of risk was discussed and agreed with the GAC in December 2016.
The calculation of these pension liabilities is complex and HSBC uses third party actuaries to provide support in the process to ensure appropriate expertise is applied to the calculation. The use of these actuaries also increases the risk of error as data is passed to third parties for analysis and calculation purposes.	We focused our testing response and our discussions with GAC on the largest schemes in the UK and US, which made up 84% of the overall liability balance at 31 December 2016. Our increased testing was focused on the transfer and use of data by third parties to form the calculation.
Considering all of these factors, our initial assessment of the risk of misstatement did not identify pension liabilities as an area of significant focus as there was no history of error and the pension funds were in surplus reducing the risk of fraud.	
During the year management identified errors in the transfer and use of data by third parties for one of the schemes in the US. As a result of this error, we reconsidered our assessment of the audit risk surrounding pension liability valuations and increased our scope of testing in this area.	
<b>Procedures performed to support our discussions and conclusions</b>	
<ul style="list-style-type: none"><li>The controls over the review and approval of actuarial assumptions, the completeness and accuracy of data provided to external actuaries, and the reconciliation to data used in experts calculation were tested.</li><li>Controls over the third party vendors were tested and the third party assurance reports covering controls operated by the vendors were reviewed.</li><li>The output from external actuaries was inspected and an independent view was formed of key actuarial assumptions.</li><li>Data used by the actuary in the calculation and the system to ledger reconciliations was independently tested.</li></ul>	
<b>Relevant references in the Annual Report and Accounts 2016</b>	

Note 5: Page 208

## Financial Statements

	Page
<b>Consolidated income statement</b>	<b>184</b>
<b>Consolidated statement of comprehensive income</b>	<b>185</b>
<b>Consolidated balance sheet</b>	<b>186</b>
<b>Consolidated statement of cash flows</b>	<b>187</b>
<b>Consolidated statement of changes in equity</b>	<b>188</b>
<b>HSBC Holdings income statement</b>	<b>190</b>
<b>HSBC Holdings statement of comprehensive income</b>	<b>190</b>
<b>HSBC Holdings balance sheet</b>	<b>191</b>
<b>HSBC Holdings statement of cash flows</b>	<b>192</b>
<b>HSBC Holdings statement of changes in equity</b>	<b>193</b>

## Notes on the Financial Statements

1 Basis of preparation and significant accounting policies	194
2 Net income/(expense) from financial instruments designated at fair value	203
3 Insurance business	204
4 Operating profit	206
5 Employee compensation and benefits	206
6 Auditors' remuneration	212
7 Tax	213
8 Dividends	215
9 Earnings per share	216
10 Trading assets	216
11 Fair values of financial instruments carried at fair value	217

12 Fair values of financial instruments not carried at fair value	224
13 Financial assets designated at fair value	226
14 Derivatives	226
15 Financial investments	229
16 Assets pledged, collateral received and assets transferred	230
17 Interests in associates and joint ventures	231
18 Investments in subsidiaries	235
19 Structured entities	236
20 Goodwill and intangible assets	238
21 Prepayments, accrued income and other assets	241
22 Assets held for sale and liabilities of disposal groups held for sale	241
23 Trading liabilities	242
24 Financial liabilities designated at fair value	242
25 Debt securities in issue	242
26 Accruals, deferred income and other liabilities	243
27 Provisions	243
28 Subordinated liabilities	244
29 Maturity analysis of assets, liabilities and off-balance sheet commitments	247
30 Offsetting of financial assets and financial liabilities	252
31 Non-controlling interests	253
32 Called up share capital and other equity instruments	253
33 Contingent liabilities, contractual commitments and guarantees	255
34 Lease commitments	256
35 Legal proceedings and regulatory matters	256
36 Related party transactions	262
37 Events after the balance sheet date	264
38 HSBC Holdings' subsidiaries, joint ventures and associates	265

## Financial Statements

### Consolidated income statement

for the year ended 31 December

	Notes	2016 \$m	2015 \$m	2014 \$m
Net interest income		<b>29,813</b>	32,531	34,705
– interest income		<b>42,414</b>	47,189	50,955
– interest expense		(12,601)	(14,658)	(16,250)
Net fee income		<b>12,777</b>	14,705	15,957
– fee income		<b>15,669</b>	18,016	19,545
– fee expense		(2,892)	(3,311)	(3,588)
Net trading income		<b>9,452</b>	8,723	6,760
– trading income excluding net interest income		<b>8,066</b>	6,948	4,853
– net interest income on trading activities		<b>1,386</b>	1,775	1,907
Net income/(expense) from financial instruments designated at fair value	2	<b>(2,666)</b>	1,532	2,473
– changes in fair value of long-term debt and related derivatives		(3,975)	863	508
– net income from other financial instruments designated at fair value		<b>1,309</b>	669	1,965
Gains less losses from financial investments		<b>1,385</b>	2,068	1,335
Dividend income		<b>95</b>	123	311
Net insurance premium income	3	<b>9,951</b>	10,355	11,921
Other operating income/(expense)		<b>(971)</b>	1,055	1,131
<b>Total operating income</b>		<b>59,836</b>	71,092	74,593
Net insurance claims and benefits paid and movement in liabilities to policyholders	3	<b>(11,870)</b>	(11,292)	(13,345)
<b>Net operating income before loan impairment charges and other credit risk provisions</b>		<b>47,966</b>	59,800	61,248
Loan impairment charges and other credit risk provisions	4	<b>(3,400)</b>	(3,721)	(3,851)
<b>Net operating income</b>		<b>44,566</b>	56,079	57,397
Employee compensation and benefits	5	<b>(18,089)</b>	(19,900)	(20,366)
General and administrative expenses		<b>(16,473)</b>	(17,662)	(18,565)
Depreciation and impairment of property, plant and equipment		<b>(1,229)</b>	(1,269)	(1,382)
Amortisation and impairment of intangible assets		<b>(777)</b>	(937)	(936)
Goodwill impairment of Global Private Banking – Europe	20	<b>(3,240)</b>	—	—
<b>Total operating expenses</b>		<b>(39,808)</b>	(39,768)	(41,249)
<b>Operating profit</b>	4	<b>4,758</b>	16,311	16,148
Share of profit in associates and joint ventures	17	<b>2,354</b>	2,556	2,532
<b>Profit before tax</b>		<b>7,112</b>	18,867	18,680
Tax expense	7	<b>(3,666)</b>	(3,771)	(3,975)
<b>Profit for the year</b>		<b>3,446</b>	15,096	14,705
Attributable to:			\$	\$
– ordinary shareholders of the parent company		<b>1,299</b>	12,572	13,115
– preference shareholders of the parent company	8	<b>90</b>	90	90
– other equity holders	8	<b>1,090</b>	860	483
– non-controlling interests		<b>967</b>	1,574	1,017
<b>Profit for the year</b>		<b>3,446</b>	15,096	14,705
Basic earnings per ordinary share	9	<b>0.07</b>	0.65	0.69
Diluted earnings per ordinary share	9	<b>0.07</b>	0.64	0.69

## Consolidated statement of comprehensive income

for the year ended 31 December

	2016 \$m	2015 \$m	2014 \$m
Profit for the year	<b>3,446</b>	15,096	14,705
Other comprehensive income/(expense)			
<b>Items that will be reclassified subsequently to profit or loss when specific conditions are met:</b>			
Available-for-sale investments	(299)	(3,072)	2,972
– fair value gains/(losses)	475	(1,231)	4,794
– fair value gains reclassified to the income statement	(895)	(2,437)	(1,672)
– amounts reclassified to the income statement in respect of impairment losses	71	127	374
– income taxes	50	469	(524)
Cash flow hedges	(68)	(24)	188
– fair value (losses)/gains	(297)	704	1,512
– fair value losses/(gains) reclassified to the income statement	195	(705)	(1,244)
– income taxes	34	(23)	(80)
Share of other comprehensive income/(expense) of associates and joint ventures	54	(9)	80
– share for the year	54	(9)	78
– reclassified to income statement on disposal	—	—	2
Exchange differences	(8,092)	(10,945)	(8,903)
– foreign exchange gains reclassified to income statement on disposal of a foreign operation	1,894	—	(21)
– other exchange differences	(9,791)	(11,112)	(8,917)
– income tax attributable to exchange differences	(195)	167	35
<b>Items that will not be reclassified subsequently to profit or loss:</b>			
Remeasurement of defined benefit asset/liability	7	101	1,985
– before income taxes	(84)	130	2,419
– income taxes	91	(29)	(434)
Other comprehensive income for the year, net of tax	(8,398)	(13,949)	(3,678)
<b>Total comprehensive income for the year</b>	<b>(4,952)</b>	1,147	11,027
Attributable to:			
– ordinary shareholders of the parent company	(6,968)	(490)	8,672
– preference shareholders of the parent company	90	90	90
– other equity holders	1,090	860	483
– non-controlling interests	836	687	1,782
<b>Total comprehensive income for the year</b>	<b>(4,952)</b>	1,147	11,027

# Financial Statements

## Consolidated balance sheet

at 31 December

	Notes	2016 \$m	2015 \$m
<b>Assets</b>			
Cash and balances at central banks		<b>128,009</b>	98,934
Items in the course of collection from other banks		<b>5,003</b>	5,768
Hong Kong Government certificates of indebtedness		<b>31,228</b>	28,410
Trading assets	10	<b>235,125</b>	224,837
Financial assets designated at fair value	13	<b>24,756</b>	23,852
Derivatives	14	<b>290,872</b>	288,476
Loans and advances to banks		<b>88,126</b>	90,401
Loans and advances to customers		<b>861,504</b>	924,454
Reverse repurchase agreements – non-trading		<b>160,974</b>	146,255
Financial investments	15	<b>436,797</b>	428,955
Assets held for sale	22	<b>4,389</b>	43,900
Prepayments, accrued income and other assets	21	<b>59,520</b>	54,398
Current tax assets		<b>1,145</b>	1,221
Interests in associates and joint ventures	17	<b>20,029</b>	19,139
Goodwill and intangible assets	20	<b>21,346</b>	24,605
Deferred tax assets	7	<b>6,163</b>	6,051
<b>Total assets at 31 Dec</b>		<b>2,374,986</b>	2,409,656
<b>Liabilities and equity</b>			
<b>Liabilities</b>			
Hong Kong currency notes in circulation		<b>31,228</b>	28,410
Deposits by banks		<b>59,939</b>	54,371
Customer accounts		<b>1,272,386</b>	1,289,586
Repurchase agreements – non-trading		<b>88,958</b>	80,400
Items in the course of transmission to other banks		<b>5,977</b>	5,638
Trading liabilities	23	<b>153,691</b>	141,614
Financial liabilities designated at fair value	24	<b>86,832</b>	66,408
Derivatives	14	<b>279,819</b>	281,071
Debt securities in issue	25	<b>65,915</b>	88,949
Liabilities of disposal groups held for sale	22	<b>2,790</b>	36,840
Accruals, deferred income and other liabilities	26	<b>41,501</b>	38,116
Current tax liabilities		<b>719</b>	783
Liabilities under insurance contracts	3	<b>75,273</b>	69,938
Provisions	27	<b>4,773</b>	5,552
Deferred tax liabilities	7	<b>1,623</b>	1,760
Subordinated liabilities	28	<b>20,984</b>	22,702
<b>Total liabilities at 31 Dec</b>		<b>2,192,408</b>	2,212,138
<b>Equity</b>			
Called up share capital	32	<b>10,096</b>	9,842
Share premium account	32	<b>12,619</b>	12,421
Other equity instruments		<b>17,110</b>	15,112
Other reserves		<b>(1,234)</b>	7,109
Retained earnings		<b>136,795</b>	143,976
Total shareholders' equity		<b>175,386</b>	188,460
Non-controlling interests	31	<b>7,192</b>	9,058
<b>Total equity at 31 Dec</b>		<b>182,578</b>	197,518
<b>Total liabilities and equity at 31 Dec</b>		<b>2,374,986</b>	2,409,656

The accompanying notes on pages 194 to 271, the audited sections in 'Global businesses and regions' on pages 44 to 60, 'Risk' on pages 64 to 126, 'Capital' on pages 127 to 131 and 'Directors' Remuneration Report' on pages 153 to 170 form an integral part of these financial statements.

These financial statements were approved by the Board of Directors on 21 February 2017 and signed on its behalf by:

Douglas Flint  
Group Chairman

Iain Mackay  
Group Finance Director

## Consolidated statement of cash flows

for the year ended 31 December

	Footnotes	2016 \$m	2015 \$m	2014 \$m
<b>Profit before tax</b>		<b>7,112</b>	18,867	18,680
<b>Adjustments for non-cash items:</b>				
Depreciation, amortisation and impairment		5,212	2,181	2,251
Net gain from investing activities		(1,215)	(1,935)	(1,928)
Share of profits in associates and joint ventures		(2,354)	(2,556)	(2,532)
(Gain)/loss on disposal of subsidiaries, businesses, associates and joint ventures		1,743	—	41
Loan impairment losses gross of recoveries and other credit risk provisions		4,090	4,546	5,125
Provisions including pensions		2,482	3,472	3,609
Share-based payment expense		534	757	732
Other non-cash items included in profit before tax		(207)	(191)	(487)
Elimination of exchange differences	1	15,364	18,308	24,571
<b>Changes in operating assets and liabilities</b>				
Change in net trading securities and derivatives		4,395	24,384	(18,498)
Change in loans and advances to banks and customers		52,868	32,971	17,813
Change in reverse repurchase agreements – non-trading		(13,138)	(3,011)	18,900
Change in financial assets designated at fair value		(1,235)	2,394	3,269
Change in other assets		(6,591)	9,090	4,393
Change in deposits by banks and customer accounts		(8,918)	(65,907)	(17,443)
Change in repurchase agreements – non-trading		8,558	(26,481)	(56,788)
Change in debt securities in issue		(23,034)	960	(8,133)
Change in financial liabilities designated at fair value		17,802	(10,785)	(10,734)
Change in other liabilities		8,792	(4,549)	(716)
Dividends received from associates		689	879	757
Contributions paid to defined benefit plans		(726)	(664)	(681)
Tax paid		(3,264)	(3,852)	(3,573)
<b>Net cash from operating activities</b>		<b>68,959</b>	(1,122)	(21,372)
Purchase of financial investments		(457,084)	(438,376)	(384,199)
Proceeds from the sale and maturity of financial investments		430,085	399,636	382,837
Net cash flows from the purchase and sale of property, plant and equipment		(1,151)	(1,249)	(1,389)
Net cash inflow/(outflow) from disposal of customer and loan portfolios		9,194	2,023	(1,035)
Net investment in intangible assets		(906)	(954)	(903)
Net cash flow on disposal of subsidiaries, businesses, associates and joint ventures	2	4,802	8	(272)
<b>Net cash from investing activities</b>		<b>(15,060)</b>	(38,912)	(4,961)
Issue of ordinary share capital and other equity instruments		2,024	3,727	5,948
Net sales/(purchases) of own shares for market-making and investment purposes		523	331	(96)
Purchase of treasury shares		(2,510)	—	—
Redemption of preference shares and other equity instruments		(1,825)	(463)	(234)
Subordinated loan capital issued		2,622	3,180	3,500
Subordinated loan capital repaid		(595)	(2,157)	(3,163)
Dividends paid to shareholders of the parent company and non-controlling interests		(9,157)	(8,195)	(7,823)
<b>Net cash from financing activities</b>		<b>(8,918)</b>	(3,577)	(1,868)
<b>Net increase/(decrease) in cash and cash equivalents</b>		<b>44,981</b>	(43,611)	(28,201)
Cash and cash equivalents at 1 Jan		243,863	301,301	346,281
Exchange differences in respect of cash and cash equivalents		(14,294)	(13,827)	(16,779)
<b>Cash and cash equivalents at 31 Dec</b>		<b>274,550</b>	243,863	301,301
Cash and cash equivalents comprise:	3			
– cash and balances at central banks		128,009	98,934	129,957
– items in the course of collection from other banks		5,003	5,768	4,927
– loans and advances to banks of one month or less		77,318	70,985	89,285
– reverse repurchase agreements with banks of one month or less		55,551	53,971	68,930
– treasury bills, other bills and certificates of deposit less than three months		14,646	19,843	14,192
– less: items in the course of transmission to other banks		(5,977)	(5,638)	(5,990)
		<b>274,550</b>	243,863	301,301

Interest received was \$42,586m (2015: \$47,623m; 2014: \$51,522m), interest paid was \$12,027m (2015: \$14,559m; 2014: \$15,633m) and dividends received were \$475m (2015: \$914m; 2014: \$1,199m).

1 Adjustment to bring changes between opening and closing balance sheet amounts to average rates. This is not done on a line-by-line basis, as details cannot be determined without unreasonable expense.

2 In July 2016, we completed the disposal of the Brazilian operations resulting in net cash inflow of \$4.8bn.

3 At 31 December 2016 \$35,501m (2015: \$33,744m) was not available for use by HSBC, of which \$21,108m (2015: \$21,773m) related to mandatory deposits at central banks.

# Financial Statements

## Consolidated statement of changes in equity

for the year ended 31 December

	Other reserves <sup>5</sup>										
	Called up share capital and share premium	Other equity instruments <sup>2</sup>	Retained earnings <sup>3,4</sup>	Available-for-sale fair value reserve	Cash flow hedging reserve	Foreign exchange reserve	Merger reserve <sup>6</sup>	Total shareholders' equity	Non-controlling interests	Total equity	
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	
<b>At 1 Jan 2016</b>	<b>22,263</b>	<b>15,112</b>	<b>143,976</b>	<b>(189)</b>	<b>34</b>	<b>(20,044)</b>	<b>27,308</b>	<b>188,460</b>	<b>9,058</b>	<b>197,518</b>	
Profit for the year	—	—	2,479	—	—	—	—	2,479	967	3,446	
Other comprehensive income (net of tax)	—	—	59	(271)	(61)	(7,994)	—	(8,267)	(131)	(8,398)	
– available-for-sale investments	—	—	—	(271)	—	—	—	(271)	(28)	(299)	
– cash flow hedges	—	—	—	—	(61)	—	—	(61)	(7)	(68)	
– remeasurement of defined benefit asset/liability	—	—	5	—	—	—	—	5	2	7	
– share of other comprehensive income of associates and joint ventures	—	—	54	—	—	—	—	54	—	54	
– foreign exchange reclassified to income statement on disposal of a foreign operation	—	—	—	—	—	1,894	—	1,894	—	1,894	
– exchange differences	—	—	—	—	—	(9,888)	—	(9,888)	(98)	(9,986)	
<b>Total comprehensive income for the year</b>	<b>—</b>	<b>—</b>	<b>2,538</b>	<b>(271)</b>	<b>(61)</b>	<b>(7,994)</b>	<b>—</b>	<b>(5,788)</b>	<b>836</b>	<b>(4,952)</b>	
Shares issued under employee remuneration and share plans	452	—	(425)	—	—	—	—	27	—	27	
Shares issued in lieu of dividends and amounts arising thereon	—	—	3,040	—	—	—	—	3,040	—	3,040	
Net increase in treasury shares	—	—	(2,510)	—	—	—	—	(2,510)	—	(2,510)	
Capital securities issued	—	1,998	—	—	—	—	—	1,998	—	1,998	
Dividends to shareholders	—	—	(11,279)	—	—	—	—	(11,279)	(919)	(12,198)	
Cost of share-based payment arrangements	—	—	534	—	—	—	—	534	—	534	
Other movements	—	—	921	(17)	—	—	—	904	(1,783)	(879)	
<b>At 31 Dec 2016</b>	<b>22,715</b>	<b>17,110</b>	<b>136,795</b>	<b>(477)</b>	<b>(27)</b>	<b>(28,038)</b>	<b>27,308</b>	<b>175,386</b>	<b>7,192</b>	<b>182,578</b>	
At 1 Jan 2015	21,527	11,532	137,144	2,143	58	(9,265)	27,308	190,447	9,531	199,978	
Profit for the year	—	—	13,522	—	—	—	—	13,522	1,574	15,096	
Other comprehensive income (net of tax)	—	—	73	(2,332)	(24)	(10,779)	—	(13,062)	(887)	(13,949)	
– available-for-sale investments	—	—	—	(2,332)	—	—	—	(2,332)	(740)	(3,072)	
– cash flow hedges	—	—	—	—	(24)	—	—	(24)	—	(24)	
– remeasurement of defined benefit asset/liability	—	—	82	—	—	—	—	82	19	101	
– share of other comprehensive income of associates and joint ventures	—	—	(9)	—	—	—	—	(9)	—	(9)	
– exchange differences	—	—	—	—	—	(10,779)	—	(10,779)	(166)	(10,945)	
<b>Total comprehensive income for the year</b>	<b>—</b>	<b>—</b>	<b>13,595</b>	<b>(2,332)</b>	<b>(24)</b>	<b>(10,779)</b>	<b>—</b>	<b>460</b>	<b>687</b>	<b>1,147</b>	
Shares issued under employee remuneration and share plans	736	—	(589)	—	—	—	—	147	—	147	
Shares issued in lieu of dividends and amounts arising thereon	—	—	3,162	—	—	—	—	3,162	—	3,162	
Capital securities issued	—	3,580	—	—	—	—	—	3,580	—	3,580	
Dividends to shareholders	—	—	(10,660)	—	—	—	—	(10,660)	(697)	(11,357)	
Cost of share-based payment arrangements	—	—	757	—	—	—	—	757	—	757	
Other movements	—	—	567	—	—	—	—	567	(463)	104	
<b>At 31 Dec 2015</b>	<b>22,263</b>	<b>15,112</b>	<b>143,976</b>	<b>(189)</b>	<b>34</b>	<b>(20,044)</b>	<b>27,308</b>	<b>188,460</b>	<b>9,058</b>	<b>197,518</b>	

## Consolidated statement of changes in equity (continued)

	Other reserves <sup>5</sup>									
	Called up share capital and share premium <sup>1</sup>	Other equity instruments <sup>2</sup>	Retained earnings <sup>3,4</sup>	Available-for-sale fair value reserve	Cash flow hedging reserve	Foreign exchange reserve	Merger reserve <sup>6</sup>	Total shareholders' equity	Non-controlling interests	Total equity
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
At 1 Jan 2014	20,550	5,851	128,728	97	(121)	(542)	27,308	181,871	8,588	190,459
Profit for the year	—	—	13,688	—	—	—	—	13,688	1,017	14,705
Other comprehensive income (net of tax)	—	—	2,066	2,025	189	(8,723)	—	(4,443)	765	(3,678)
– available-for-sale investments	—	—	—	2,025	—	—	—	2,025	947	2,972
– cash flow hedges	—	—	—	—	189	—	—	189	(1)	188
– remeasurement of defined benefit asset/liability	—	—	1,986	—	—	—	—	1,986	(1)	1,985
– share of other comprehensive income of associates and joint ventures	—	—	80	—	—	—	—	80	—	80
– exchange differences	—	—	—	—	—	(8,723)	—	(8,723)	(180)	(8,903)
Total comprehensive income for the year	—	—	15,754	2,025	189	(8,723)	—	9,245	1,782	11,027
Shares issued under employee remuneration and share plans	977	—	(710)	—	—	—	—	267	—	267
Shares issued in lieu of dividends and amounts arising thereon	—	—	2,709	—	—	—	—	2,709	—	2,709
Capital securities issued	—	5,681	—	—	—	—	—	5,681	—	5,681
Dividends to shareholders	—	—	(9,893)	—	—	—	—	(9,893)	(712)	(10,605)
Cost of share-based payment arrangements	—	—	732	—	—	—	—	732	—	732
Other movements	—	—	(176)	21	(10)	—	—	(165)	(127)	(292)
At 31 Dec 2014	21,527	11,532	137,144	2,143	58	(9,265)	27,308	190,447	9,531	199,978

1 For further details refer to Note 32.

2 During 2016, HSBC Holdings issued \$2,000m of perpetual subordinated contingent convertible capital securities, after issuance costs of \$6m and tax benefits of \$4m. In 2015, HSBC Holdings issued \$2,450m and €1,000m of perpetual subordinated contingent convertible capital securities, on which there were \$12m of external issuance costs, \$25m of intra-group issuance costs and \$19m of tax. In 2014, HSBC Holdings issued \$2,250m, \$1,500m and €1,500m of perpetual subordinated contingent convertible capital securities, on which there were \$13m of external issuance costs and \$33m of intra-group issuance costs. Under IFRSs these issuance costs and tax benefits are classified as equity.

3 At 31 December 2016, retained earnings included 353,356,251 treasury shares (2015: 81,580,180; 2014: 85,337,430). The increase principally reflects the share buy-back initiative, with the purchase of 325,273,407 ordinary shares to reduce outstanding ordinary shares. In addition, treasury shares are also held within HSBC's Insurance business retirement funds for the benefit of policyholders or beneficiaries within employee trusts for the settlement of shares expected to be delivered under employee share schemes or bonus plans, and the market-making activities in Markets.

4 Cumulative goodwill amounting to \$5,138m has been charged against reserves in respect of acquisitions of subsidiaries prior to 1 January 1998, including \$3,469m charged against the merger reserve arising on the acquisition of HSBC Bank plc. The balance of \$1,669m has been charged against retained earnings.

5 At 31 December 2015, our operations in Brazil were classified as held for sale (see Note 22). The cumulative amount of other reserves attributable to these operations were as follows: available-for-sale fair value reserve debit of \$176m, cash flow hedging reserve credit of \$34m and foreign exchange reserve debit of \$2.6bn.

6 Statutory share premium relief under Section 131 of the Companies Act 1985 (the 'Act') was taken in respect of the acquisition of HSBC Bank plc in 1992, HSBC France in 2000 and HSBC Finance Corporation in 2003, and the shares issued were recorded at their nominal value only. In HSBC's consolidated financial statements the fair value differences of \$8,290m in respect of HSBC France and \$12,768m in respect of HSBC Finance Corporation were recognised in the merger reserve. The merger reserve created on the acquisition of HSBC Finance Corporation subsequently became attached to HSBC Overseas Holdings (UK) Limited ('HOHU'), following a number of intra-group reorganisations. During 2009, pursuant to Section 131 of the Companies Act 1985, statutory share premium relief was taken in respect of the rights issue and \$15,796m was recognised in the merger reserve. The merger reserve includes a deduction of \$614m in respect of costs relating to the rights issue, of which \$149m was subsequently transferred to the income statement. Of this \$149m, \$121m was a loss arising from accounting for the agreement with the underwriters as a contingent forward contract. The merger reserve excludes the loss of \$344m on a forward foreign exchange contract associated with hedging the proceeds of the rights issue.

## Financial Statements

### HSBC Holdings income statement

for the year ended 31 December

	Notes	2016 \$m	2015 \$m	2014 \$m
Net interest expense		<b>(424)</b>	(438)	(486)
– interest income		<b>1,380</b>	866	944
– interest expense		<b>(1,804)</b>	(1,304)	(1,430)
Fee (expense)/income		<b>(1)</b>	39	47
Net trading income/(expense)		<b>119</b>	(349)	(215)
Net (expense)/income from financial instruments designated at fair value	2	<b>(49)</b>	276	438
Dividend income from subsidiaries		<b>10,436</b>	8,469	9,077
Other operating income		<b>696</b>	654	608
<b>Total operating income</b>		<b>10,777</b>	8,651	9,469
Employee compensation and benefits	5	<b>(570)</b>	(908)	(681)
General and administrative expenses		<b>(4,014)</b>	(3,434)	(2,522)
Impairment of subsidiaries		<b>–</b>	(26)	(38)
<b>Total operating expenses</b>		<b>(4,584)</b>	(4,368)	(3,241)
<b>Profit before tax</b>		<b>6,193</b>	4,283	6,228
Tax credit		<b>402</b>	570	299
<b>Profit for the year</b>		<b>6,595</b>	4,853	6,527

### HSBC Holdings statement of comprehensive income

for the year ended 31 December

	2016 \$m	2015 \$m	2014 \$m
Profit for the year	<b>6,595</b>	4,853	6,527
Other comprehensive income/(expense)			
<b>Items that will be reclassified subsequently to profit or loss when specific conditions are met:</b>			
Available-for-sale investments	<b>(72)</b>	(57)	116
– fair value gains/(losses)	<b>(83)</b>	(77)	152
– income taxes	<b>11</b>	20	(36)
<b>Items that will not be reclassified subsequently to profit or loss:</b>			
Changes in fair value of financial liabilities designated at fair value due to movement in own credit risk	<b>(896)</b>	–	–
– before income taxes	<b>(1,030)</b>	–	–
– income taxes	<b>134</b>	–	–
<b>Other comprehensive income for the year, net of tax</b>	<b>(968)</b>	(57)	116
<b>Total comprehensive income for the year</b>	<b>5,627</b>	4,796	6,643

## HSBC Holdings balance sheet

at 31 December

	Notes	2016 \$m	2015 \$m
<b>Assets</b>			
Cash and balances with HSBC undertakings		<b>247</b>	242
Derivatives	14	<b>2,148</b>	2,467
Loans and advances to HSBC undertakings		<b>77,421</b>	44,350
Financial investments in HSBC undertakings		<b>3,590</b>	4,285
Prepayments, accrued income and other assets		<b>503</b>	265
Current tax assets		<b>631</b>	723
Investments in subsidiaries	18	<b>95,850</b>	97,770
Intangible assets		<b>176</b>	75
Deferred tax assets		<b>232</b>	17
<b>Total assets at 31 Dec</b>		<b>180,798</b>	150,194
<b>Liabilities and equity</b>			
<b>Liabilities</b>			
Amounts owed to HSBC undertakings		<b>2,157</b>	2,152
Financial liabilities designated at fair value	24	<b>30,113</b>	19,853
Derivatives	14	<b>5,025</b>	2,278
Debt securities in issue	25	<b>21,805</b>	960
Accruals, deferred income and other liabilities		<b>1,651</b>	1,642
Deferred tax liabilities		—	—
Subordinated liabilities	28	<b>15,189</b>	15,895
Total liabilities		<b>75,940</b>	42,780
<b>Equity</b>			
Called up share capital	32	<b>10,096</b>	9,842
Share premium account		<b>12,619</b>	12,421
Other equity instruments		<b>17,004</b>	15,020
Other reserves		<b>37,483</b>	37,907
Retained earnings		<b>27,656</b>	32,224
<b>Total equity</b>		<b>104,858</b>	107,414
<b>Total liabilities and equity at 31 Dec</b>		<b>180,798</b>	150,194

The accompanying notes on pages 194 to 271 and the audited sections in 'Global businesses and regions' on pages 44 to 60, 'Risk' on pages 64 to 126, 'Capital' on pages 127 to 131 and 'Directors' Remuneration Report' on pages 153 to 170 form an integral part of these financial statements.

These financial statements were approved by the Board of Directors on 21 February 2017 and signed on its behalf by:



Douglas Flint  
Group Chairman



Iain Mackay  
Group Finance Director

**HSBC Holdings statement of cash flows**

**for the year ended 31 December**

	<b>2016 \$m</b>	<b>2015 \$m</b>	<b>2014 \$m</b>
<b>Profit before tax</b>	<b>6,193</b>	4,283	6,228
Adjustments for non-cash items:	48	114	52
– depreciation, amortisation and impairment	10	30	39
– charge for share-based payment	34	86	74
– other non-cash items included in profit before tax	4	(2)	(61)
<b>Changes in operating assets and liabilities</b>			
Change in loans to HSBC undertakings	(33,069)	(454)	3,474
Change in net trading securities and net derivatives	3,066	1,413	483
Change in other assets	(239)	(141)	7
Change in debt securities in issue	(1,633)	(49)	(149)
Change in financial liabilities designated at fair value	(1,229)	(1,228)	(694)
Change in other liabilities	(693)	(1,065)	(9,071)
Tax received	646	470	133
<b>Net cash from operating activities</b>	<b>(26,910)</b>	3,343	463
Purchase of financial investments in HSBC undertakings	—	(276)	(2,410)
Proceeds from the sale and maturity of financial investments in HSBC undertakings	610	—	300
Net cash outflow from acquisition of or increase in stake of subsidiaries	(2,073)	(2,118)	(1,603)
Repayment of capital from subsidiaries	3,920	790	3,505
Net investment in intangible assets	(109)	(79)	—
<b>Net cash from investing activities</b>	<b>2,348</b>	(1,683)	(208)
Issue of ordinary share capital and other equity instruments	2,381	4,216	6,559
Purchase of treasury shares	(2,510)	—	—
Subordinated loan capital issued	2,636	3,180	3,500
Subordinated loan capital repaid	(1,781)	(1,565)	(1,654)
Debt securities issued	32,080	0	—
Debt securities repaid	—	—	(1,634)
Dividends paid on ordinary shares	(7,059)	(6,548)	(6,611)
Dividends paid to holders of other equity instruments	(1,180)	(950)	(573)
<b>Net cash from financing activities</b>	<b>24,567</b>	(1,667)	(413)
<b>Net increase/(decrease) in cash and cash equivalents</b>	<b>5</b>	(7)	(158)
Cash and cash equivalents at 1 January	242	249	407
<b>Cash and cash equivalents at 31 Dec</b>	<b>247</b>	242	249
<b>Cash and cash equivalents comprise</b>			
Cash at bank with HSBC undertakings	247	242	249

Interest received was \$2,605m (2015: \$2,026m), interest paid was \$2,910m (2015: \$2,309m) and dividends received were \$10,412m (2015: \$8,469m).

## HSBC Holdings statement of changes in equity

for the year ended 31 December

	Called up share capital \$m	Share premium \$m	Other instruments \$m	Retained earnings \$m	Other reserves				Total shareholders' equity \$m
					Available-for-sale fair value reserve \$m	Other paid-in capital <sup>2</sup> \$m	Merger and other reserves \$m		
<b>At 1 Jan 2016</b>	<b>9,842</b>	<b>12,421</b>	<b>15,020</b>	<b>32,224</b>	<b>183</b>	<b>2,597</b>	<b>35,127</b>	<b>107,414</b>	
Profit for the year	—	—	—	6,595	—	—	—	—	6,595
Other comprehensive income (net of tax)	—	—	—	(896)	(72)	—	—	—	(968)
– available-for-sale investments	—	—	—	—	(72)	—	—	—	(72)
– changes in fair value of financial liabilities designated at fair value due to movement in own credit risk	—	—	—	(896)	—	—	—	—	(896)
Total comprehensive income for the year	—	—	—	5,699	(72)	—	—	—	5,627
Shares issued under employee share plans	<b>35</b>	<b>417</b>	—	(51)	—	—	—	—	<b>401</b>
Shares issued in lieu of dividends and amounts arising thereon	<b>219</b>	<b>(219)</b>	—	<b>3,040</b>	—	—	—	—	<b>3,040</b>
Net increase in treasury shares	—	—	—	(2,510)	—	—	—	—	(2,510)
Capital securities issued	—	—	<b>1,984</b>	—	—	—	—	—	<b>1,984</b>
Dividends to shareholders	—	—	—	(11,279)	—	—	—	—	(11,279)
Cost of share-based payment arrangements	—	—	—	34	—	—	—	—	34
Other movements	—	—	—	499	1	(353)	—	—	147
<b>At 31 Dec 2016</b>	<b>10,096</b>	<b>12,619</b>	<b>17,004</b>	<b>27,656</b>	<b>112</b>	<b>2,244</b>	<b>35,127</b>	<b>104,858</b>	
At 1 Jan 2015	9,609	11,918	11,476	34,986	240	2,089	35,127	105,445	
Profit for the year	—	—	—	4,853	—	—	—	—	4,853
Other comprehensive income (net of tax)	—	—	—	—	(57)	—	—	—	(57)
– available-for-sale investments	—	—	—	—	(57)	—	—	—	(57)
Total comprehensive income for the year	—	—	—	4,853	(57)	—	—	—	4,796
Shares issued under employee share plans	45	691	—	(59)	—	—	—	—	677
Shares issued in lieu of dividends and amounts arising thereon	188	(188)	—	3,162	—	—	—	—	3,162
Capital securities issued	—	—	<b>3,544</b>	—	—	—	—	—	<b>3,544</b>
Dividends to shareholders	—	—	—	(10,660)	—	—	—	—	(10,660)
Cost of share-based payment arrangements	—	—	—	86	—	—	—	—	86
Other movements	—	—	—	(144)	—	508	—	—	364
<b>At 31 Dec 2015</b>	<b>9,842</b>	<b>12,421</b>	<b>15,020</b>	<b>32,224</b>	<b>183</b>	<b>2,597</b>	<b>35,127</b>	<b>107,414</b>	
At 1 Jan 2014	9,415	11,135	5,828	35,406	124	2,052	35,127	99,087	
Profit for the year	—	—	—	6,527	—	—	—	—	6,527
Other comprehensive income (net of tax)	—	—	—	—	116	—	—	—	116
– available-for-sale investments	—	—	—	—	116	—	—	—	116
Total comprehensive income for the year	—	—	—	6,527	116	—	—	—	6,643
Shares issued under employee share plans	60	917	—	(53)	—	—	—	—	924
Shares issued in lieu of dividends and amounts arising thereon	134	(134)	—	2,709	—	—	—	—	2,709
Capital securities issued	—	—	<b>5,648</b>	—	—	—	—	—	<b>5,648</b>
Dividends to shareholders	—	—	—	(9,893)	—	—	—	—	(9,893)
Cost of share-based payment arrangements	—	—	—	74	—	—	—	—	74
Other movements	—	—	—	216	—	37	—	—	253
<b>At 31 Dec 2014</b>	<b>9,609</b>	<b>11,918</b>	<b>11,476</b>	<b>34,986</b>	<b>240</b>	<b>2,089</b>	<b>35,127</b>	<b>105,445</b>	

Dividends per ordinary share at 31 December 2016 were \$0.51 (2015: \$0.50; 2014:\$0.49).

1 At 31 December 2016, retained earnings included 325,499,152 (\$2,499m) of treasury shares (2015: 67,881 (\$1m); 2014: 179,419 (\$3m)). The increase principally reflects the share buy-back initiative, with the purchase of 325,273,407 ordinary shares (\$2,497m) to reduce outstanding ordinary shares. In addition, treasury shares are held to fund employee share plans.

2 Other paid-in capital arises from the exercise and lapse of share options granted to employees of HSBC Holdings subsidiaries.

## 1 Basis of preparation and significant accounting policies

### 1.1 Basis of preparation

#### (a) Compliance with International Financial Reporting Standards

The consolidated financial statements of HSBC and the separate financial statements of HSBC Holdings have been prepared in accordance with IFRSs as issued by the IASB, including interpretations ('IFRICs') issued by the IFRS Interpretations Committee, and as endorsed by the European Union ('EU'). At 31 December 2016, there were no unendorsed standards effective for the year ended 31 December 2016 affecting these consolidated and separate financial statements, and HSBC's application of IFRSs results in no differences between IFRSs as issued by the IASB and IFRSs as endorsed by the EU.

#### Standards adopted during the year ended 31 December 2016

There were no new standards applied during the year ended 31 December 2016 by HSBC.

The requirements of IFRS 9 'Financial Instruments' relating to the presentation of gains and losses on financial liabilities designated at fair value were adopted in the separate financial statements of HSBC Holdings. As a result, the effects of changes in those liabilities' credit risk is presented in other comprehensive income with the remaining effect presented in profit or loss. In accordance with the transitional requirements of IFRS 9, comparatives have not been restated. Adoption increased profit before tax by \$896m with the opposite effect on other comprehensive income, with no effect on net assets.

During 2016, HSBC adopted a number of interpretations and amendments to standards which had an insignificant effect on the consolidated financial statements of HSBC and the separate financial statements of HSBC Holdings.

#### (b) Differences between IFRSs and Hong Kong Financial Reporting Standards

There are no significant differences between IFRSs and Hong Kong Financial Reporting Standards in terms of their application to HSBC and consequently there would be no significant differences had the financial statements been prepared in accordance with Hong Kong Financial Reporting Standards. The Notes on the Financial Statements, taken together with the Report of the Directors, include the aggregate of all disclosures necessary to satisfy IFRSs and Hong Kong reporting requirements.

#### (c) Future accounting developments

#### Minor amendments to IFRSs

The IASB has published a number of minor amendments to IFRSs in the 'Annual Improvements to IFRSs 2012-2014' and in a series of stand-alone amendments, one of which has not yet been endorsed for use in the EU. HSBC has not early adopted any of the amendments effective after 31 December 2016 and it expects they will have an insignificant effect, when adopted, on the consolidated financial statements of HSBC and the separate financial statements of HSBC Holdings.

#### Major new IFRSs

The IASB has published IFRS 9 'Financial Instruments', IFRS 15 'Revenue from Contracts with Customers' and IFRS 16 'Leases'. IFRS 9 and IFRS 15 have been endorsed for use in the EU and IFRS 16 has not yet been endorsed.

#### *IFRS 9 'Financial Instruments'*

In July 2014, the IASB issued IFRS 9 'Financial Instruments', which is the comprehensive standard to replace IAS 39 'Financial Instruments: Recognition and Measurement', and includes requirements for classification and measurement of financial assets and liabilities, impairment of financial assets and hedge accounting.

#### *Classification and measurement*

The classification and measurement of financial assets will depend on how these are managed (the entity's business model) and their contractual cash flow characteristics. These factors determine whether the financial assets are measured at amortised cost, fair value through other comprehensive income ('FVOCI') or fair value through profit or loss ('FVPL'). The combined effect of the application of the business model and the contractual cash flow characteristics tests may result in some differences in the population of financial assets measured at amortised cost or fair value compared with IAS 39. However, based on an assessment of financial assets performed to date and expectations around changes to balance sheet composition, HSBC expects that the overall impact of any change will not be significant.

For financial liabilities designated to be measured at fair value, gains or losses relating to changes in the entity's own credit risk are to be included in other comprehensive income.

#### *Impairment*

The impairment requirements apply to financial assets measured at amortised cost and FVOCI, and lease receivables and certain loan commitments and financial guarantee contracts. At initial recognition, an impairment allowance (or provision in the case of commitments and guarantees) is required for expected credit losses ('ECL') resulting from default events that are possible within the next 12 months ('12-month ECL'). In the event of a significant increase in credit risk, an allowance (or provision) is required for ECL resulting from all possible default events over the expected life of the financial instrument ('lifetime ECL'). Financial assets where 12-month ECL is recognised are in 'stage 1'; financial assets that are considered to have experienced a significant increase in credit risk are in 'stage 2'; and financial assets for which there is objective evidence of impairment, so are considered to be in default or otherwise credit impaired, are in 'stage 3'.

The assessment of credit risk and the estimation of ECL are required to be unbiased and probability-weighted, and should incorporate all available information relevant to the assessment, including information about past events, current conditions and reasonable and supportable forecasts of economic conditions at the reporting date. In addition, the estimation of ECL should take into account the time value of money. As a result, the recognition and measurement of impairment is intended to be more forward-looking than under IAS 39, and the resulting impairment charge will tend to be more volatile. IFRS 9 will also tend to result in an increase in the total level of impairment allowances, since all financial assets will be assessed for at least 12-month ECL and the population of financial assets to which lifetime ECL applies is likely to be larger than the population for which there is objective evidence of impairment in accordance with IAS 39.

### *Hedge accounting*

The general hedge accounting requirements aim to simplify hedge accounting, creating a stronger link with risk management strategy and permitting hedge accounting to be applied to a greater variety of hedging instruments and risks. However they do not explicitly address macro hedge accounting strategies, which are particularly important for banks. As a result, IFRS 9 includes an accounting policy choice to remain with IAS 39 hedge accounting.

Based on the analysis performed to date, HSBC expects to exercise the accounting policy choice to continue IAS 39 hedge accounting and therefore is not currently planning to change hedge accounting, although it will implement the revised hedge accounting disclosures required by the related amendments to IFRS 7 'Financial Instruments: Disclosures'.

### *Transition*

The classification and measurement and impairment requirements are applied retrospectively by adjusting the opening balance sheet at the date of initial application, with no requirement to restate comparative periods. HSBC does not intend to restate comparatives. The mandatory application date for the standard as a whole is 1 January 2018, but it is possible to apply the revised presentation for certain liabilities measured at fair value from an earlier date. HSBC has early adopted the revised presentation of fair value gains and losses relating to an entity's own credit risk on certain liabilities in the separate financial statements of HSBC Holdings from 1 January 2016, and since interim financial statements have been issued during 2016 without adoption, will adopt new requirements in the consolidated financial statements from 1 January 2017. If this presentation was applied in the consolidated financial statements at 31 December 2016, the effect would be to increase profit before tax with the opposite effect on other comprehensive income based on the change in fair value attributable to changes in HSBC's credit risk for the year, with no effect on net assets. Further information on the change in fair value attributable to changes in credit risk, including HSBC's credit risk, is disclosed in Note 24. HSBC is assessing the impact that the impairment requirements will have on the financial statements.

The joint Global Risk and Global Finance IFRS 9 Implementation Programme continues to progress with the documentation of Group accounting policy, the development of operating and system target operating models and the development, build and testing of risk modelling methodologies for the calculation of impairment nearing completion. HSBC intends to perform a parallel run during the second half of 2017 to gain a better understanding of the potential effect of the new standard and for the governance framework to gain experience. HSBC intends to quantify the potential impact of IFRS 9 once it is practicable to provide reliable estimates, which will be no later than in the *Annual Report and Accounts 2017*. Until reliable estimates of the impact are available, particularly on the interaction with the regulatory capital requirements, further information on the expected impact on the financial position and on capital planning cannot be provided. Further information about the application of IFRS 9 by HSBC is available on pages 347 to 352 of the *Annual Report and Accounts 2015*.

### *IFRS 15 'Revenue from Contracts with Customers'*

In May 2014, the IASB issued IFRS 15 'Revenue from Contracts with Customers'. The original effective date of IFRS 15 has been delayed by one year and the standard is now effective for annual periods beginning on or after 1 January 2018 with early application permitted. IFRS 15 provides a principles-based approach for revenue recognition, and introduces the concept of recognising revenue for performance obligations as they are satisfied. The standard should be applied retrospectively, with certain practical expedients available. HSBC has assessed the impact of IFRS 15 and expects that the standard will have no significant effect, when applied, on the consolidated financial statements of HSBC and the separate financial statements of HSBC Holdings.

### *IFRS 16 'Leases'*

In January 2016, the IASB issued IFRS 16 'Leases' with an effective date for annual periods beginning on or after 1 January 2019. IFRS 16 results in lessees accounting for most leases within the scope of the standard in a manner similar to the way in which finance leases are currently accounted for under IAS 17 'Leases'. Lessees will recognise a 'right of use' asset and a corresponding financial liability on the balance sheet. The asset will be amortised over the length of the lease and the financial liability measured at amortised cost. Lessor accounting remains substantially the same as under IAS 17. HSBC is currently assessing the impact of IFRS 16, and it is not practicable to quantify the effect at the date of the publication of these financial statements. Existing operating lease commitments are set out in Note 34.

### **(d) Foreign currencies**

HSBC's consolidated financial statements are presented in US dollars because the US dollar and currencies linked to it form the major currency bloc in which HSBC transacts and funds its business. The US dollar is also HSBC Holdings' functional currency because the US dollar and currencies linked to it are the most significant currencies relevant to the underlying transactions, events and conditions of its subsidiaries, as well as representing a significant proportion of its funds generated from financing activities.

Transactions in foreign currencies are recorded at the rate of exchange on the date of the transaction. Assets and liabilities denominated in foreign currencies are translated at the rate of exchange at the balance sheet date except non-monetary assets and liabilities measured at historical cost that are translated using the rate of exchange at the initial transaction date. Exchange differences are included in other comprehensive income or in the income statement depending on where the gain or loss on the underlying item is recognised.

In the consolidated financial statements, the assets, liabilities and results of foreign operations whose functional currency is not US dollars are translated into the Group's presentation currency at the reporting date. Exchange differences arising are recognised in other comprehensive income. On disposal of a foreign operation, exchange differences previously recognised in other comprehensive income are reclassified to the income statement.

### **(e) Presentation of information**

Certain disclosures required by IFRSs have been included in the audited sections of this *Annual Report and Accounts* as follows:

- segmental disclosures are included in the 'Report of the Directors: Financial Review' on pages 30 to 63;
- disclosures concerning the nature and extent of risks relating to insurance contracts and financial instruments are included in the 'Report of the Directors: Risk' on pages 64 to 126;
- capital disclosures are included in the 'Report of the Directors: Capital' on pages 127 to 131; and

## **Notes on the Financial Statements**

- disclosures relating to HSBC's securitisation activities and structured products are included in the 'Report of the Directors: Risk' on pages 64 to 126.

In accordance with HSBC's policy to provide disclosures that help investors and other stakeholders understand the Group's performance, financial position and changes to them, the information provided in the Notes on the Financial Statements and the Report of the Directors goes beyond the minimum levels required by accounting standards, statutory and regulatory requirements and listing rules. In addition, HSBC follows the British Bankers' Association Code for Financial Reporting Disclosure ('the BBA Code'). The BBA Code aims to increase the quality and comparability of UK banks' disclosures and sets out five disclosure principles together with supporting guidance. In line with the principles of the BBA Code, HSBC assesses good practice recommendations issued from time to time by relevant regulators and standard setters and will assess the applicability and relevance of such guidance, enhancing disclosures where appropriate.

### **(f) Critical accounting estimates and judgements**

The preparation of financial information requires the use of estimates and judgements about future conditions. In view of the inherent uncertainties and the high level of subjectivity involved in the recognition or measurement of items highlighted as the critical accounting estimates and judgements in section 1.2 below, it is possible that the outcomes in the next financial year could differ from those on which management's estimates are based, resulting in materially different conclusions from those reached by management for the purposes of these Financial Statements. Management's selection of HSBC's accounting policies which contain critical estimates and judgements reflects the materiality of the items to which the policies are applied and the high degree of judgement and estimation uncertainty involved.

### **(g) Segmental analysis**

HSBC's chief operating decision-maker is the Group Chief Executive, supported by the Group Management Board ('GMB'), which operates as a general management committee under the direct authority of the Board, and operating segments are reported in a manner consistent with the internal reporting provided to the Group Chief Executive and the GMB.

Measurement of segmental assets, liabilities, income and expenses is in accordance with the Group's accounting policies. Segmental income and expenses include transfers between segments, and these transfers are conducted at arm's length. Shared costs are included in segments on the basis of the actual recharges made.

### **(h) Going concern**

The financial statements are prepared on a going concern basis, as the Directors are satisfied that the Group and parent company have the resources to continue in business for the foreseeable future. In making this assessment, the Directors have considered a wide range of information relating to present and future conditions, including future projections of profitability, cash flows and capital resources.

## **1.2 Summary of significant accounting policies**

### **(a) Consolidation and related policies**

#### **Investments in subsidiaries**

Where an entity is governed by voting rights, HSBC consolidates when it holds, directly or indirectly, the necessary voting rights to pass resolutions by the governing body. In all other cases, the assessment of control is more complex and requires judgement of other factors, including having exposure to variability of returns, power to direct relevant activities and whether power is held as agent or principal.

Business combinations are accounted for using the acquisition method. The amount of non-controlling interest is measured either at fair value or at the non-controlling interest's proportionate share of the acquiree's identifiable net assets. This election is made for each business combination.

HSBC Holdings' investments in subsidiaries are stated at cost less impairment losses.

#### **Goodwill**

Goodwill is allocated to cash-generating units ('CGUs') for the purpose of impairment testing, which is undertaken at the lowest level at which goodwill is monitored for internal management purposes. HSBC's CGUs are based on geographical regions subdivided by global business, except for Global Banking and Markets, for which goodwill is monitored on a global basis.

Impairment testing is performed at least once a year, or whenever there is an indication of impairment, by comparing the recoverable amount of a CGU with its carrying amount.

Goodwill is included in a disposal group if the disposal group is a CGU to which goodwill has been allocated or it is an operation within such a CGU. The amount of goodwill included in a disposal group is measured on the basis of the relative values of the operation disposed of and the portion of the CGU retained.

### **Critical accounting estimates and judgements**

The review of goodwill for impairment reflects management's best estimate of the future cash flows of the CGUs and the rates used to discount these cash flows, both of which are subject to uncertain factors as follows:

- The future cash flows of the CGUs are sensitive to the cash flows projected for the periods for which detailed forecasts are available and to assumptions regarding the long-term pattern of sustainable cash flows thereafter. Forecasts are compared with actual performance and verifiable economic data, but they reflect management's view of future business prospects at the time of the assessment.
- The rates used to discount future expected cash flows can have a significant effect on their valuation and are based on the costs of capital assigned to individual CGUs. The cost of capital percentage is generally derived from a capital asset pricing model, which incorporates inputs reflecting a number of financial and economic variables, including the risk-free interest rate in the country concerned and a premium for the risk of the business being evaluated. These variables are subject to fluctuations in external market rates and economic conditions beyond management's control, are subject to uncertainty and require the exercise of significant judgement.

The accuracy of forecast cash flows is subject to a high degree of uncertainty in volatile market conditions. In such circumstances, management retests goodwill for impairment more frequently than once a year when indicators of impairment exist to ensure that the assumptions on which the cash flow forecasts are based continue to reflect current market conditions and management's best estimate of future business prospects.

## **HSBC sponsored structured entities**

HSBC is considered to sponsor another entity if, in addition to ongoing involvement with the entity, it had a key role in establishing that entity or in bringing together relevant counterparties so the transaction that is the purpose of the entity could occur. HSBC is generally not considered a sponsor if the only involvement with the entity is merely administrative.

### **Interests in associates and joint arrangements**

Joint arrangements are investments in which HSBC, together with one or more parties, has joint control. Depending on HSBC's rights and obligations, the joint arrangement is classified as either a joint operation or a joint venture. HSBC classifies investments in entities over which it has significant influence, and that are neither subsidiaries nor joint arrangements, as associates.

HSBC recognises its share of the assets, liabilities and results in a joint operation. Investments in associates and interests in joint ventures are recognised using the equity method. The attributable share of the results and reserves of joint ventures and associates are included in the consolidated financial statements of HSBC based on either financial statements made up to 31 December or pro-rated amounts adjusted for any material transactions or events occurring between the date the financial statements are available and 31 December.

Investments in associates and joint ventures are assessed at each reporting date and tested for impairment when there is an indication that the investment may be impaired. Goodwill on acquisitions of interests in joint ventures and associates is not tested separately for impairment but is assessed as part of the carrying amount of the investment.

### **Critical accounting estimates and judgements**

Impairment testing of investments in associates involves significant judgement in determining the value in use, and in particular estimating the present values of cash flows expected to arise from continuing to hold the investment. The most significant judgements relate to the impairment testing of our investment in Bank of Communications Co., Limited ('BoCom'). Key assumptions used in estimating BoCom's value in use, the sensitivity of the value in use calculation to different assumptions and a sensitivity analysis that shows the changes in key assumptions that would reduce the excess of value in use over the carrying amount (the 'headroom') to nil are described in Note 17.

## **(b) Income and expense**

### **Operating income**

#### *Interest income and expense*

Interest income and expense for all financial instruments, excluding those classified as held for trading or designated at fair value are recognised in 'Interest income' and 'Interest expense' in the income statement using the effective interest method. However, as an exception to this, interest on debt securities issued by HSBC that are designated under the fair value option and derivatives managed in conjunction with those debt securities are included in interest expense.

Interest on impaired financial assets is recognised using the rate of interest used to discount the future cash flows for the purpose of measuring the impairment loss.

#### **Non-interest income and expense**

Fee income is earned from a diverse range of services provided by HSBC to its customers. Fee income is accounted for as follows:

- income earned on the execution of a significant act is recognised as revenue when the act is completed (for example, fees arising from negotiating a transaction, such as the acquisition of shares, for a third party); and
- income earned from the provision of services is recognised as revenue as the services are provided (for example, asset management services).

Net trading income comprises all gains and losses from changes in the fair value of financial assets and financial liabilities held for trading, together with the related interest income, expense and dividends.

Dividend income is recognised when the right to receive payment is established. This is the ex-dividend date for listed equity securities, and usually the date when shareholders approve the dividend for unlisted equity securities.

Net income/(expense) from financial instruments designated at fair value includes all gains and losses from changes in the fair value of financial assets and liabilities designated at fair value through profit or loss, including derivatives that are managed in conjunction with those financial assets and liabilities, and liabilities under investment contracts. Interest income, interest expense and dividend income in respect of those financial instruments are also included, except for interest arising from debt securities issued by HSBC and derivatives managed in conjunction with those debt securities, which is recognised in 'Interest expense'.

The accounting policies for insurance premium income are disclosed in Note 1.2(f).

## **(c) Valuation of financial instruments**

All financial instruments are initially recognised at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value of a financial instrument on initial recognition is generally its transaction price (that is, the fair value of the consideration given or received). However, if there is a difference between the transaction price and the fair value of financial instruments whose fair value is based on a quoted price in an active market or a valuation technique that uses only data from observable markets, HSBC recognises the difference as a trading gain or loss at inception ('day 1 gain or loss'). In all other cases, the entire day 1 gain or loss is deferred and recognised in the income statement over the life of the transaction until the transaction matures or is closed out, the valuation inputs become observable or HSBC enters into an offsetting transaction.

The fair value of financial instruments is generally measured on an individual basis. However, in cases where HSBC manages a group of financial assets and liabilities according to its net market or credit risk exposure, the fair value of the group of financial instruments is measured on a net basis but the underlying financial assets and liabilities are presented separately in the financial statements, unless they satisfy the IFRS offsetting criteria.

## **Notes on the Financial Statements**

### **Critical accounting estimates and judgements**

The majority of valuation techniques employ only observable market data. However, certain financial instruments are valued on the basis of valuation techniques that feature one or more significant market inputs that are unobservable, and for them the measurement of fair value is more judgemental. An instrument in its entirety is classified as valued using significant unobservable inputs if, in the opinion of management, a significant proportion of the instrument's inception profit or greater than 5% of the instrument's valuation is driven by unobservable inputs. 'Unobservable' in this context means that there is little or no current market data available from which to determine the price at which an arm's length transaction would be likely to occur. It generally does not mean that there is no data available at all upon which to base a determination of fair value (consensus pricing data may, for example, be used).

#### **(d) Financial instruments measured at amortised cost**

Loans and advances to banks and customers, held-to-maturity investments and most financial liabilities are measured at amortised cost. The carrying value of these financial assets at initial recognition includes any directly attributable transaction costs. If the initial fair value is lower than the cash amount advanced, such as in the case of some leveraged finance and syndicated lending activities, the difference is deferred and recognised over the life of the loan (as described in paragraph (c) above) through the recognition of interest income, unless the loan becomes impaired.

HSBC may commit to underwriting loans on fixed contractual terms for specified periods of time. When the loan arising from the lending commitment is expected to be held for trading, the commitment to lend is recorded as a derivative. When HSBC intends to hold the loan, a provision on the loan commitment is only recorded where it is probable that HSBC will incur a loss.

#### **Impairment of loans and advances**

Losses for impaired loans are recognised when there is objective evidence that impairment of a loan or portfolio of loans has occurred. Losses which may arise from future events are not recognised.

#### **Individually assessed loans and advances**

The factors considered in determining whether a loan is individually significant for the purposes of assessing impairment include the size of the loan, the number of loans in the portfolio, the importance of the individual loan relationship and how this is managed. Loans that are determined to be individually significant will be individually assessed for impairment, except when volumes of defaults and losses are sufficient to justify treatment under a collective methodology.

Loans considered as individually significant are typically to corporate and commercial customers, are for larger amounts and are managed on an individual basis. For these loans, HSBC considers on a case-by-case basis at each balance sheet date whether there is any objective evidence that a loan is impaired.

The determination of the realisable value of security is based on the most recently updated market value at the time the impairment assessment is performed. The value is not adjusted for expected future changes in market prices, though adjustments are made to reflect local conditions such as forced sale discounts.

Impairment losses are calculated by discounting the expected future cash flows of a loan, which include expected future receipts of contractual interest, at the loan's original effective interest rate or an approximation thereof, and comparing the resultant present value with the loan's current carrying amount.

#### **Collectively assessed loans and advances**

Impairment is assessed collectively to cover losses which have been incurred but have not yet been identified on loans subject to individual assessment or for homogeneous groups of loans that are not considered individually significant, generally retail lending portfolios.

#### **Incurred but not yet identified impairment**

Individually assessed loans for which no evidence of impairment has been specifically identified on an individual basis are grouped together according to their credit risk characteristics for a collective impairment assessment. This assessment captures impairment losses that HSBC has incurred as a result of events occurring before the balance sheet date which HSBC is not able to identify on an individual loan basis, and that can be reliably estimated. When information becomes available which identifies losses on individual loans within a group, those loans are removed from the group and assessed individually.

#### **Homogeneous groups of loans and advances**

Statistical methods are used to determine collective impairment losses for homogeneous groups of loans not considered individually significant. The methods used to calculate collective allowances are set out below:

- When appropriate empirical information is available, HSBC utilises roll-rate methodology, which employs statistical analyses of historical data and experience of delinquency and default to reliably estimate the amount of the loans that will eventually be written off as a result of the events occurring before the balance sheet date. Individual loans are grouped using ranges of past due days, and statistical estimates are made of the likelihood that loans in each range will progress through the various stages of delinquency and become irrecoverable. Additionally, individual loans are segmented based on their credit characteristics, such as industry sector, loan grade or product. In applying this methodology, adjustments are made to estimate the periods of time between a loss event occurring, for example because of a missed payment, and its confirmation through write-off (known as the loss identification period). Current economic conditions are also evaluated when calculating the appropriate level of allowance required to cover inherent loss. In certain highly developed markets, models also take into account behavioural and account management trends as revealed in, for example, bankruptcy and rescheduling statistics.
- When the portfolio size is small or when information is insufficient or not reliable enough to adopt a roll-rate methodology, HSBC adopts a basic formulaic approach based on historical loss rate experience, or a discounted cash flow model. Where a basic formulaic approach is undertaken, the period between a loss event occurring and its identification is estimated by local management, and is typically between six and 12 months.

## **Write-off of loans and advances**

Loans (and the related impairment allowance accounts) are normally written off, either partially or in full, when there is no realistic prospect of recovery. Where loans are secured, this is generally after receipt of any proceeds from the realisation of security. In circumstances where the net realisable value of any collateral has been determined and there is no reasonable expectation of further recovery, write-off may be earlier.

## **Reversals of impairment**

If the amount of an impairment loss decreases in a subsequent period, and the decrease can be related objectively to an event occurring after the impairment was recognised, the excess is written back by reducing the loan impairment allowance account accordingly. The write-back is recognised in the income statement.

## **Assets acquired in exchange for loans**

When non-financial assets acquired in exchange for loans as part of an orderly realisation are held for sale, these assets are recorded as 'Assets held for sale.'

## **Renegotiated loans**

Loans subject to collective impairment assessment whose terms have been renegotiated are no longer considered past due, but are treated as up-to-date loans for measurement purposes once a minimum number of payments required has been received. Where collectively assessed loan portfolios include significant levels of renegotiated loans, these loans are segregated from other parts of the loan portfolio for the purposes of collective impairment assessment to reflect their risk profile. Loans subject to individual impairment assessment, whose terms have been renegotiated, are subject to ongoing review to determine whether they remain impaired. The carrying amounts of loans that have been classified as renegotiated retain this classification until maturity or derecognition.

A loan that is renegotiated is derecognised if the existing agreement is cancelled and a new agreement made on substantially different terms or if the terms of an existing agreement are modified such that the renegotiated loan is substantially a different financial instrument. Any new loans that arise following derecognition events will continue to be disclosed as renegotiated loans and are assessed for impairment as above.

## **Critical accounting estimates and judgements**

Loan impairment allowances represent management's best estimate of losses incurred in the loan portfolios at the balance sheet date. Management is required to exercise judgement in making assumptions and estimates when calculating loan impairment allowances on both individually and collectively assessed loans and advances.

Collective impairment allowances are subject to estimation uncertainty, in part because it is not practicable to identify losses on an individual loan basis due to the large number of individually insignificant loans in the portfolio. The estimation methods include the use of statistical analyses of historical information, supplemented with significant management judgement, to assess whether current economic and credit conditions are such that the actual level of incurred losses is likely to be greater or less than historical experience. Where changes in economic, regulatory or behavioural conditions result in the most recent trends in portfolio risk factors being not fully reflected in the statistical models, risk factors are taken into account by adjusting the impairment allowances derived solely from historical loss experience.

Risk factors include loan portfolio growth, product mix, unemployment rates, bankruptcy trends, geographical concentrations, loan product features, economic conditions such as national and local trends in housing markets, the level of interest rates, portfolio seasoning, account management policies and practices, changes in laws and regulations, and other influences on customer payment patterns. Different factors are applied in different regions and countries to reflect local economic conditions, laws and regulations. The methodology and the assumptions used in calculating impairment losses are reviewed regularly in the light of differences between loss estimates and actual loss experience. For example, roll rates, loss rates and the expected timing of future recoveries are regularly benchmarked against actual outcomes to ensure they remain appropriate.

For individually assessed loans, judgement is required in determining whether there is objective evidence that a loss event has occurred and, if so, the measurement of the impairment allowance. In determining whether there is objective evidence that a loss event has occurred, judgement is exercised in evaluating all relevant information on indicators of impairment, including the consideration of whether payments are contractually past due and the consideration of other factors indicating deterioration in the financial condition and outlook of borrowers affecting their ability to pay.

A higher level of judgement is required for loans to borrowers showing signs of financial difficulty in market sectors experiencing economic stress, particularly where the likelihood of repayment is affected by the prospects for refinancing or the sale of a specified asset. For those loans where objective evidence of impairment exists, management determines the size of the allowance required based on a range of factors such as the realisable value of security, the likely dividend available on liquidation or bankruptcy, the viability of the customer's business model and the capacity to trade successfully out of financial difficulties and generate sufficient cash flow to service debt obligations.

HSBC might provide loan forbearance to borrowers experiencing financial difficulties by agreeing to modify the contractual payment terms of loans in order to improve the management of customer relationships, maximise collection opportunities or avoid default or repossession. Where forbearance activities are significant, higher levels of judgement and estimation uncertainty are involved in determining their effects on loan impairment allowances. Judgements are involved in differentiating the credit risk characteristics of forbearance cases, including those which return to performing status following renegotiation. Where collectively assessed loan portfolios include significant levels of loan forbearance, portfolios are segmented to reflect the different credit risk characteristics of forbearance cases, and estimates are made of the incurred losses inherent within each forbearance portfolio segment. Forbearance activities take place in both retail and wholesale loan portfolios, but our largest concentration is in the US, in HSBC Finance's CML run-off portfolio.

The exercise of judgement requires the use of assumptions which are highly subjective and very sensitive to the risk factors, in particular to changes in economic and credit conditions across a large number of geographical areas. Many of the factors have a high degree of interdependency and there is no single factor to which our loan impairment allowances as a whole are sensitive.

## **Non-trading reverse repurchase and repurchase agreements**

When securities are sold subject to a commitment to repurchase them at a predetermined price ('repos'), they remain on the balance sheet and a liability is recorded in respect of the consideration received. Securities purchased under commitments to resell ('reverse repos') are not recognised on the balance sheet and an asset is recorded in respect of the initial consideration paid. Non-trading repos and reverse repos are measured at amortised cost. The difference between the sale and repurchase price or between the purchase and resale price is treated as interest and recognised in net interest income over the life of the agreement.

## **Notes on the Financial Statements**

### **(e) Financial instruments measured at fair value**

#### **Available-for-sale financial assets**

Available-for-sale financial assets are recognised on the trade date when HSBC enters into contractual arrangements to purchase those instruments, and are normally derecognised when the securities are either sold or redeemed. They are subsequently remeasured at fair value, and changes therein are recognised in other comprehensive income until the assets are either sold or become impaired. Upon disposal, the cumulative gains or losses in other comprehensive income are recognised in the income statement as 'Gains less losses from financial investments'.

#### *Impairment of available-for-sale financial assets*

Available-for-sale financial assets are assessed at each balance sheet date for objective evidence of impairment. Impairment losses are recognised in the income statement within 'Loan impairment charges and other credit risk provisions' for debt instruments and within 'Gains less losses from financial investments' for equities.

#### *Available-for-sale debt securities*

In assessing objective evidence of impairment at the reporting date, HSBC considers all available evidence, including observable data or information about events specifically relating to the securities which may result in a shortfall in the recovery of future cash flows. A subsequent decline in the fair value of the instrument is recognised in the income statement when there is objective evidence of impairment as a result of decreases in the estimated future cash flows. Where there is no further objective evidence of impairment, the decline in the fair value of the financial asset is recognised in other comprehensive income. If the fair value of a debt security increases in a subsequent period, and the increase can be objectively related to an event occurring after the impairment loss was recognised in the income statement, or the instrument is no longer impaired, the impairment loss is reversed through the income statement.

#### *Available-for-sale equity securities*

A significant or prolonged decline in the fair value of the equity below its cost is objective evidence of impairment. In assessing whether it is significant, the decline in fair value is evaluated against the original cost of the asset at initial recognition. In assessing whether it is prolonged, the decline is evaluated against the continuous period in which the fair value of the asset has been below its original cost at initial recognition.

All subsequent increases in the fair value of the instrument are treated as a revaluation and are recognised in other comprehensive income. Subsequent decreases in the fair value of the available-for-sale equity security are recognised in the income statement to the extent that further cumulative impairment losses have been incurred. Impairment losses recognised on the equity security are not reversed through the income statement.

#### **Financial instruments designated at fair value**

Financial instruments, other than those held for trading, are classified in this category if they meet one or more of the criteria set out below, and are so designated irrevocably at inception:

- the use of the designation removes or significantly reduces an accounting mismatch;
- when a group of financial assets, liabilities or both is managed and its performance is evaluated on a fair value basis, in accordance with a documented risk management or investment strategy; and
- where financial instruments contain one or more non-closely related embedded derivatives.

Designated financial assets are recognised when HSBC enters into contracts with counterparties, which is generally on trade date, and are normally derecognised when the rights to the cash flows expire or are transferred. Designated financial liabilities are recognised when HSBC enters into contracts with counterparties, which is generally on settlement date, and are normally derecognised when extinguished. Subsequent changes in fair values are recognised in the income statement in 'Net income/(expense) from financial instruments designated at fair value'.

Under this criterion, the main classes of financial instruments designated by HSBC are:

#### *Long-term debt issues*

The interest and/or foreign exchange exposure on certain fixed rate debt securities issued has been matched with the interest and/or foreign exchange exposure on certain swaps as part of a documented risk management strategy.

#### *Financial assets and financial liabilities under unit-linked and non-linked investment contracts*

A contract under which HSBC does not accept significant insurance risk from another party is not classified as an insurance contract, other than investment contracts with discretionary participation features ('DPF'), but is accounted for as a financial liability. See Note 1.2(f) for investment contracts with DPF and contracts where HSBC accepts significant insurance risk. Customer liabilities under linked and certain non-linked investment contracts issued by insurance subsidiaries and the corresponding financial assets are designated at fair value. Liabilities are at least equivalent to the surrender or transfer value which is calculated by reference to the value of the relevant underlying funds or indices. Premiums receivable and amounts withdrawn are accounted for as increases or decreases in the liability recorded in respect of investment contracts. The incremental costs directly related to the acquisition of new investment contracts or renewing existing investment contracts are deferred and amortised over the period during which the investment management services are provided.

#### **Derivatives**

Derivatives are financial instruments that derive their value from the price of underlying items such as equities, interest rates or other indices. Derivatives are recognised initially and are subsequently measured at fair value. Derivatives are classified as assets when their fair value is positive or as liabilities when their fair value is negative; this includes embedded derivatives which are bifurcated from the host contract when they meet the definition of a derivative on a stand-alone basis.

Gains and losses from changes in the fair value of derivatives that do not qualify for hedge accounting are reported in 'Net trading income'. Gains and losses on derivatives managed in conjunction with financial instruments designated at fair value are reported in 'Net income/(expense) from financial instruments designated at fair value' together with the gains and losses on the economically

hedged items. Where the derivatives are managed with debt securities issued by HSBC that are designated at fair value, the contractual interest is shown in 'Interest expense' together with the interest payable on the issued debt.

### **Hedge accounting**

When derivatives are held for risk management purposes they are designated in hedge relationships where the required criteria for documentation and hedge effectiveness are met. HSBC enters into fair value hedges, cash flow hedges or hedges of net investments in foreign operations as appropriate to the risk being hedged.

#### *Fair value hedge*

Changes in the fair value of derivatives are recorded in the income statement, along with changes in the fair value of the hedged assets or liabilities attributable to the hedged risk. If a hedge relationship no longer meets the criteria for hedge accounting, hedge accounting is discontinued; the cumulative adjustment to the carrying amount of the hedged item is amortised to the income statement on a recalculated effective interest rate over the residual period to maturity, unless the hedged item has been derecognised, in which case it is recognised in the income statement immediately.

#### *Cash flow hedge*

The effective portion of changes in the fair value of derivatives is recognised in other comprehensive income; the ineffective portion of the change in fair value is recognised immediately in the income statement within 'Net trading income'. The accumulated gains and losses recognised in other comprehensive income are reclassified to the income statement in the same periods in which the hedged item affects profit or loss. In hedges of forecast transactions that result in recognition of a non-financial asset or liability, previous gains and losses recognised in other comprehensive income are included in the initial measurement of the asset or liability. When a hedge relationship is discontinued, or partially discontinued, any cumulative gain or loss recognised in other comprehensive income remains in equity until the forecast transaction is recognised in the income statement. When a forecast transaction is no longer expected to occur, the cumulative gain or loss previously recognised in other comprehensive income is immediately reclassified to the income statement.

#### *Net investment hedge*

Hedges of net investments in foreign operations are accounted for in a similar way to cash flow hedges. A gain or loss on the effective portion of the hedging instrument is recognised in other comprehensive income; the residual change in fair value is recognised immediately in the income statement. Gains and losses previously recognised in other comprehensive income are reclassified to the income statement on the disposal, or part disposal, of the foreign operation.

### **Derivatives that do not qualify for hedge accounting**

Non-qualifying hedges are derivatives entered into as economic hedges of assets and liabilities for which hedge accounting was not applied.

#### **(f) Insurance contracts**

A contract is classified as an insurance contract where HSBC accepts significant insurance risk from another party by agreeing to compensate that party on the occurrence of a specified uncertain future event. An insurance contract may also transfer financial risk, but is accounted for as an insurance contract if the insurance risk is significant. In addition, HSBC issues investment contracts with DPF which are also accounted for as insurance contracts as required by IFRS 4 'Insurance Contracts'.

#### **Net insurance premium income**

Premiums for life insurance contracts are accounted for when receivable, except in unit-linked insurance contracts where premiums are accounted for when liabilities are established.

Reinsurance premiums are accounted for in the same accounting period as the premiums for the direct insurance contracts to which they relate.

#### **Net insurance claims and benefits paid and movements in liabilities to policyholders**

Gross insurance claims for life insurance contracts reflect the total cost of claims arising during the year, including claim handling costs and any policyholder bonuses allocated in anticipation of a bonus declaration.

Maturity claims are recognised when due for payment. Surrenders are recognised when paid or at an earlier date on which, following notification, the policy ceases to be included within the calculation of the related insurance liabilities. Death claims are recognised when notified.

Reinsurance recoveries are accounted for in the same period as the related claim.

#### **Liabilities under insurance contracts**

Liabilities under non-linked life insurance contracts are calculated by each life insurance operation based on local actuarial principles. Liabilities under unit-linked life insurance contracts are at least equivalent to the surrender or transfer value, which is calculated by reference to the value of the relevant underlying funds or indices.

#### **Future profit participation on insurance contracts with DPF**

Where contracts provide discretionary profit participation benefits to policyholders, liabilities for these contracts include provisions for the future discretionary benefits to policyholders. These provisions reflect the actual performance of the investment portfolio to date and management's expectation of the future performance of the assets backing the contracts, as well as other experience factors such as mortality, lapses and operational efficiency, where appropriate. The benefits to policyholders may be determined by the contractual terms, regulation, or past distribution policy.

#### **Investment contracts with DPF**

While investment contracts with DPF are financial instruments, they continue to be treated as insurance contracts as required by IFRS 4. The Group therefore recognises the premiums for these contracts as revenue and recognises as an expense the resulting increase in the carrying amount of the liability.

## **Notes on the Financial Statements**

In the case of net unrealised investment gains on these contracts, whose discretionary benefits principally reflect the actual performance of the investment portfolio, the corresponding increase in the liabilities is recognised in either the income statement or other comprehensive income, following the treatment of the unrealised gains on the relevant assets. In the case of net unrealised losses, a deferred participating asset is recognised only to the extent that its recoverability is highly probable. Movements in the liabilities arising from realised gains and losses on relevant assets are recognised in the income statement.

### **Present value of in-force long-term insurance business**

HSBC recognises the value placed on insurance contracts and investment contracts with DPF, which are classified as long-term and in-force at the balance sheet date, as an asset. The asset represents the present value of the equity holders' interest in the issuing insurance companies' profits expected to emerge from these contracts written at the balance sheet date. The present value of in-force business ('PVIF') is determined by discounting those expected future profits using appropriate assumptions in assessing factors such as future mortality, lapse rates and levels of expenses, and a risk discount rate that reflects the risk premium attributable to the respective contracts. The PVIF incorporates allowances for both non-market risk and the value of financial options and guarantees. The PVIF asset is presented gross of attributable tax in the balance sheet and movements in the PVIF asset are included in 'Other operating income' on a gross of tax basis.

### **(g) Employee compensation and benefits**

#### **Share-based payments**

HSBC enters into both equity-settled and cash-settled share-based payment arrangements with its employees as compensation for services provided by employees.

The vesting period for these schemes may commence before the grant date if the employees have started to render services in respect of the award before the grant date. Expenses are recognised when the employee starts to render service to which the award relates.

Cancellations result from the failure to meet a non-vesting condition during the vesting period, and are treated as an acceleration of vesting recognised immediately in the income statement. Failure to meet a vesting condition by the employee is not treated as a cancellation, and the amount of expense recognised for the award is adjusted to reflect the number of awards expected to vest.

#### **Post-employment benefit plans**

HSBC operates a number of pension schemes (including defined benefit and defined contribution) and post-employment benefit schemes.

Payments to defined contribution plans are charged as an expense as the employees render service.

Defined benefit pension obligations are calculated using the projected unit credit method. The net charge to the income statement mainly comprises the service cost and the net interest on the net defined benefit asset or liability, and is presented in operating expenses.

Re-measurements of the net defined benefit asset or liability, which comprise actuarial gains and losses, return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest), are recognised immediately in other comprehensive income. The net defined benefit asset or liability represents the present value of defined benefit obligations reduced by the fair value of plan assets, after applying the asset ceiling test, where the net defined benefit surplus is limited to the present value of available refunds and reductions in future contributions to the plan.

The cost of obligations arising from other post-employment plans are accounted for on the same basis as defined benefit pension plans.

### **(h) Tax**

Income tax comprises current tax and deferred tax. Income tax is recognised in the income statement except to the extent that it relates to items recognised in other comprehensive income or directly in equity, in which case the tax is recognised in the same statement as the related item appears.

Current tax is the tax expected to be payable on the taxable profit for the year and any adjustment to tax payable in respect of previous years. HSBC provides for potential current tax liabilities that may arise on the basis of the amounts expected to be paid to the tax authorities.

Deferred tax is recognised on temporary differences between the carrying amounts of assets and liabilities in the balance sheet, and the amounts attributed to such assets and liabilities for tax purposes. Deferred tax is calculated using the tax rates expected to apply in the periods in which the assets will be realised or the liabilities settled.

Current and deferred tax is calculated based on tax rates and laws enacted, or substantively enacted, by the balance sheet date.

### **Critical accounting estimates and judgements**

The recognition of a deferred tax asset relies on an assessment of the probability and sufficiency of future taxable profits, future reversals of existing taxable temporary differences and ongoing tax planning strategies. In the absence of a history of taxable profits, the most significant judgements relate to expected future profitability and to the applicability of tax planning strategies, including corporate reorganisations.

### **(i) Provisions, contingent liabilities and guarantees**

#### **Provisions**

Provisions are recognised when it is probable that an outflow of economic benefits will be required to settle a present legal or constructive obligation that has arisen as a result of past events and for which a reliable estimate can be made.

## Critical accounting estimates and judgements

Judgement is involved in determining whether a present obligation exists and in estimating the probability, timing and amount of any outflows. Professional expert advice is taken on the assessment of litigation, property (including onerous contracts) and similar obligations. Provisions for legal proceedings and regulatory matters typically require a higher degree of judgement than other types of provisions. When matters are at an early stage, accounting judgements can be difficult because of the high degree of uncertainty associated with determining whether a present obligation exists, and estimating the probability and amount of any outflows that may arise. As matters progress, management and legal advisers evaluate on an ongoing basis whether provisions should be recognised, revising previous judgements and estimates as appropriate. At more advanced stages, it is typically easier to make judgements and estimates around a better defined set of possible outcomes. However, the amount provisioned can remain very sensitive to the assumptions used. There could be a wide range of possible outcomes for any pending legal proceedings, investigations or inquiries. As a result, it is often not practicable to quantify a range of possible outcomes for individual matters. It is also not practicable to meaningfully quantify ranges of potential outcomes in aggregate for these types of provisions because of the diverse nature and circumstances of such matters and the wide range of uncertainties involved. Provisions for customer remediation also require significant levels of estimation and judgement. The amounts of provisions recognised depend on a number of different assumptions, such as, the volume of inbound complaints, the projected period of inbound complaint volumes, the decay rate of complaint volumes, the population identified as systemically mis-sold and the number of policies per customer complaint.

## Contingent liabilities, contractual commitments and guarantees

### Contingent liabilities

Contingent liabilities, which include certain guarantees and letters of credit pledged as collateral security, and contingent liabilities related to legal proceedings or regulatory matters, are not recognised in the financial statements but are disclosed unless the probability of settlement is remote.

### Financial guarantee contracts

Liabilities under financial guarantee contracts which are not classified as insurance contracts are recorded initially at their fair value, which is generally the fee received or present value of the fee receivable.

HSBC Holdings has issued financial guarantees and similar contracts to other Group entities. HSBC elects to account for certain guarantees as insurance contracts in HSBC Holdings' financial statements, in which case they are measured and recognised as insurance liabilities. This election is made on a contract by contract basis, and is irrevocable.

## 2 Net income/(expense) from financial instruments designated at fair value

	2016 \$m	2015 \$m	2014 \$m
<b>Net income/(expense) arising on:</b>			
Financial assets			
Financial assets held to meet liabilities under insurance and investment contracts	<b>1,480</b>	531	2,300
Other financial assets designated at fair value	<b>90</b>	89	131
Derivatives managed with other financial assets designated at fair value	<b>(43)</b>	13	(19)
	<b>1,527</b>	633	2,412
Financial liabilities			
Liabilities to customers under investment contracts	<b>(218)</b>	34	(435)
HSBC's long-term debt issued and related derivatives	<b>(3,975)</b>	863	508
– changes in own credit spread on long-term debt	<b>(1,792)</b>	1,002	417
– derivatives managed in conjunction with HSBC's issued debt securities	<b>(1,367)</b>	(1,997)	333
– other changes in fair value	<b>(816)</b>	1,858	(242)
Other financial liabilities designated at fair value	<b>(6)</b>	3	(23)
Derivatives managed with other financial liabilities designated at fair value	<b>6</b>	(1)	11
	<b>(4,193)</b>	899	61
<b>Year ended 31 Dec</b>	<b>(2,666)</b>	1,532	2,473

## HSBC Holdings

### Net income/(expense) arising on HSBC Holdings' long-term debt issued and related derivatives

Footnotes	2016 \$m	2015 \$m	2014 \$m
<b>Net income/(expense) arising on:</b>			
– changes in own credit spread on long-term debt	<b>1</b>	—	348
– derivatives managed in conjunction with HSBC Holdings' issued debt securities	<b>(642)</b>	(927)	126
– other changes in fair value	<b>593</b>	855	(27)
<b>Year ended 31 Dec</b>	<b>(49)</b>	276	438

<sup>1</sup> From 1 January 2016, HSBC Holdings adopted, in its separate financial statements, the requirements of IFRS 9 'Financial Instruments' relating to the presentation of gains and losses on financial liabilities designated at fair value. As a result, the effects of changes in those liabilities' credit risk is presented in other comprehensive income with the remaining effect presented in profit or loss.

## Notes on the Financial Statements

### 3 Insurance business

#### Net insurance premium income

	Non-linked insurance \$m	Linked life insurance \$m	Investment contracts with DPF <sup>1</sup> \$m	Total \$m
Gross insurance premium income	8,036	675	1,877	10,588
Reinsurers' share of gross insurance premium income	(629)	(8)	—	(637)
<b>Year ended 31 Dec 2016</b>	<b>7,407</b>	<b>667</b>	<b>1,877</b>	<b>9,951</b>
Gross insurance premium income	7,506	1,409	2,097	11,012
Reinsurers' share of gross insurance premium income	(648)	(9)	—	(657)
<b>Year ended 31 Dec 2015</b>	<b>6,858</b>	<b>1,400</b>	<b>2,097</b>	<b>10,355</b>
Gross insurance premium income	7,705	2,195	2,470	12,370
Reinsurers' share of gross insurance premium income	(441)	(8)	—	(449)
<b>Year ended 31 Dec 2014</b>	<b>7,264</b>	<b>2,187</b>	<b>2,470</b>	<b>11,921</b>

1 Discretionary participation features.

#### Net insurance claims and benefits paid and movement in liabilities to policyholders

	Non-linked insurance \$m	Linked life insurance \$m	Investment contracts with DPF <sup>1</sup> \$m	Total \$m
Gross claims and benefits paid and movement in liabilities	8,778	1,321	2,409	12,508
– claims, benefits and surrenders paid	2,828	749	2,017	5,594
– movement in liabilities	5,950	572	392	6,914
Reinsurers' share of claims and benefits paid and movement in liabilities	(560)	(78)	—	(638)
– claims, benefits and surrenders paid	(112)	(14)	—	(126)
– movement in liabilities	(448)	(64)	—	(512)
<b>Year ended 31 Dec 2016</b>	<b>8,218</b>	<b>1,243</b>	<b>2,409</b>	<b>11,870</b>
Gross claims and benefits paid and movement in liabilities	7,746	1,398	2,728	11,872
– claims, benefits and surrenders paid	3,200	1,869	2,101	7,170
– movement in liabilities	4,546	(471)	627	4,702
Reinsurers' share of claims and benefits paid and movement in liabilities	(575)	(5)	—	(580)
– claims, benefits and surrenders paid	(153)	(64)	—	(217)
– movement in liabilities	(422)	59	—	(363)
<b>Year ended 31 Dec 2015</b>	<b>7,171</b>	<b>1,393</b>	<b>2,728</b>	<b>11,292</b>
Gross claims and benefits paid and movement in liabilities	7,770	2,765	3,188	13,723
– claims, benefits and surrenders paid	3,575	1,499	2,215	7,289
– movement in liabilities	4,195	1,266	973	6,434
Reinsurers' share of claims and benefits paid and movement in liabilities	(411)	33	—	(378)
– claims, benefits and surrenders paid	(176)	(88)	—	(264)
– movement in liabilities	(235)	121	—	(114)
<b>Year ended 31 Dec 2014</b>	<b>7,359</b>	<b>2,798</b>	<b>3,188</b>	<b>13,345</b>

1 Discretionary participation features.

### Liabilities under insurance contracts

	<i>Footnotes</i>	<b>Non-linked insurance</b> \$m	<b>Linked life insurance</b> \$m	<b>Investment contracts with DPF</b> \$m	<b>Total</b> \$m
Gross liabilities under insurance contracts at 1 Jan 2016		<b>40,538</b>	<b>6,791</b>	<b>22,609</b>	<b>69,938</b>
Claims and benefits paid		(2,828)	(749)	(2,017)	(5,594)
Increase in liabilities to policyholders		<b>8,778</b>	<b>1,321</b>	<b>2,409</b>	<b>12,508</b>
Disposals/transfers to held-for-sale		—	—	—	—
Exchange differences and other movements	2	(445)	(414)	(720)	(1,579)
<b>Gross liabilities under insurance contracts at 31 Dec 2016</b>		<b>46,043</b>	<b>6,949</b>	<b>22,281</b>	<b>75,273</b>
Reinsurers' share of liabilities under insurance contracts		(1,500)	(320)	—	(1,820)
<b>Net liabilities under insurance contracts at 31 Dec 2016</b>		<b>44,543</b>	<b>6,629</b>	<b>22,281</b>	<b>73,453</b>
Gross liabilities under insurance contracts at 1 Jan 2015		36,973	11,820	25,068	73,861
Claims and benefits paid		(3,200)	(1,869)	(2,101)	(7,170)
Increase in liabilities to policyholders		7,746	1,398	2,728	11,872
Disposals/transfers to held-for-sale		(443)	(4,594)	—	(5,037)
Exchange differences and other movements	2	(538)	36	(3,086)	(3,588)
Gross liabilities under insurance contracts at 31 Dec 2015		40,538	6,791	22,609	69,938
Reinsurers' share of liabilities under insurance contracts		(1,115)	(263)	—	(1,378)
Net liabilities under insurance contracts at 31 Dec 2015		39,423	6,528	22,609	68,560

1 Discretionary participation features.

2 'Exchange differences and other movements' includes movements in liabilities arising from net unrealised investment gains recognised in other comprehensive income.

The key factors contributing to the movement in liabilities to policyholders included death claims, surrenders, lapses, liabilities to policyholders created at the initial inception of the policies, the declaration of bonuses and other amounts attributable to policyholders.

## Notes on the Financial Statements

### 4 Operating profit

Operating profit is stated after the following items:

	2016 \$m	2015 \$m	2014 \$m
<b>Income</b>			
Interest recognised on impaired financial assets	<b>574</b>	934	1,137
Fees earned on financial assets that are not at fair value through profit or loss (other than amounts included in determining the effective interest rate)	<b>7,732</b>	8,736	9,438
Fees earned on trust and other fiduciary activities	<b>2,543</b>	3,052	3,253
<b>Expense</b>			
Interest on financial instruments, excluding interest on financial liabilities held for trading or designated at fair value	<b>(11,858)</b>	(13,680)	(15,322)
Fees payable on financial liabilities that are not at fair value through profit or loss (other than amounts included in determining the effective interest rate)	<b>(1,214)</b>	(1,251)	(1,427)
Fees payable relating to trust and other fiduciary activities	<b>(129)</b>	(166)	(185)
Payments under lease and sublease agreements	<b>(969)</b>	(1,190)	(1,548)
– minimum lease payments	<b>(945)</b>	(1,058)	(1,199)
– contingent rents and sublease payments	<b>(24)</b>	(132)	(349)
UK bank levy	<b>(922)</b>	(1,421)	(1,066)
Restructuring provisions	<b>(415)</b>	(430)	(147)
<b>Gains/(losses)</b>			
Impairment of available-for-sale equity securities	<b>(36)</b>	(111)	(373)
Gains/(losses) recognised on assets held for sale	<b>(206)</b>	(244)	220
Gains on the partial sale of shareholding in Industrial Bank	<b>—</b>	1,372	—
Loss on disposal of Brazilian operations	<b>(1,743)</b>	—	—
<b>Loan impairment charges and other credit risk provisions</b>			
– net impairment charge on loans and advances	<b>(3,400)</b>	(3,721)	(3,851)
– release of impairment on available-for-sale debt securities	<b>(3,350)</b>	(3,592)	(4,055)
– other credit risk provisions	<b>63</b>	17	319
	<b>(113)</b>	(146)	(115)

External net operating income is attributed to countries on the basis of the location of the branch responsible for reporting the results or advancing the funds:

	Footnote	2016 \$m	2015 \$m	2014 \$m
<b>External net operating income by country</b>	1	<b>47,966</b>	59,800	61,248
– UK		<b>9,495</b>	14,132	14,392
– Hong Kong		<b>12,864</b>	14,447	12,656
– US		<b>5,094</b>	5,541	5,736
– France		<b>2,571</b>	2,706	2,538
– other countries		<b>17,942</b>	22,974	25,926
– of which: Brazil		<b>(204)</b>	3,546	4,817

1 Net operating income before loan impairment charges and other credit risk provisions, also referred to as revenue.

### 5 Employee compensation and benefits

	2016 \$m	2015 \$m	2014 \$m
Wages and salaries	<b>15,735</b>	17,245	17,477
Social security costs	<b>1,312</b>	1,600	1,666
Post-employment benefits	<b>1,042</b>	1,055	1,223
<b>Year ended 31 Dec</b>	<b>18,089</b>	19,900	20,366

Average number of persons employed by HSBC during the year by global business

	2016	2015	2014
Retail Banking and Wealth Management	<b>137,234</b>	155,859	156,397
Commercial Banking	<b>45,912</b>	51,007	50,519
Global Banking and Markets	<b>47,623</b>	49,912	47,219
Global Private Banking	<b>8,322</b>	8,934	8,799
Corporate Centre	<b>7,842</b>	2,721	1,833
<b>Year ended 31 Dec</b>	<b>246,933</b>	268,433	264,767

### Average number of persons employed by HSBC during the year by geographical region

	Footnote	2016	2015	2014
Europe	1	<b>71,196</b>	68,408	68,163
Asia		<b>122,282</b>	121,438	116,492
Middle East and North Africa	1	<b>12,021</b>	14,467	14,477
North America		<b>20,353</b>	21,506	21,983
Latin America		<b>21,081</b>	42,614	43,652
<b>Year ended 31 Dec</b>		<b>246,933</b>	268,433	264,767

1 2015 and 2014 figures are restated for the changes explained on page 44.

### Reconciliation of total incentive awards granted to income statement charge

	2016 \$m	2015 \$m	2014 \$m
Total incentive awards approved and granted for the current year	<b>3,035</b>	3,462	3,660
Less: deferred bonuses awarded, expected to be recognised in future periods	(323)	(387)	(359)
<b>Total incentives awarded and recognised in the current year</b>	<b>2,712</b>	3,075	3,301
Add: current year charges for deferred bonuses from previous years	<b>371</b>	483	425
Other	(128)	(40)	(114)
<b>Income statement charge for incentive awards</b>	<b>2,955</b>	3,518	3,612

### Year in which income statement is expected to reflect deferred bonuses

	Charge recognised			Expected charge	
	2016 \$m	2015 \$m	2014 \$m	2017 \$m	2018 and beyond \$m
Variable compensation from 2016 bonus pool	<b>152</b>	—	—	137	186
Variable compensation from 2015 bonus pool	<b>168</b>	253	—	128	76
Variable compensation from 2014 bonus pool and earlier	<b>203</b>	483	670	88	28
<b>Total</b>	<b>523</b>	736	670	353	290
Cash awards	<b>163</b>	168	150	102	98
Equity awards	<b>360</b>	568	520	251	192

### Share-based payments

'Wages and salaries' includes the effect of share-based payments arrangements, of which \$534m were equity settled (2015: \$757m; 2014: \$732m), as follows:

	2016 \$m	2015 \$m	2014 \$m
Restricted share awards	<b>591</b>	748	738
Savings-related and other share award option plans	<b>33</b>	43	36
<b>Year ended 31 Dec</b>	<b>624</b>	791	774

### HSBC share awards

Award	Policy
<b>Restricted share awards (including annual incentive awards delivered in shares) and GPSP</b>	<ul style="list-style-type: none"> <li>An assessment of performance over the relevant period ending on 31 December is used to determine the amount of the award to be granted.</li> <li>Deferred awards generally require employees to remain in employment over the vesting period and are not subject to performance conditions after the grant date.</li> <li>Deferred share awards generally vest over a period of three years and GPSP awards vest after five years.</li> <li>Vested shares may be subject to a retention requirement post-vesting. GPSP awards are retained until cessation of employment.</li> <li>Awards granted from 2010 onwards are subject to a malus provision prior to vesting.</li> <li>Awards granted to Material Risk Takers from 2015 onwards are subject to clawback post vesting.</li> </ul>
<b>International Employee Share Purchase Plan ('ShareMatch')</b>	<ul style="list-style-type: none"> <li>The plan was first introduced in Hong Kong in 2013 and now includes employees based in 25 jurisdictions.</li> <li>Shares are purchased in the market each quarter up to a maximum value of £750, or the equivalent in local currency.</li> <li>Matching awards are added at a ratio of one free share for every three purchased.</li> <li>Matching awards vest subject to continued employment and the retention of the purchased shares for a maximum period of two years and nine months.</li> </ul>

## Notes on the Financial Statements

### Movement on HSBC share awards

	2016 Number (000s)	2015 Number (000s)
<b>Restricted share awards outstanding at 1 Jan</b>	<b>118,665</b>	116,483
Additions during the year	94,981	80,749
Released in the year	(76,552)	(75,235)
Forfeited in the year	(13,928)	(3,332)
<b>Restricted share awards outstanding at 31 Dec</b>	<b>123,166</b>	118,665
Weighted average fair value of awards granted (\$)	7.25	9.67

### HSBC share option plans

Main plans	Policy
<b>Savings-related share option plans ('Sharesave')</b>	<ul style="list-style-type: none"> <li>Two plans: the UK Plan and the International Plan. The last grant of options under the International Plan was in 2012.</li> <li>From 2014, eligible employees can save up to £500 per month with the option to use the savings to acquire shares.</li> <li>Exercisable within six months following either the third or fifth anniversaries of the commencement of a three-year or five-year contract, respectively.</li> <li>The exercise price is set at a 20% (2015: 20%) discount to the market value immediately preceding the date of invitation.</li> </ul>
<b>HSBC Holdings Group share option plan</b>	<ul style="list-style-type: none"> <li>Plan ceased in May 2005.</li> <li>Exercisable between the third and 10th anniversaries of the date of grant.</li> </ul>

### Calculation of fair values

The fair values of share options are calculated using a Black-Scholes model. The fair value of a share award is based on the share price at the date of the grant.

### Movement on HSBC share option plans

Footnotes	Savings-related share option plans		HSBC Holdings Group share option plan	
	Number (000s)	WAEP <sup>1</sup> £	Number (000s)	WAEP <sup>1</sup> £
<b>Outstanding at 1 Jan 2016</b>	<b>74,775</b>	<b>4.36</b>	—	—
Granted during the year	2	15,044	4.40	—
Exercised during the year	3	(4,354)	5.02	—
Expired during the year		(15,438)	4.47	—
<b>Outstanding at 31 Dec 2016</b>	<b>70,027</b>	<b>4.30</b>	—	—
Weighted average remaining contractual life (years)		2.91		—
Outstanding at 1 Jan 2015		66,366	4.89	6,374
Granted during the year	2	52,629	4.05	—
Exercised during the year	3	(21,120)	4.45	—
Expired during the year		(23,100)	5.11	(6,374)
Outstanding at 31 Dec 2015		74,775	4.36	—
Weighted average remaining contractual life (years)		3.92		—

<sup>1</sup> Weighted average exercise price.

<sup>2</sup> The weighted average fair value of options granted during the year was \$1.28 (2015: \$1.09).

<sup>3</sup> The weighted average share price at the date the options were exercised was \$6.98 (2015: \$8.50) and \$0 (2015: \$0) for the savings-related share option plans and HSBC Holdings Group share option plan, respectively.

### Post-employment benefit plans

The Group operates pension plans throughout the world for its employees. 'Pension risk management' on page 84 contains details of the policies and practices associated with these pension plans. Some are defined benefit plans, of which the largest is the HSBC Bank (UK) Pension Scheme ('the principal plan').

#### The principal plan

The principal plan has a defined benefit section and a defined contribution section. The defined benefit section was closed to future benefit accrual in 2015, with defined benefits earned by employees at that date continuing to be linked to their salary while they remain employed by HSBC Bank. The plan is overseen by an independent corporate trustee, who has a fiduciary responsibility for the operation of the plan. Its assets are held separately from the assets of the Group.

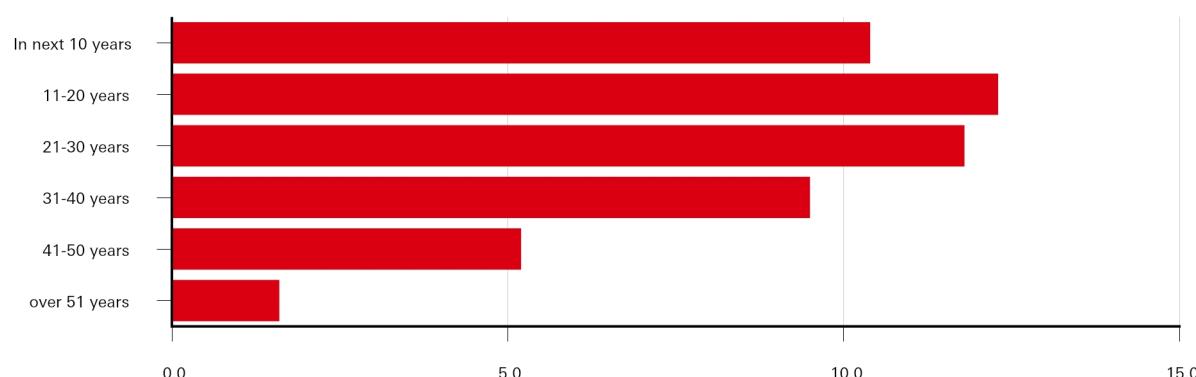
The investment strategy of the plan is to hold the majority of assets in bonds, with the remainder in a diverse range of investments. It also includes some interest rate swaps to reduce interest rate risk and inflation swaps to reduce inflation risk.

The latest funding valuation of the plan at 31 December 2014 was carried out by Colin G Singer, of Willis Towers Watson Limited, who is a Fellow of the UK Institute and Faculty of Actuaries, using the projected unit credit method. At that date, the market value of the plan's assets was £24.6bn (\$30.3bn) and this exceeded the value placed on its liabilities on an ongoing basis by £520m (\$641m), giving a funding level of 102%. The main differences between the assumptions used for assessing the liabilities for this funding valuation and those used for IAS 19 (see 'Key actuarial assumptions' section below) are more prudent discount rate, inflation and longevity assumptions.

Although the plan was in surplus at the valuation date, HSBC agreed to make further contributions to the plan to support a lower-risk investment strategy over the longer term. These contributions amounted to £128m (\$158m) in 2016 and are expected to amount to £64m (\$79m) in each of 2017, 2018 and 2019, and £160m (\$197m) in each of 2020 and 2021.

The chart below shows the expected profile of future benefits payable from the plan.

#### Future benefit payments (\$bn)



The actuary also assessed the value of the liabilities if the plan were to be stopped and an insurance company asked to secure all future pension payments. This is generally larger than the amount needed on the ongoing basis described above because an insurance company would use more prudent assumptions and include an explicit allowance for the future administrative expenses of the plan. Under this approach, the amount of assets needed was estimated to be £31bn (\$38bn) at 31 December 2014.

#### Income statement charge

	2016 \$m	2015 \$m	2014 \$m
Defined benefit pension plans	218	256	469
Defined contribution pension plans	783	793	687
<b>Pension plans</b>	<b>1,001</b>	<b>1,049</b>	<b>1,156</b>
Defined benefit and contribution healthcare plans	41	6	67
<b>Year ended 31 Dec</b>	<b>1,042</b>	<b>1,055</b>	<b>1,223</b>

#### Net assets/(liabilities) recognised on the balance sheet in respect of defined benefit plans

	Fair value of plan assets \$m	Present value of defined benefit obligations \$m	Effect of limit on plan surpluses \$m	Total \$m
Defined benefit pension plans	42,397	(39,747)	(24)	2,626
Defined benefit healthcare plans	118	(711)	—	(593)
<b>At 31 Dec 2016</b>	<b>42,515</b>	<b>(40,458)</b>	<b>(24)</b>	<b>2,033</b>
Total employee benefit liabilities (within 'Accruals, deferred income and other liabilities')				(2,681)
Total employee benefit assets (within 'Prepayments, accrued income and other assets')				4,714
Defined benefit pension plans	41,424	(38,326)	(14)	3,084
Defined benefit healthcare plans	141	(762)	—	(621)
<b>At 31 Dec 2015</b>	<b>41,565</b>	<b>(39,088)</b>	<b>(14)</b>	<b>2,463</b>
Total employee benefit liabilities (within 'Accruals, deferred income and other liabilities')				(2,809)
Total employee benefit assets (within 'Prepayments, accrued income and other assets')				5,272

## Notes on the Financial Statements

### Defined benefit pension plans

#### Net asset/(liability) under defined benefit pension plans

	Fair value of plan assets		Present value of defined benefit obligations		Effect of the asset ceiling		Net defined benefit asset/(liability)	
	Principal plan	Other plans	Principal plan	Other plans	Principal plan	Other plans	Principal plan	Other plans
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>At 1 Jan 2016</b>	<b>32,670</b>	<b>8,754</b>	<b>(27,675)</b>	<b>(10,651)</b>	—	(14)	<b>4,995</b>	<b>(1,911)</b>
Current service cost	—	—	(70)	(235)	—	—	(70)	(235)
Past service cost and gains/(losses) from settlements	—	(1)	—	(39)	—	—	—	(40)
Service cost	—	(1)	(70)	(274)	—	—	(70)	(275)
Net interest income/(cost) on the net defined benefit asset/(liability)	1,085	294	(914)	(337)	—	(1)	171	(44)
Re-measurement effects recognised in other comprehensive income	6,449	671	(6,886)	(299)	—	(8)	(437)	364
– return on plan assets (excluding interest income)	6,449	671	—	—	—	—	6,449	671
– actuarial gains/(losses)	—	—	(7,029)	(152)	—	(8)	(7,029)	(160)
– other changes	—	—	143	(147)	—	—	143	(147)
Exchange differences	(6,097)	(534)	5,254	410	—	(1)	(843)	(125)
Contributions by HSBC	347	379	—	—	—	—	347	379
– normal	64	207	—	—	—	—	64	207
– special	283	172	—	—	—	—	283	172
Contributions by employees	—	30	—	(30)	—	—	—	—
Benefits paid	(970)	(623)	970	698	—	—	—	75
Administrative costs and taxes paid by plan	(42)	(15)	42	15	—	—	—	—
<b>At 31 Dec 2016</b>	<b>33,442</b>	<b>8,955</b>	<b>(29,279)</b>	<b>(10,468)</b>	—	(24)	<b>4,163</b>	<b>(1,537)</b>
Present value of defined benefit obligation relating to:								
– actives			(7,066)	(5,066)				
– deferreds			(9,219)	(2,306)				
– pensioners			(12,994)	(3,096)				
At 1 Jan 2015	35,244	9,580	(30,480)	(11,582)	—	(17)	4,764	(2,019)
Current service cost	—	—	(129)	(268)	—	—	(129)	(268)
Past service cost and gains/(losses) from settlements	—	(3)	(53)	71	—	—	(53)	68
Service cost	—	(3)	(182)	(197)	—	—	(182)	(200)
Net interest income/(cost) on the net defined benefit asset/(liability)	1,265	322	(1,088)	(371)	—	(2)	177	(51)
Re-measurement effects recognised in other comprehensive income	(1,521)	(394)	1,642	339	—	(30)	121	(85)
– return on plan assets (excluding interest income)	(1,521)	(394)	—	—	—	—	(1,521)	(394)
– actuarial gains/(losses)	—	—	1,392	339	—	(30)	1,392	309
– other changes	—	—	250	—	—	—	250	—
Exchange differences	(1,704)	(458)	1,443	529	—	35	(261)	106
Contributions by HSBC	376	279	—	—	—	—	376	279
– normal	159	227	—	—	—	—	159	227
– special	217	52	—	—	—	—	217	52
Contributions by employees	17	35	(17)	(35)	—	—	—	—
Benefits paid	(970)	(590)	970	649	—	—	—	59
Administrative costs and taxes paid by plan	(37)	(17)	37	17	—	—	—	—
<b>At 31 Dec 2015</b>	<b>32,670</b>	<b>8,754</b>	<b>(27,675)</b>	<b>(10,651)</b>	—	(14)	<b>4,995</b>	<b>(1,911)</b>
Present value of defined benefit obligation relating to:								
– actives			(6,310)	(5,350)				
– deferreds			(7,919)	(2,239)				
– pensioners			(13,446)	(3,062)				

HSBC expects to make \$425m of contributions to defined benefit pension plans during 2017. Benefits expected to be paid from the plans to retirees over each of the next five years, and in aggregate for the five years thereafter, are as follows:

#### Benefits expected to be paid from plans

	2017	2018	2019	2020	2021	2022-2026
Footnote	\$m	\$m	\$m	\$m	\$m	\$m
The principal plan	1	917	948	979	1,012	1,045
Other plans	1	427	468	489	505	536

<sup>1</sup> The duration of the defined benefit obligation is 19.0 years for the principal plan under the disclosure assumptions adopted (2015: 17.0 years) and 13.9 years for all other plans combined (2015: 13.9 years).

## Fair value of plan assets by asset classes

	31 Dec 2016				31 Dec 2015			
	Value \$m	Quoted market price in active market \$m	No quoted market price in active market \$m	Thereof HSBC <sup>1</sup> \$m	Value \$m	Quoted market price in active market \$m	No quoted market price in active market \$m	Thereof HSBC <sup>1</sup> \$m
<b>The principal plan</b>								
Fair value of plan assets	33,442	29,379	4,063	878	32,670	29,370	3,300	513
- equities	5,386	4,722	664	-	5,730	4,990	740	-
- bonds	23,426	23,426	-	-	22,704	22,704	-	-
- derivatives	2,107	-	2,107	878	1,011	-	1,011	513
- other	2,523	1,231	1,292	-	3,225	1,676	1,549	-
<b>Other plans</b>								
Fair value of plan assets	8,955	7,631	1,324	239	8,754	7,882	872	148
- equities	2,255	1,502	753	-	2,434	1,900	534	1
- bonds	5,811	5,592	219	5	5,719	5,458	261	2
- derivatives	(89)	44	(133)	(85)	7	-	7	1
- other	978	493	485	319	594	524	70	144

1 The fair value of plan assets includes derivatives entered into with HSBC Bank plc as detailed in Note 36.

## Post-employment defined benefit plans' principal actuarial financial assumptions

HSBC determines the discount rates to be applied to its obligations in consultation with the plans' local actuaries, on the basis of current average yields of high quality (AA-rated or equivalent) debt instruments with maturities consistent with those of the defined benefit obligations.

### Key actuarial assumptions for the principal plan

	Discount rate %	Inflation rate %	Rate of increase for pensions %	Rate of pay increase %
			3.50	3.20
<b>UK</b>				
<b>At 31 Dec 2016</b>	<b>2.50</b>	<b>3.50</b>	<b>3.20</b>	<b>4.00</b>
At 31 Dec 2015	3.70	3.20	3.00	3.70
At 31 Dec 2014	3.70	3.20	3.00	3.70

### Mortality tables and average life expectancy at age 65 for the principal plan

	Mortality table	Life expectancy at age 65 for a male member currently:		Life expectancy at age 65 for a female member currently:	
		Aged 65	Aged 45	Aged 65	Aged 45
<b>UK</b>					
<b>At 31 Dec 2016</b>	<b>SAPS S2<sup>1</sup></b>	<b>22.4</b>	<b>24.1</b>	<b>24.7</b>	<b>26.6</b>
At 31 Dec 2015	SAPS S1 <sup>2</sup>	23.6	25.0	24.9	26.7

1 Self-administered Pension Scheme ('SAPS') S2 table (Males: 'All Pensioners' version, Females: 'Normal Pensions' version) with a multiplier of 0.98 for both male and female pensioners. Improvements are projected in accordance with the Continuous Mortality Investigation ('CMI') core projection model 2015 with a long-term rate of improvement of 1.25% per annum. Separate tables assuming lighter mortality have been applied to higher paid pensioners.

2 Self-administered Pension Scheme ('SAPS') Light table with a multiplier of 1.01 for male pensioners and 1.02 for female pensioners. Improvements are projected in accordance with the Continuous Mortality Investigation ('CMI') core projection model 2015 with a long-term rate of improvement of 1.25% per annum.

### The effect of changes in key assumptions on the principal plan

	Impact on HSBC Bank (UK) Pension Scheme Obligation			
	Financial impact of increase		Financial impact of decrease	
	2016 \$m	2015 \$m	2016 \$m	2015 \$m
Discount rate – increase/decrease of 0.25%	(1,322)	(1,107)	1,419	1,180
Inflation rate – increase/decrease of 0.25%	735	747	(1,048)	(855)
Pension payments and deferred pensions – increase/decrease of 0.25%	1,305	990	(1,255)	(937)
Pay – increase/decrease of 0.25%	143	119	(139)	(119)
Change in mortality – increase of 1 year	1,326	670	n/a	n/a

## Notes on the Financial Statements

### HSBC Holdings

Employee compensation and benefit expense in respect of HSBC Holdings' employees in 2016 amounted to \$571m (2015: \$908m). The average number of persons employed during 2016 was 1,660 (2015: 2,656). Employees who are members of defined benefit pension plans are principally members of either the HSBC Bank (UK) Pension Scheme or the HSBC International Staff Retirement Benefits Scheme. HSBC Holdings pays contributions to such plans for its own employees in accordance with the schedules of contributions determined by the trustees of the plans and recognises these contributions as an expense as they fall due.

From 1 July 2016 employment costs of most employees are recognised by the ServCo group and the ServCo group has started providing services to HSBC Holdings. HSBC Holdings recognised a management charge of \$406m for these services which is included under 'General and administrative expenses'.

### Directors' emoluments

Details of directors' emoluments, pensions and their interests are disclosed in the Directors' Remuneration Report on page 153.

## 6 Auditors' remuneration

	Footnotes	2016 \$m	2015 \$m	2014 \$m
Audit fees payable to PwC/KPMG	1, 2	<b>65.7</b>	62.0	40.6
Other audit fees payable		<b>1.6</b>	1.2	1.2
<b>Year ended 31 Dec</b>		<b>67.3</b>	63.2	41.8

### Fees payable by HSBC to PwC/KPMG<sup>2</sup>

	Footnotes	2016 \$m	2015 \$m	2014 \$m
Fees for HSBC Holdings' statutory audit	3	<b>14.0</b>	13.1	13.4
Fees for other services provided to HSBC		<b>97.1</b>	85.1	62.5
– audit of HSBC's subsidiaries	4	<b>51.7</b>	48.9	27.2
– audit-related assurance services	5	<b>20.6</b>	16.6	22.6
– taxation-related services:				
taxation compliance services		<b>1.9</b>	1.0	1.5
taxation advisory services		<b>0.4</b>	0.9	0.8
– other assurance services	6	<b>4.5</b>	2.8	0.7
– other non-audit services	6	<b>18.0</b>	14.9	9.7
<b>Year ended 31 Dec</b>		<b>111.1</b>	98.2	75.9

No fees were payable by HSBC to PwC or KPMG as principal auditor for the following types of services: internal audit services and services related to litigation, recruitment and remuneration.

### Fees payable by HSBC's associated pension schemes to PwC/KPMG<sup>2</sup>

	2016 \$000	2015 \$000	2014 \$000
Audit of HSBC's associated pension schemes	<b>208</b>	352	322
Audit related assurance services	<b>4</b>	5	5
<b>Year ended 31 Dec</b>	<b>212</b>	357	327

<sup>1</sup> Included within the 2016 audit fees payable is a final fee adjustment of \$4.2m related to the prior year audit in respect of overruns.

<sup>2</sup> PwC became the Group's principal auditor in 2015. KPMG was the principal auditor during 2014.

<sup>3</sup> Fees payable to PwC and KPMG for the statutory audit of the consolidated financial statements of HSBC and the separate financial statements of HSBC Holdings. They include amounts payable for services relating to the consolidation returns of HSBC Holdings' subsidiaries which are clearly identifiable as being in support of the Group audit opinion.

<sup>4</sup> Fees payable for the statutory audit of the financial statements of HSBC's subsidiaries, including the 2016 changes in scope and additional procedures performed due to the technology systems and data access controls matter as described on page 174.

<sup>5</sup> Including services for assurance and other services that relate to statutory and regulatory filings, including comfort letters and interim reviews and work performed related to the implementation of IFRS 9.

<sup>6</sup> Including other permitted services relating to advisory, corporate finance transactions, etc.

No fees were payable by HSBC's associated pension schemes to PwC or KPMG as principal auditor for the following types of services: audit-related assurance services, internal audit services, other assurance services, services related to corporate finance transactions, valuation and actuarial services, litigation, recruitment and remuneration, and information technology.

In addition to the above, the estimated fees paid to PwC by third parties other than HSBC amount to \$4.3m (PwC 2015: \$2.4m; KPMG 2014: \$3.6m). In these cases, HSBC is connected with the contracting party and may therefore be involved in appointing PwC. These fees arise from services such as auditing mutual funds managed by HSBC and reviewing the financial position of corporate concerns which borrow from HSBC.

Fees payable for non-audit services for HSBC Holdings are not disclosed separately because such fees are disclosed on a consolidated basis for the HSBC Group.

## 7 Tax

### Tax expense

	Footnotes	2016 \$m	2015 \$m	2014 \$m
Current tax	1	<b>3,669</b>	3,797	3,950
– for this year		<b>3,525</b>	3,882	4,477
– adjustments in respect of prior years		<b>144</b>	(85)	(527)
Deferred tax		<b>(3)</b>	(26)	25
– origination and reversal of temporary differences		<b>(111)</b>	(153)	(477)
– effect of changes in tax rates		<b>(4)</b>	110	83
– adjustments in respect of prior years		<b>112</b>	17	419
<b>Year ended 31 Dec</b>		<b>3,666</b>	3,771	3,975

<sup>1</sup> Current tax included Hong Kong profits tax of \$1,118m (2015: \$1,294m; 2014: \$1,135m). The Hong Kong tax rate applying to the profits of subsidiaries assessable in Hong Kong was 16.5% (2015: 16.5%; 2014: 16.5%).

### Tax reconciliation

The tax charged to the income statement differs from the tax charge that would apply if all profits had been taxed at the UK corporation tax rate as follows:

	2016 \$m	%	2015 \$m	%	2014 \$m	%
Profit before tax	<b>7,112</b>		18,867		18,680	
<b>Tax expense</b>						
Taxation at UK corporation tax rate of 20.0% (2015: 20.25%; 2014: 21.5%)	<b>1,422</b>	<b>20.0</b>	3,821	20.25	4,016	21.50
Impact of differently taxed overseas profits in overseas locations	<b>43</b>	<b>0.6</b>	71	0.4	33	0.2
Items increasing tax charge in 2016 not in 2015:						
– non-deductible goodwill write-down	<b>648</b>	<b>9.1</b>	—	—	—	—
– non-deductible loss and taxes suffered on Brazil disposal	<b>464</b>	<b>6.5</b>	—	—	—	—
– UK tax losses not recognised	<b>305</b>	<b>4.3</b>	—	—	—	—
– adjustments in respect of prior period liabilities	<b>256</b>	<b>3.6</b>	(68)	(0.4)	(108)	(0.6)
– UK Banking Surcharge	<b>199</b>	<b>2.8</b>	—	—	—	—
– non-UK tax losses not recognised	<b>147</b>	<b>2.1</b>	—	—	—	—
Other items increasing tax charge in 2016:						
– local taxes and overseas withholding taxes	<b>434</b>	<b>6.1</b>	416	2.2	434	2.3
– other permanent disallowables	<b>438</b>	<b>6.2</b>	421	2.2	476	2.5
– bank levy	<b>170</b>	<b>2.4</b>	286	1.5	229	1.2
– non-deductible UK customer compensation	<b>162</b>	<b>2.3</b>	87	0.5	—	—
– other items	<b>—</b>	<b>—</b>	(116)	(0.6)	(22)	(0.1)
– non-deductible regulatory settlements	<b>20</b>	<b>0.3</b>	184	1.0	264	1.4
Items reducing tax charge in 2016:						
– non-taxable income and gains	<b>(577)</b>	<b>(8.1)</b>	(501)	(2.7)	(668)	(3.5)
– effect of profits in associates and joint ventures	<b>(461)</b>	<b>(6.5)</b>	(508)	(2.7)	(547)	(2.9)
– change in tax rates	<b>(4)</b>	<b>(0.1)</b>	110	0.6	22	0.1
Non-taxable income and gains - Industrial Bank	<b>—</b>	<b>—</b>	(227)	(1.2)	—	—
US deferred tax temporary differences previously not recognised	<b>—</b>	<b>—</b>	(184)	(1.0)	(154)	(0.8)
Other deferred tax temporary differences previously not recognised	<b>—</b>	<b>—</b>	(21)	(0.1)	—	—
<b>Year ended 31 Dec</b>	<b>3,666</b>	<b>51.6</b>	3,771	20.0	3,975	21.3

The Group's profits are taxed at different rates depending on the country in which the profits arise. The key applicable tax rates include Hong Kong (16.5%), USA (35%) and UK (20%). If the Group's profits were taxed at the statutory rates of the countries in which the profits arise then the tax rate for the year would have been 20.6% (2015: 20.65%). The effective tax rate for the year was 51.6% (2015: 20%) and was significantly higher than 2015 due to the non-deductible goodwill write-down and loss on disposal of Brazil, tax losses not recognised, adjustments in respect of prior periods and the 8% UK banking surcharge, which became applicable from 1 January 2016.

Accounting for taxes involves some estimation because the tax law is uncertain and its application requires a degree of judgement, which authorities may dispute. Liabilities are recognised based on best estimates of the probable outcome, taking into account external advice where appropriate. We do not expect significant liabilities to arise in excess of the amounts provided. HSBC only recognises current and deferred tax assets where recovery is probable.

## Notes on the Financial Statements

### Movement of deferred tax assets and liabilities

Footnotes	Loan impairment provisions		Unused tax losses and tax credits		Derivatives, FVOD <sup>1</sup> and other investments		Insurance business	Expense provisions	Other	Total
		\$m		\$m		\$m	\$m	\$m	\$m	\$m
Assets		1,351		1,388		1,400	—	1,271	1,050	6,460
Liabilities		—		—	(230)	(1,056)	—	(883)	(2,169)	
<b>At 1 Jan 2016</b>		<b>1,351</b>		<b>1,388</b>		<b>1,170</b>	<b>(1,056)</b>	<b>1,271</b>	<b>167</b>	<b>4,291</b>
Income statement	3	(279)		876	18	(123)	(370)	(314)	(192)	
Other comprehensive income		—		—	28	—	—	259	287	
Equity		—		—	—	—	—	20	20	
Foreign exchange and other adjustments		(122)		(52)	(49)	9	(8)	356	134	
<b>At 31 Dec 2016</b>		<b>950</b>		<b>2,212</b>		<b>1,167</b>	<b>(1,170)</b>	<b>893</b>	<b>488</b>	<b>4,540</b>
Assets	2	950		2,212		1,441	—	893	1,857	7,353
Liabilities	2	—		—	(274)	(1,170)	—	(1,369)	(2,813)	
Assets		2,264		1,332		1,764	—	1,244	836	7,440
Liabilities		—		—	(233)	(861)	—	(759)	(1,853)	
At 1 Jan 2015		2,264		1,332		1,531	(861)	1,244	77	5,587
Income statement		45		379	(557)	(143)	418	(116)	26	
Other comprehensive income		—		—	22	—	156	321	499	
Reclassification to 'Assets held for sale'		(673)		(186)	76	87	(386)	(136)	(1,218)	
Equity		—		—	—	—	—	4	4	
Foreign exchange and other adjustments		(285)		(137)	98	(139)	(161)	17	(607)	
<b>At 31 Dec 2015</b>		<b>1,351</b>		<b>1,388</b>		<b>1,170</b>	<b>(1,056)</b>	<b>1,271</b>	<b>167</b>	<b>4,291</b>
Assets	2	1,351		1,388		1,400	—	1,271	1,050	6,460
Liabilities	2	—		—	(230)	(1,056)	—	(883)	(2,169)	

<sup>1</sup> Fair value of own debt.

<sup>2</sup> After netting off balances within countries, the balances as disclosed in the accounts are as follows: deferred tax assets \$6,163m (2015: \$6,051m); and deferred tax liabilities \$1,623m (2015: \$1,760m).

<sup>3</sup> Excludes a tax credit of \$195m relating to deferred tax balances in Brazil, which were included within 'Assets held for sale' prior to disposal.

In applying judgement in recognising deferred tax assets, management has critically assessed all available information, including future business profit projections and the track record of meeting forecasts.

The net deferred tax asset of \$4.5bn (2015: \$4.3bn) includes \$4.8bn (2015: \$4.5bn) deferred tax assets relating to the US, of which \$2bn deferred tax asset relates to US tax losses that expire in 16-20 years. Management expects the US deferred tax asset to be substantially recovered in six to seven years, with the majority recovered in the first five years. The most recent financial forecasts approved by management covers a five-year period and the forecasts have been extrapolated beyond five years by assuming that performance remains constant after the fifth year. The forecasts also include additional tax losses in 2017 – these losses expire in 2037 and are expected to be utilised by 2023.

The US reported a loss for the current period, mainly due to the Household International class action litigation settlement. Excluding the Household International class action settlement the US would have reported a profit for the current year. In addition, the US reported a profit in 2014 and 2015. Management does not expect the current year loss to adversely impact future deferred tax asset recovery to a significant extent.

The US deferred tax asset has been calculated using the current federal tax rate of 35%. Any possible future reduction of the US federal tax rate from 35% would reduce the value of the US deferred tax assets and create a tax charge in the period in which any change in the tax rate is enacted. This tax charge should be ultimately offset by the benefit of reduced US tax charges in future years.

### Unrecognised deferred tax

The amount of gross temporary differences, unused tax losses and tax credits for which no deferred tax asset is recognised in the balance sheet was \$18.2bn (2015: \$15.5bn). These amounts included unused state losses arising in the Group's US operations of \$12.3bn (2015: \$11.3bn). Of the total amounts unrecognised, \$4.9bn (2015: \$3.1bn) had no expiry date, \$1.0bn (2015: \$0.9bn) was scheduled to expire within 10 years and the remaining balance is expected to expire after 10 years.

Deferred tax is not recognised in respect of the Group's investments in subsidiaries and branches where HSBC is able to control the timing of remittance or other realisation and where remittance or realisation is not probable in the foreseeable future. The aggregate temporary differences relating to unrecognised deferred tax liabilities arising on investments in subsidiaries and branches is \$10.6bn (2015: \$9.1bn) and the corresponding unrecognised deferred tax liability is \$0.7bn (2015: \$0.6bn).

## 8 Dividends

### Dividends to shareholders of the parent company

	2016			2015			2014		
	Per share \$	Total \$m	Settled in scrip \$m	Per share \$	Total \$m	Settled in scrip \$m	Per share \$	Total \$m	Settled in scrip \$m
<b>Dividends paid on ordinary shares</b>									
In respect of previous year:									
– fourth interim dividend	<b>0.21</b>	<b>4,137</b>	<b>408</b>	0.20	3,845	2,011	0.19	3,582	1,827
In respect of current year:									
– first interim dividend	<b>0.10</b>	<b>1,981</b>	<b>703</b>	0.10	1,951	231	0.10	1,906	284
– second interim dividend	<b>0.10</b>	<b>1,991</b>	<b>994</b>	0.10	1,956	160	0.10	1,914	372
– third interim dividend	<b>0.10</b>	<b>1,990</b>	<b>935</b>	0.10	1,958	760	0.10	1,918	226
<b>Total</b>	<b>0.51</b>	<b>10,099</b>	<b>3,040</b>	0.50	9,710	3,162	0.49	9,320	2,709
Total dividends on preference shares classified as equity (paid quarterly)	<b>62.00</b>	<b>90</b>		62.00	90		62.00	90	

### Total coupons on capital securities classified as equity

	Footnotes	First call date	2016		2015	2014
			Total	Per security \$m	Total \$m	Total \$m
Perpetual subordinated capital securities	1, 3					
– \$2,200m		Apr 2013	<b>\$2.032</b>	<b>179</b>	179	179
– \$3,800m		Dec 2015	<b>\$2.000</b>	<b>304</b>	304	304
Perpetual subordinated contingent convertible securities	2, 3					
– \$2,250m issued at 6.375%		Sep 2024	<b>\$63.750</b>	<b>143</b>	143	–
– \$1,500m issued at 5.625%		Jan 2020	<b>\$56.250</b>	<b>84</b>	70	–
– €1,500m issued at 5.250%		Sep 2022	<b>€52.500</b>	<b>88</b>	86	–
– \$2,450m issued at 6.375%		Mar 2025	<b>\$63.750</b>	<b>156</b>	78	–
– €1,000m issued at 6.000%		Sep 2023	<b>€60.000</b>	<b>67</b>	–	–
– \$2,000m issued at 6.875%		Jun 2021	<b>\$68.750</b>	<b>69</b>	–	–
<b>Total</b>				<b>1,090</b>	860	483

1 Discretionary coupons are paid quarterly on the perpetual subordinated capital securities, in denominations of \$25 per security.

2 Discretionary coupons are paid semi-annually on the perpetual subordinated contingent convertible securities, in denominations of 1,000 per security.

3 Further details of these securities can be found in Note 32.

After the end of the year, the Directors declared a fourth interim dividend in respect of the financial year ended 31 December 2016 of \$0.21 per ordinary share, a distribution of approximately \$4,172m. The fourth interim dividend will be payable on 6 April 2017 to holders on the Principal Register in the UK, the Hong Kong Overseas Branch Register or the Bermuda Overseas Branch Register on 24 February 2017. No liability was recorded in the financial statements in respect of the fourth interim dividend for 2016.

On 17 January 2017, HSBC paid a coupon on its \$2,200m subordinated capital securities of \$0.508 per security, a distribution of \$45m. On 17 January 2017, HSBC paid a coupon on its \$1,500m subordinated contingent convertible securities of \$28.125 per security, a distribution of \$42m. No liability was recorded in the balance sheet at 31 December 2016 in respect of these coupon payments.

## Notes on the Financial Statements

### 9 Earnings per share

Basic earnings per ordinary share is calculated by dividing the profit attributable to ordinary shareholders of the parent company by the weighted average number of ordinary shares outstanding, excluding own shares held. Diluted earnings per ordinary share is calculated by dividing the basic earnings, which require no adjustment for the effects of dilutive potential ordinary shares, by the weighted average number of ordinary shares outstanding, excluding own shares held, plus the weighted average number of ordinary shares that would be issued on conversion of dilutive potential ordinary shares.

#### Profit attributable to the ordinary shareholders of the parent company

	2016 \$m	2015 \$m	2014 \$m
Profit attributable to shareholders of the parent company	<b>2,479</b>	13,522	13,688
Dividend payable on preference shares classified as equity	(90)	(90)	(90)
Coupon payable on capital securities classified as equity	(1,090)	(860)	(483)
<b>Year ended 31 Dec</b>	<b>1,299</b>	12,572	13,115

#### Basic and diluted earnings per share

Footnote	2016			2015			2014		
	Profit \$m	Number of shares (millions)	Per share \$	Profit \$m	Number of shares (millions)	Per share \$	Profit \$m	Number of shares (millions)	Per share \$
	1	<b>1,299</b>	<b>19,753</b>	<b>0.07</b>	12,572	19,380	0.65	13,115	18,960
Basic									
Effect of dilutive potential ordinary shares		<b>92</b>			137			96	
Diluted	1	<b>1,299</b>	<b>19,845</b>	<b>0.07</b>	12,572	19,517	0.64	13,115	19,056
<b>At 31 Dec</b>									

1 Weighted average number of ordinary shares outstanding (basic) or assuming dilution (diluted).

The weighted average number of dilutive potential ordinary shares excludes 10m employee share options that were anti-dilutive (2015: 7m; 2014: 6m).

### 10 Trading assets

	Footnote	2016		2015	
		\$m	\$m	\$m	\$m
Treasury and other eligible bills				<b>14,451</b>	7,829
Debt securities				<b>94,054</b>	99,038
Equity securities				<b>63,604</b>	66,491
<b>Trading securities</b>				<b>172,109</b>	173,358
Loans and advances to banks	1			<b>24,769</b>	22,303
Loans and advances to customers				1	<b>38,247</b>
<b>At 31 Dec</b>				<b>235,125</b>	224,837

1 Loans and advances to banks and customers include settlement accounts, stock borrowing, reverse repos and other amounts.

#### Trading Securities<sup>1</sup>

	Footnotes	2016		2015	
		\$m	\$m	\$m	\$m
US Treasury and US Government agencies	2	<b>17,010</b>	14,833		
UK Government		<b>9,493</b>	10,177		
Hong Kong Government		<b>7,970</b>	6,495		
Other governments		<b>49,229</b>	48,567		
Asset-backed securities	3	<b>2,668</b>	3,135		
Corporate debt and other securities		<b>22,135</b>	23,660		
Equity securities		<b>63,604</b>	66,491		
<b>At 31 Dec</b>		<b>172,109</b>	173,358		

1 Included within these figures are debt securities issued by banks and other financial institutions of \$14,630m (2015: \$16,403m), of which \$789m (2015: \$1,034m) are guaranteed by various governments.

2 Includes securities that are supported by an explicit guarantee issued by the US Government.

3 Excludes asset-backed securities included under US Treasury and US Government agencies.

## 11 Fair values of financial instruments carried at fair value

### Control framework

Fair values are subject to a control framework designed to ensure that they are either determined or validated by a function independent of the risk taker.

Where fair values are determined by reference to externally quoted prices or observable pricing inputs to models, independent price determination or validation is used. For inactive markets, HSBC sources alternative market information, with greater weight given to information that is considered to be more relevant and reliable. Examples of the factors considered are price observability, instrument comparability, consistency of data sources, underlying data accuracy and timing of prices.

For fair values determined using valuation models, the control framework includes development or validation by independent support functions of the model logic, inputs, model outputs and adjustments. Valuation models are subject to a process of due diligence before becoming operational and are calibrated against external market data on an ongoing basis.

Changes in fair value are generally subject to a profit and loss analysis process and are disaggregated into high-level categories including portfolio changes, market movements and other fair value adjustments.

The majority of financial instruments measured at fair value are in GB&M. GB&M's fair value governance structure comprises its Finance function, Valuation Committees and a Valuation Committee Review Group. Finance is responsible for establishing procedures governing valuation and ensuring fair values are in compliance with accounting standards. The fair values are reviewed by the Valuation Committees, which consist of independent support functions. These Committees are overseen by the Valuation Committee Review Group, which considers all material subjective valuations.

### Financial liabilities measured at fair value

In certain circumstances, HSBC records its own debt in issue at fair value, based on quoted prices in an active market for the specific instrument. When quoted market prices are unavailable, the own debt in issue is valued using valuation techniques, the inputs for which are either based on quoted prices in an inactive market for the instrument or are estimated by comparison with quoted prices in an active market for similar instruments. In both cases, the fair value includes the effect of applying the credit spread which is appropriate to HSBC's liabilities. The change in fair value of issued debt securities attributable to the Group's own credit spread is computed as follows: for each security at each reporting date, an externally verifiable price is obtained or a price is derived using credit spreads for similar securities for the same issuer. Then, using discounted cash flow, each security is valued using a Libor-based discount curve. The difference in the valuations is attributable to the Group's own credit spread. This methodology is applied consistently across all securities.

Structured notes issued and certain other hybrid instruments are included within trading liabilities and are measured at fair value. The credit spread applied to these instruments is derived from the spreads at which HSBC issues structured notes.

Gains and losses arising from changes in the credit spread of liabilities issued by HSBC reverse over the contractual life of the debt, provided that the debt is not repaid at a premium or a discount.

### Fair value hierarchy

Fair values of financial assets and liabilities are determined according to the following hierarchy:

- Level 1 – valuation technique using quoted market price: financial instruments with quoted prices for identical instruments in active markets that HSBC can access at the measurement date.
- Level 2 – valuation technique using observable inputs: financial instruments with quoted prices for similar instruments in active markets or quoted prices for identical or similar instruments in inactive markets and financial instruments valued using models where all significant inputs are observable.
- Level 3 – valuation technique with significant unobservable inputs: financial instruments valued using valuation techniques where one or more significant inputs are unobservable.

### Financial instruments carried at fair value and bases of valuation

	2016				2015			
	Level 1 \$m	Level 2 \$m	Level 3 \$m	Total \$m	Level 1 \$m	Level 2 \$m	Level 3 \$m	Total \$m
<b>Recurring fair value measurements at 31 Dec</b>								
<b>Assets</b>								
Trading assets	<b>133,744</b>	<b>94,892</b>	<b>6,489</b>	<b>235,125</b>	133,095	84,886	6,856	224,837
Financial assets designated at fair value	<b>19,882</b>	<b>4,144</b>	<b>730</b>	<b>24,756</b>	18,947	4,431	474	23,852
Derivatives	<b>1,076</b>	<b>287,044</b>	<b>2,752</b>	<b>290,872</b>	1,922	284,292	2,262	288,476
Financial investments: available for sale	<b>274,655</b>	<b>111,743</b>	<b>3,476</b>	<b>389,874</b>	262,929	117,197	4,727	384,853
<b>Liabilities</b>								
Trading liabilities	<b>45,171</b>	<b>104,938</b>	<b>3,582</b>	<b>153,691</b>	41,462	95,867	4,285	141,614
Financial liabilities designated at fair value	<b>4,248</b>	<b>82,547</b>	<b>37</b>	<b>86,832</b>	5,260	61,145	3	66,408
Derivatives	<b>1,554</b>	<b>275,965</b>	<b>2,300</b>	<b>279,819</b>	2,243	277,618	1,210	281,071

## Notes on the Financial Statements

### Transfers between Level 1 and Level 2 fair values

	Assets				Liabilities		
	Available for sale	Held for trading	Designated at fair value	Derivatives	Held for trading	Designated at fair value	Derivatives
	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>At 31 Dec 2016</b>							
Transfers from Level 1 to Level 2	162	1,614	122	465	2,699	—	209
Transfers from Level 2 to Level 1	1,314	—	—	—	341	—	—
At 31 Dec 2015							
Transfers from Level 1 to Level 2	—	67	—	56	1,563	857	100
Transfers from Level 2 to Level 1	—	487	—	2	515	2	—

Transfers between levels of the fair value hierarchy are deemed to occur at the end of each semi-annual reporting period.

### Fair value adjustments

Fair value adjustments are adopted when HSBC determines there are additional factors considered by market participants that are not incorporated within the valuation model. Movements in the level of fair value adjustments do not necessarily result in the recognition of profits or losses within the income statement, such as when models are enhanced and fair value adjustments may no longer be required.

### Global Banking and Markets fair value adjustments

Type of adjustment	2016		2015
	\$m	\$m	\$m
Risk-related	1,131	1,402	
– bid-offer	416	477	
– uncertainty	87	95	
– credit valuation adjustment ('CVA')	633	853	
– debit valuation adjustment ('DVA')	(437)	(465)	
– funding fair value adjustment ('FFVA')	429	442	
– other	3	—	
Model-related	14	97	
– model limitation	14	92	
– other	—	5	
Inception profit (Day 1 P&L reserves) (Note 14)	99	97	
<b>At 31 Dec</b>	<b>1,244</b>	<b>1,596</b>	

Fair value adjustments declined by \$352m during the year. The most significant movement was a decline of \$220m in respect of the credit valuation adjustment, driven by the disposal of Brazilian operations, refinements to modelling methodology and as a result of tightening credit spreads.

#### Bid-offer

IFRS 13 'Fair value measurement' requires use of the price within the bid-offer spread that is most representative of fair value. Valuation models will typically generate mid-market values. The bid-offer adjustment reflects the extent to which bid-offer costs would be incurred if substantially all residual net portfolio market risks were closed using available hedging instruments or by disposing of or unwinding the position.

#### Uncertainty

Certain model inputs may be less readily determinable from market data, and/or the choice of model itself may be more subjective. In these circumstances an adjustment may be necessary to reflect the likelihood that market participants would adopt more conservative values for uncertain parameters and/or model assumptions than those used in HSBC's valuation model.

#### Credit and debit valuation adjustments

The CVA is an adjustment to the valuation of over-the-counter ('OTC') derivative contracts to reflect the possibility that the counterparty may default and that HSBC may not receive the full market value of the transactions.

The DVA is an adjustment to the valuation of OTC derivative contracts to reflect the possibility that HSBC may default, and that it may not pay the full market value of the transactions.

HSBC calculates a separate CVA and DVA for each legal entity, and for each counterparty to which the entity has exposure. With the exception of central clearing parties, all third-party counterparties are included in the CVA and DVA calculations, and these adjustments are not netted across Group entities.

HSBC calculates the CVA by applying the probability of default ('PD') of the counterparty, conditional on the non-default of HSBC, to HSBC's expected positive exposure to the counterparty and multiplying the result by the loss expected in the event of default. Conversely, HSBC calculates the DVA by applying the PD of HSBC, conditional on the non-default of the counterparty, to the expected positive exposure of the counterparty to HSBC and multiplying the result by the loss expected in the event of default. Both calculations are performed over the life of the potential exposure.

For most products HSBC uses a simulation methodology, which incorporates a range of potential exposures over the life of the portfolio, to calculate the expected positive exposure to a counterparty. The simulation methodology includes credit mitigants, such as counterparty netting agreements and collateral agreements with the counterparty.

The methodologies do not, in general, account for ‘wrong-way risk’ which arises when the underlying value of the derivative prior to any CVA is positively correlated to the PD of the counterparty. When there is significant wrong-way risk, a trade-specific approach is applied to reflect this risk in the valuation.

### Funding fair value adjustment

The FFVA is calculated by applying future market funding spreads to the expected future funding exposure of any uncollateralised component of the OTC derivative portfolio. The expected future funding exposure is calculated by a simulation methodology, where available, and is adjusted for events that may terminate the exposure, such as the default of HSBC or the counterparty. The FFVA and DVA are calculated independently.

### Model limitation

Models used for portfolio valuation purposes may be based upon a simplified set of assumptions that do not capture all current and future material market characteristics. In these circumstances, model limitation adjustments are adopted.

### Inception profit (Day 1 P&L reserves)

Inception profit adjustments are adopted when the fair value estimated by a valuation model is based on one or more significant unobservable inputs. The accounting for inception profit adjustments is discussed in Note 1.

### Fair value valuation bases

#### Financial instruments measured at fair value using a valuation technique with significant unobservable inputs – Level 3

	Assets					Liabilities				
	Available for sale	Held for trading	Designated at fair value	Derivatives	Total	Held for trading	Designated at fair value	Derivatives	Total	
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	
Private equity including strategic investments	2,435	49	712	—	3,196	25	—	—	25	
Asset-backed securities	761	789	—	—	1,550	—	—	—	—	
Loans held for securitisation	—	28	—	—	28	—	—	—	—	
Structured notes	—	2	—	—	2	3,557	—	—	3,557	
Derivatives with monolines	—	—	—	175	175	—	—	—	—	
Other derivatives	—	—	—	2,577	2,577	—	—	2,300	2,300	
Other portfolios	280	5,621	18	—	5,919	—	37	—	37	
<b>At 31 Dec 2016</b>	<b>3,476</b>	<b>6,489</b>	<b>730</b>	<b>2,752</b>	<b>13,447</b>	<b>3,582</b>	<b>37</b>	<b>2,300</b>	<b>5,919</b>	
Private equity including strategic investments	3,443	55	453	—	3,951	35	—	—	35	
Asset-backed securities	1,053	531	—	—	1,584	—	—	—	—	
Loans held for securitisation	—	30	—	—	30	—	—	—	—	
Structured notes	—	4	—	—	4	4,250	—	—	4,250	
Derivatives with monolines	—	—	—	196	196	—	—	—	—	
Other derivatives	—	—	—	2,066	2,066	—	—	1,210	1,210	
Other portfolios	231	6,236	21	—	6,488	—	3	—	3	
<b>At 31 Dec 2015</b>	<b>4,727</b>	<b>6,856</b>	<b>474</b>	<b>2,262</b>	<b>14,319</b>	<b>4,285</b>	<b>3</b>	<b>1,210</b>	<b>5,498</b>	

Level 3 instruments are present in both ongoing and legacy businesses. Loans held for securitisation, derivatives with monolines, certain ‘other derivatives’ and predominantly all Level 3 ABSs are legacy positions. HSBC has the capability to hold these positions.

### Private equity including strategic investments

The investment’s fair value is estimated: on the basis of an analysis of the investee’s financial position and results, risk profile, prospects and other factors; by reference to market valuations for similar entities quoted in an active market; or the price at which similar companies have changed ownership.

### Asset-backed securities

While quoted market prices are generally used to determine the fair value of these securities, valuation models are used to substantiate the reliability of the limited market data available and to identify whether any adjustments to quoted market prices are required. For certain ABSs such as residential mortgage-backed securities, the valuation uses an industry standard model with assumptions relating to prepayment speeds, default rates and loss severity based on collateral type, and performance, as appropriate. The valuations output is benchmarked for consistency against observable data for securities of a similar nature.

### Structured notes

The fair value of Level 3 structured notes is derived from the fair value of the underlying debt security, and the fair value of the embedded derivative is determined as described in the paragraph below on derivatives. These structured notes comprise principally equity-linked notes issued by HSBC which provide the counterparty with a return linked to the performance of equity securities and other portfolios. Examples of the unobservable parameters include long-dated equity volatilities and correlations between equity prices, and interest and foreign exchange rates.

### Derivatives

OTC derivative valuation models calculate the present value of expected future cash flows, based upon ‘no-arbitrage’ principles. For many vanilla derivative products, the modelling approaches used are standard across the industry. For more complex derivative products, there may be some differences in market practice. Inputs to valuation models are determined from observable market data wherever possible, including prices available from exchanges, dealers, brokers or providers of consensus pricing. Certain inputs may not be observable in the market directly, but can be determined from observable prices via model calibration procedures or estimated from historical data or other sources.

## Notes on the Financial Statements

### Reconciliation of fair value measurements in Level 3 of the fair value hierarchy

#### Movement in Level 3 financial instruments

Footnote	Assets				Liabilities		
	Available for sale	Held for trading	Designated at fair value	Derivatives	Held for trading	Designated at fair value	Derivatives
	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>At 1 Jan 2016</b>	<b>4,727</b>	<b>6,856</b>	<b>474</b>	<b>2,262</b>	<b>4,285</b>	<b>3</b>	<b>1,210</b>
Total gains/(losses) recognised in profit or loss	178	31	25	1,107	337	(1)	1,428
- trading income/(expense) excluding net interest income	—	31	—	1,107	337	—	1,428
- net income/(expense) from other financial instruments designated at fair value	—	—	25	—	—	(1)	—
- gains less losses from financial investments	91	—	—	—	—	—	—
- loan impairment charges and other credit risk provisions ('LICs')	87	—	—	—	—	—	—
Total gains/(losses) recognised in other comprehensive income ('OCI') <sup>1</sup>	(162)	(610)	(8)	(335)	(130)	(1)	(240)
- available-for-sale investments: fair value gains/(losses)	123	—	—	—	—	—	—
- cash flow hedges: fair value gains/(losses)	—	—	—	—	—	—	12
- exchange differences	(285)	(610)	(8)	(335)	(130)	(1)	(252)
Purchases	350	823	359	—	20	6	—
New issuances	—	—	—	—	1,882	—	—
Sales	(1,212)	(1,760)	(7)	—	(40)	(2)	—
Settlements	(177)	(311)	(113)	(107)	(1,907)	—	(239)
Transfers out	(947)	(199)	(2)	(187)	(920)	—	(229)
Transfers in	719	1,659	2	12	55	32	370
<b>At 31 Dec 2016</b>	<b>3,476</b>	<b>6,489</b>	<b>730</b>	<b>2,752</b>	<b>3,582</b>	<b>37</b>	<b>2,300</b>
Unrealised gains/(losses) recognised in profit or loss relating to assets and liabilities held at 31 Dec 2016	87	(170)	21	364	(143)	1	(335)
- trading income/(expense) excluding net interest income	—	(170)	—	364	(143)	—	(335)
- net income/(expense) from other financial instruments designated at fair value	—	—	21	—	—	1	—
- loan impairment charges and other credit risk provisions	87	—	—	—	—	—	—
At 1 Jan 2015	4,988	6,468	726	2,924	6,139	—	1,907
Total gains/(losses) recognised in profit or loss	(34)	109	30	95	(573)	(1)	(209)
- trading income/(expense) excluding net interest income	—	109	—	95	(573)	—	(209)
- net income from other financial instruments designated at fair value	—	—	30	—	—	(1)	—
- gains less losses from financial investments	(269)	—	—	—	—	—	—
- loan impairment charges and other credit risk provisions ('LICs')	235	—	—	—	—	—	—
Total gains/(losses) recognised in other comprehensive income ('OCI') <sup>1</sup>	1	226	(192)	(11)	(126)	(118)	(1)
- available-for-sale investments: fair value gains/(losses)	393	—	—	—	—	—	—
- cash flow hedges: fair value gains/(losses)	—	—	—	(4)	—	—	—
- exchange differences	(167)	(192)	(11)	(122)	(118)	(1)	(64)
Purchases	594	1,745	250	—	2	9	—
New issuances	—	—	—	—	1,471	—	—
Sales	(757)	(1,206)	(50)	—	(66)	(4)	—
Settlements	(32)	(146)	(135)	(38)	(1,260)	—	(241)
Transfers out	(1,471)	(206)	(336)	(1,015)	(1,743)	—	(283)
Transfers in	1,231	284	—	422	433	—	100
<b>At 31 Dec 2015</b>	<b>4,727</b>	<b>6,856</b>	<b>474</b>	<b>2,262</b>	<b>4,285</b>	<b>3</b>	<b>1,210</b>
Unrealised gains/(losses) recognised in profit or loss relating to assets and liabilities held at 31 Dec 2015	235	(9)	12	89	384	(1)	267
- trading income/(expense) excluding net interest income	—	(9)	—	89	384	—	267
- net income from other financial instruments designated at fair value	—	—	12	—	—	(1)	—
- loan impairment charges and other credit risk provisions	235	—	—	—	—	—	—

<sup>1</sup> Included in 'Available-for-sale investments: fair value gains/(losses)' and 'Exchange differences' in the consolidated statement of comprehensive income.

## Effect of changes in significant unobservable assumptions to reasonably possible alternatives

Sensitivity of Level 3 fair values to reasonably possible alternative assumptions

Footnote	2016				2015			
	Reflected in profit or loss		Reflected in OCI		Reflected in profit or loss		Reflected in OCI	
	Favourable changes	Un-favourable changes	Favourable changes	Un-favourable changes	Favourable changes	Un-favourable changes	Favourable changes	Un-favourable changes
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Derivatives, trading assets and trading liabilities	1	238	(177)	—	—	335	(215)	—
Financial assets and liabilities designated at fair value		48	(38)	—	—	24	(24)	—
Financial investments: available for sale		72	(36)	170	(149)	35	(30)	230
<b>At 31 Dec</b>		<b>358</b>	<b>(251)</b>	<b>170</b>	<b>(149)</b>	<b>394</b>	<b>(269)</b>	<b>230</b>

1 Derivatives, trading assets and trading liabilities are presented as one category to reflect the manner in which these instruments are risk managed.

Sensitivity of Level 3 fair values to reasonably possible alternative assumptions by instrument type

	2016				2015			
	Reflected in profit or loss		Reflected in OCI		Reflected in profit or loss		Reflected in OCI	
	Favourable changes	Un-favourable changes	Favourable changes	Un-favourable changes	Favourable changes	Un-favourable changes	Favourable changes	Un-favourable changes
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Private equity including strategic investments	112	(73)	121	(106)	54	(53)	152	(171)
Asset-backed securities	43	(15)	33	(27)	18	(12)	57	(51)
Loans held for securitisation	1	(1)	—	—	1	(1)	—	—
Structured notes	10	(7)	—	—	15	(11)	—	—
Derivatives with monolines	3	(3)	—	—	11	(11)	—	—
Other derivatives	141	(94)	—	—	179	(87)	—	—
Other portfolios	48	(58)	16	(16)	116	(94)	21	(21)
<b>At 31 Dec</b>	<b>358</b>	<b>(251)</b>	<b>170</b>	<b>(149)</b>	<b>394</b>	<b>(269)</b>	<b>230</b>	<b>(243)</b>

The sensitivity analysis aims to measure a range of fair values consistent with the application of a 95% confidence interval.

Methodologies take account of the nature of the valuation technique employed, as well as the availability and reliability of observable proxy and historical data.

When the fair value of a financial instrument is affected by more than one unobservable assumption, the above table reflects the most favourable or the most unfavourable change from varying the assumptions individually.

## Notes on the Financial Statements

### Key unobservable inputs to Level 3 financial instruments

Quantitative information about significant unobservable inputs in Level 3 valuations

Footnotes	Fair value				2016				2015			
	Assets \$m	Liabilities \$m	Valuation techniques	Key unobservable inputs	Full range of inputs		Core range of inputs <sup>1</sup>		Full range of inputs		Core range of inputs <sup>1</sup>	
					Lower	Higher	Lower	Higher	Lower	Higher	Lower	Higher
Private equity including strategic investments	3,196	25	See page 224	See page 224	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Asset-backed securities <sup>2</sup>	1,550	—										
– CLO/CDO	498	—	Market proxy	Prepayment rate	2%	7%	2%	7%	1%	6%	1%	6%
other ABSs	1,052	—	Market proxy	Bid quotes	0	101	42	94	3	147	54	117
Loans held for securitisation	28	—	Market proxy	Bid quotes	0	96	57	90	0	147	44	109
Structured notes	2	3,557										
– equity-linked notes	—	3,090	Model – Option model	Equity volatility	11%	96%	16%	36%	12%	72%	19%	43%
	—	300	Model – Option model	Equity correlation	33%	94%	46%	81%	35%	93%	43%	79%
– fund-linked notes	—	9	Model – Option model	Fund volatility	6%	11%	6%	11%	6%	8%	6%	8%
– FX-linked notes	—	87	Model – Option model	FX volatility	3%	29%	5%	18%	5%	35%	5%	20%
– other	2	71										
Derivatives with monolines	175	—	Model – Discounted cash flow	Credit spread	2%	2%	2%	2%	4%	4%	4%	4%
Other derivatives	2,577	2,300										
Interest rate												
– securitisation swaps	711	1,117	Model – Discounted cash flow	Prepayment rate	0%	90%	8%	27%	0%	90%	14%	71%
– long-dated swaptions	1,236	109	Model – Option model	IR volatility	8%	101%	21%	39%	3%	66%	20%	41%
– other	204	108										
FX derivatives:												
– FX options	240	364	Model – Option model	FX Volatility	0.6%	25%	7%	12%	0.5%	35%	5%	14%
– other	4	2										
Equity derivatives:												
– long-dated single stock options	103	165	Model – Option model	Equity volatility	11%	83%	16%	36%	8%	104%	18%	44%
– other	55	388										
Credit derivatives:												
– other	24	47										
Other portfolios	5,919	37										
– structured certificates	4,446	—	Model – Discounted cash flow	Credit volatility	3%	4%	3%	4%	2%	4%	2%	4%
– EM corporate debt	124	—	Market proxy	Bid quotes	96	144	113	113	70	124	100	123
– other <sup>3</sup>	1,349	37										
<b>At 31 Dec 2016</b>	<b>13,447</b>	<b>5,919</b>										

1 The core range of inputs is the estimated range within which 90% of the inputs fall.

2 Collateralised loan obligation/collateralised debt obligation.

3 'Other' includes a range of smaller asset holdings.

## Private equity including strategic investments

Given the bespoke nature of the analysis in respect of each holding, it is not practical to quote a range of key unobservable inputs.

### Prepayment rates

Prepayment rates are a measure of the anticipated future speed at which a loan portfolio will be repaid in advance of the due date. They vary according to the nature of the loan portfolio and expectations of future market conditions, and may be estimated using a variety of evidence, such as prepayment rates implied from proxy observable security prices, current or historical prepayment rates and macroeconomic modelling.

### Market proxy

Market proxy pricing may be used for an instrument when specific market pricing is not available but there is evidence from instruments with common characteristics. In some cases it might be possible to identify a specific proxy, but more generally evidence across a wider range of instruments will be used to understand the factors that influence current market pricing and the manner of that influence.

### Volatility

Volatility is a measure of the anticipated future variability of a market price. It varies by underlying reference market price, and by strike and maturity of the option.

Certain volatilities, typically those of a longer-dated nature, are unobservable and are estimated from observable data. The range of unobservable volatilities reflects the wide variation in volatility inputs by reference market price. The core range is significantly narrower than the full range because these examples with extreme volatilities occur relatively rarely within the HSBC portfolio.

### Correlation

Correlation is a measure of the inter-relationship between two market prices and is expressed as a number between minus one and one. It is used to value more complex instruments where the payout is dependent upon more than one market price. There is a wide range of instruments for which correlation is an input, and consequently a wide range of both same-asset correlations and cross-asset correlations is used. In general, the range of same-asset correlations will be narrower than the range of cross-asset correlations.

Unobservable correlations may be estimated based upon a range of evidence, including consensus pricing services, HSBC trade prices, proxy correlations and examination of historical price relationships. The range of unobservable correlations quoted in the table reflects the wide variation in correlation inputs by market price pair.

### Credit spread

Credit spread is the premium over a benchmark interest rate required by the market to accept lower credit quality. In a discounted cash flow model, the credit spread increases the discount factors applied to future cash flows, thereby reducing the value of an asset. Credit spreads may be implied from market prices and may not be observable in more illiquid markets.

## Inter-relationships between key unobservable inputs

Key unobservable inputs to Level 3 financial instruments may not be independent of each other. As described above, market variables may be correlated. This correlation typically reflects the manner in which different markets tend to react to macroeconomic or other events. Furthermore, the effect of changing market variables on the HSBC portfolio will depend on HSBC's net risk position in respect of each variable.

## HSBC Holdings

### Basis of valuing HSBC Holdings' financial assets and liabilities measured at fair value

	2016 \$m	2015 \$m
<b>Valuation technique using observable inputs: Level 2</b>		
<b>Assets at 31 Dec</b>		
– derivatives	<b>2,148</b>	2,467
– available for sale	<b>3,590</b>	4,285
<b>Liabilities at 31 Dec</b>		
– designated at fair value	<b>30,113</b>	19,853
– derivatives	<b>5,025</b>	2,278

## Notes on the Financial Statements

### 12 Fair values of financial instruments not carried at fair value

Fair values of financial instruments not carried at fair value and bases of valuation

	Fair value						
	Carrying amount	Quoted market price Level 1	Observable inputs Level 2	Significant unobservable inputs Level 3	Total		
		\$m	\$m	\$m			
<b>At 31 Dec 2016</b>							
<b>Assets</b>							
Loans and advances to banks	88,126	—	85,568	2,572	88,140		
Loans and advances to customers	861,504	—	15,670	845,894	861,564		
Reverse repurchase agreements – non-trading	160,974	—	159,504	1,527	161,031		
Financial investments – debt securities	46,923	1,190	46,014	19	47,223		
<b>Liabilities</b>							
Deposits by banks	59,939	—	59,883	42	59,925		
Customer accounts	1,272,386	—	1,262,540	10,136	1,272,676		
Repurchase agreements – non-trading	88,958	—	88,939	—	88,939		
Debt securities in issue	65,915	—	66,386	—	66,386		
Subordinated liabilities	20,984	—	23,264	292	23,556		

At 31 Dec 2015

	Fair value				
	Carrying amount	Quoted market price Level 1	Observable inputs Level 2	Significant unobservable inputs Level 3	Total
	\$m	\$m	\$m	\$m	\$m
<b>At 31 Dec 2015</b>					
<b>Assets</b>					
Loans and advances to banks	90,401	—	88,156	2,255	90,411
Loans and advances to customers	924,454	—	12,412	910,057	922,469
Reverse repurchase agreements – non-trading	146,255	—	145,307	959	146,266
Financial investments – debt securities	44,102	1,163	44,076	19	45,258
<b>Liabilities</b>					
Deposits by banks	54,371	—	54,295	76	54,371
Customer accounts	1,289,586	—	1,280,368	9,421	1,289,789
Repurchase agreements – non-trading	80,400	—	80,400	—	80,400
Debt securities in issue	88,949	—	89,023	—	89,023
Subordinated liabilities	22,702	—	24,344	649	24,993

Fair values of selected financial instruments not carried at fair value and bases of valuation – assets and disposal groups held for sale

	Fair value						
	Carrying amount	Quoted market price Level 1	Observable inputs Level 2	Significant unobservable inputs Level 3	Total		
		\$m	\$m	\$m			
<b>At 31 Dec 2016</b>							
Loans and advances to customers							
Customer accounts	3,756	—	241	3,306	3,547		
Customer accounts	2,713	—	2,713	—	2,713		
<b>At 31 Dec 2015</b>							
Loans and advances to customers							
Customer accounts	21,109	—	4,068	16,884	20,952		
Customer accounts	16,682	—	15,578	1,104	16,682		

Other financial instruments not carried at fair value are typically short-term in nature and reprice to current market rates frequently. Accordingly, their carrying amount is a reasonable approximation of fair value. They include cash and balances at central banks, items in the course of collection from and transmission to other banks, Hong Kong Government certificates of indebtedness and Hong Kong currency notes in circulation, all of which are measured at amortised cost.

### Carrying amount and fair value of loans and advances to customers by industry sector

	Carrying amount			Fair value		
	Not Impaired \$m	Impaired \$m	Total \$m	Not Impaired \$m	Impaired \$m	Total \$m
Loans and advances to customers						
- personal	332,574	5,252	337,826	330,167	4,597	334,764
- corporate and commercial	453,151	7,058	460,209	456,816	6,393	463,209
- financial	63,316	153	63,469	63,411	180	63,591
<b>At 31 Dec 2016</b>	<b>849,041</b>	<b>12,463</b>	<b>861,504</b>	<b>850,394</b>	<b>11,170</b>	<b>861,564</b>

Loans and advances to customers						
- personal	361,716	9,487	371,203	359,559	9,024	368,583
- corporate and commercial	485,933	7,145	493,078	487,196	6,592	493,788
- financial	60,049	124	60,173	59,941	157	60,098
<b>At 31 Dec 2015</b>	<b>907,698</b>	<b>16,756</b>	<b>924,454</b>	<b>906,696</b>	<b>15,773</b>	<b>922,469</b>

Loans and advances to customers are classified as not impaired or impaired in accordance with the criteria described on page 90.

### Valuation

Fair value is an estimate of the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. It does not reflect the economic benefits and costs that HSBC expects to flow from an instrument's cash flow over its expected future life. Our valuation methodologies and assumptions in determining fair values for which no observable market prices are available may differ from those of other companies.

### Loans and advances to banks and customers

To determine the fair value of loans and advances to banks and customers, loans are segregated, as far as possible, into portfolios of similar characteristics. Fair values are based on observable market transactions, when available. When they are unavailable, fair values are estimated using valuation models incorporating a range of input assumptions. These assumptions may include: value estimates from third-party brokers reflecting over-the-counter trading activity; forward-looking discounted cash flow models, taking account of expected customer prepayment rates, using assumptions that HSBC believes are consistent with those that would be used by market participants in valuing such loans; new business rates estimates for similar loans; and trading inputs from other market participants including observed primary and secondary trades. From time to time, we may engage a third party valuation specialist to measure the fair value of a pool of loans.

The fair value of loans reflects impairments at the balance sheet date and estimates of market participants' expectations of credit losses over the life of the loans, and the fair value effect of repricing between origination and the balance sheet date. For impaired loans, fair value is estimated by discounting the future cash flows over the time period they are expected to be recovered.

### Financial investments

The fair values of listed financial investments are determined using bid market prices. The fair values of unlisted financial investments are determined using valuation techniques that incorporate the prices and future earnings streams of equivalent quoted securities.

### Deposits by banks and customer accounts

The fair values of on demand deposits are approximated by their carrying value. For deposits with longer-term maturities, fair values are estimated using discounted cash flows, applying current rates offered for deposits of similar remaining maturities.

### Debt securities in issue and subordinated liabilities

Fair values are determined using quoted market prices at the balance sheet date where available, or by reference to quoted market prices for similar instruments.

### Repurchase and reverse repurchase agreements – non-trading

Fair values approximate carrying amounts as balances are generally short dated.

### HSBC Holdings

The methods used by HSBC Holdings to determine fair values of financial instruments for the purpose of measurement and disclosure are described above.

### Fair values of HSBC Holdings' financial instruments not carried at fair value on the balance sheet

	2016		2015	
	Carrying amount \$m	Fair value \$m	Carrying amount \$m	Fair value \$m
<b>Assets at 31 Dec</b>				
Loans and advances to HSBC undertakings	77,421	79,985	44,350	45,180
<b>Liabilities at 31 Dec</b>				
Amounts owed to HSBC undertakings	2,157	2,156	2,152	2,152
Debt securities in issue	21,805	23,147	960	1,224
Subordinated liabilities	15,189	17,715	15,895	18,297

<sup>1</sup> Fair values were determined using valuation techniques with observable inputs (Level 2).

## Notes on the Financial Statements

### 13 Financial assets designated at fair value

	2016 \$m	2015 \$m
Securities	<b>24,677</b>	23,732
– treasury and other eligible bills	204	396
– debt securities	4,189	4,341
– equity securities	20,284	18,995
Loans and advances to banks and customers	79	120
<b>At 31 Dec</b>	<b>24,756</b>	23,852

#### Securities<sup>1</sup>

	2016 \$m	2015 \$m
US Treasury and US Government agencies	2	104
UK Government	41	103
Hong Kong Government	16	33
Other governments	747	1,020
Asset-backed securities	3	20
Corporate debt and other securities	3,465	3,411
Equities	20,284	18,995
<b>At 31 Dec</b>	<b>24,677</b>	23,732

1 Included within these figures are debt securities issued by banks and other financial institutions of \$1,766m (2015: \$1,536m), of which \$19m (2015: \$35m) are guaranteed by various governments.

2 Includes securities that are supported by an explicit guarantee issued by the US Government.

3 Excludes asset-backed securities included under US Treasury and US Government agencies.

### 14 Derivatives

#### Notional contract amounts and fair values of derivatives by product contract type held by HSBC

	Notional contract amount		Fair value – Assets		Fair value – Liabilities			
	Trading \$m	Hedging \$m	Trading \$m	Hedging \$m	Total \$m	Trading \$m	Hedging \$m	Total \$m
Foreign exchange	<b>5,819,814</b>	26,281	126,185	1,228	127,413	118,813	968	119,781
Interest rate	<b>13,729,757</b>	215,006	253,398	1,987	255,385	245,941	4,081	250,022
Equities	<b>472,169</b>	–	7,410	–	7,410	9,240	–	9,240
Credit	<b>448,220</b>	–	5,199	–	5,199	5,767	–	5,767
Commodity and other	<b>62,009</b>	–	2,020	–	2,020	1,564	–	1,564
<b>Gross total fair values</b>	<b>20,531,969</b>	241,287	394,212	3,215	397,427	381,325	5,049	386,374
Offset (Note 30)					(106,555)			(106,555)
<b>At 31 Dec 2016</b>	<b>20,531,969</b>	241,287	394,212	3,215	290,872	381,325	5,049	279,819
Foreign exchange	5,658,030	32,324	95,201	1,140	96,341	94,843	755	95,598
Interest rate	14,462,113	212,923	277,496	1,658	279,154	267,609	3,758	271,367
Equities	501,834	–	8,732	–	8,732	10,383	–	10,383
Credit	463,344	–	6,961	–	6,961	6,884	–	6,884
Commodity and other	51,683	–	3,148	–	3,148	2,699	–	2,699
Gross total fair values	21,137,004	245,247	391,538	2,798	394,336	382,418	4,513	386,931
Offset (Note 30)					(105,860)			(105,860)
At 31 Dec 2015	21,137,004	245,247	391,538	2,798	288,476	382,418	4,513	281,071

The notional contract amounts of derivatives held for trading purposes and derivatives designated in qualifying hedge accounting indicate the nominal value of transactions outstanding at the balance sheet date; they do not represent amounts at risk.

Derivative assets increased during 2016, driven by changes in foreign exchange rates and yield curve movements.

### Notional contract amounts and fair values of derivatives by product contract type held by HSBC Holdings with subsidiaries

	Notional contract amount		Fair value – Assets			Fair value – Liabilities		
	Trading \$m	Hedging \$m	Trading \$m	Hedging \$m	Total \$m	Trading \$m	Hedging \$m	Total \$m
Foreign exchange	<b>23,442</b>	<b>1,120</b>	<b>223</b>	—	<b>223</b>	<b>3,201</b>	<b>239</b>	<b>3,440</b>
Interest rate	<b>26,858</b>	<b>24,356</b>	<b>1,478</b>	<b>447</b>	<b>1,925</b>	<b>639</b>	<b>946</b>	<b>1,585</b>
<b>At 31 Dec 2016</b>	<b>50,300</b>	<b>25,476</b>	<b>1,701</b>	<b>447</b>	<b>2,148</b>	<b>3,840</b>	<b>1,185</b>	<b>5,025</b>
Foreign exchange	19,036	1,120	390	—	390	2,065	213	2,278
Interest rate	10,150	5,132	1,600	477	2,077	—	—	—
<b>At 31 Dec 2015</b>	<b>29,186</b>	<b>6,252</b>	<b>1,990</b>	<b>477</b>	<b>2,467</b>	<b>2,065</b>	<b>213</b>	<b>2,278</b>

### Use of derivatives

For details regarding use of derivatives, see page 116 under 'Market Risk'.

### Trading derivatives

Most of HSBC's derivative transactions relate to sales and trading activities. Sales activities include the structuring and marketing of derivative products to customers to enable them to take, transfer, modify or reduce current or expected risks. Trading activities include market-making and risk management. Market-making entails quoting bid and offer prices to other market participants for the purpose of generating revenues based on spread and volume. Risk management activity is undertaken to manage the risk arising from client transactions, with the principal purpose of retaining client margin. Other derivatives classified as held for trading include non-qualifying hedging derivatives.

Substantially all of HSBC Holdings' derivatives entered into with subsidiaries are managed in conjunction with financial liabilities designated at fair value.

### Derivatives valued using models with unobservable inputs

The difference between the fair value at initial recognition (the transaction price) and the value that would have been derived had valuation techniques used for subsequent measurement been applied at initial recognition, less subsequent releases, is as follows:

#### Unamortised balance of derivatives valued using models with significant unobservable inputs

	Footnote	2016		2015	
		\$m	\$m	\$m	\$m
Unamortised balance at 1 Jan		<b>97</b>		114	
Deferral on new transactions		<b>156</b>		196	
Recognised in the income statement during the year:		(140)		(207)	
– amortisation		(70)		(121)	
– subsequent to unobservable inputs becoming observable		(5)		(2)	
– maturity, termination or offsetting derivative		(65)		(84)	
Exchange differences		(13)		(6)	
Other		(1)		—	
<b>Unamortised balance at 31 Dec</b>		<b>1</b>		<b>99</b>	<b>97</b>

1 This amount is yet to be recognised in the consolidated income statement.

### Hedge accounting derivatives

#### Fair value hedges

HSBC's fair value hedges principally consist of interest rate swaps that are used to protect against changes in the fair value of fixed-rate long-term financial instruments due to movements in market interest rates.

#### Notional contract amounts and fair values of derivatives designated as fair value hedges by product type

	2016			2015		
	Notional \$m	Assets \$m	Liabilities \$m	Notional \$m	Assets \$m	Liabilities \$m
HSBC						
Foreign exchange	<b>618</b>	<b>10</b>	<b>22</b>	196	2	—
Interest rate	<b>124,361</b>	<b>1,078</b>	<b>3,726</b>	105,127	672	3,395
<b>At 31 Dec</b>	<b>124,979</b>	<b>1,088</b>	<b>3,748</b>	105,323	674	3,395
HSBC Holdings						
Foreign exchange	<b>1,120</b>	—	<b>239</b>	1,120	—	213
Interest rate	<b>24,356</b>	<b>447</b>	<b>946</b>	5,132	477	—
<b>At 31 Dec</b>	<b>25,476</b>	<b>447</b>	<b>1,185</b>	6,252	477	213

## Notes on the Financial Statements

### Gains or losses arising from fair value hedges

	2016 \$m	2015 \$m	2014 \$m
HSBC			
Gains/(losses):			
– on hedging instruments	(439)	40	(2,542)
– on the hedged items attributable to the hedged risk	462	(51)	2,561
<b>Year ended 31 Dec</b>	<b>23</b>	<b>(11)</b>	<b>19</b>
HSBC Holdings			
Gains/(losses):			
– on hedging instruments	(909)	(4)	423
– on the hedged items attributable to the hedged risk	926	6	(422)
<b>Year ended 31 Dec</b>	<b>17</b>	<b>2</b>	<b>1</b>

### Cash flow hedges

HSBC's cash flow hedges consist principally of interest rate swaps, futures and cross-currency swaps that are used to protect against exposures to variability in future interest cash flows on non-trading assets and liabilities which bear interest at variable rates or which are expected to be re-funded or reinvested in the future. The amounts and timing of future cash flows, representing both principal and interest flows, are projected for each portfolio of financial assets and liabilities on the basis of their contractual terms and other relevant factors, including estimates of prepayments and defaults. The aggregate principal balances and interest cash flows across all portfolios over time form the basis for identifying gains and losses on the effective portions of derivatives designated as cash flow hedges of forecast transactions.

### Notional contract amounts and fair values of derivatives designated as cash flow hedges by product held by HSBC

	2016			2015		
	Notional \$m	Assets \$m	Liabilities \$m	Notional \$m	Assets \$m	Liabilities \$m
Foreign Exchange	25,663	1,081	939	32,128	1,027	748
Interest rate	90,645	909	355	107,796	986	363
<b>At 31 Dec</b>	<b>116,308</b>	<b>1,990</b>	<b>1,294</b>	139,924	2,013	1,111

### Forecast principal balances on which interest cash flows are expected to arise

	3 months or less \$m	More than 3 months but less than 1 year \$m	5 years or less but more than 1 year \$m	More than 5 years \$m
	\$m	\$m	\$m	\$m
<b>Net cash inflows/(outflows) exposure</b>				
Assets	83,472	79,749	57,553	2,750
Liabilities	(13,169)	(12,977)	(11,761)	(1,502)
<b>At 31 Dec 2016</b>	<b>70,303</b>	<b>66,772</b>	<b>45,792</b>	<b>1,248</b>
<b>Net cash inflows/(outflows) exposure</b>				
Assets	94,256	93,528	62,664	971
Liabilities	(16,241)	(17,179)	(11,681)	(3,326)
<b>At 31 Dec 2015</b>	<b>78,015</b>	<b>76,349</b>	<b>50,983</b>	<b>(2,355)</b>

This table reflects the interest rate repricing profile of the underlying hedged items. During the year to 31 December 2016 a loss of \$5m (2015: gain of \$15m; 2014: gain of \$34m) was recognised due to hedge ineffectiveness. A gain of \$129m was recognised in respect of amounts reclassified from other comprehensive income to the income statement for partially discontinued macro cash flow hedges, where the hedged forecast transactions are no longer expected to occur (2015: nil; 2014: nil).

### Hedges of net investments in foreign operations

The Group applies hedge accounting in respect of certain consolidated net investments. Hedging is undertaken using forward foreign exchange contracts or by financing with foreign currency borrowings. At 31 December 2016, the fair values of outstanding financial instruments designated as hedges of net investments in foreign operations were assets of \$137m (2015: \$111m), liabilities of \$7m (2015: \$12m) and notional contract values of \$3,544m (2015: \$4,210m). Ineffectiveness recognised in 'Net trading income' in the year ended 31 December 2016 was nil (2015: nil; 2014: nil).

## 15 Financial investments

### Carrying amount of financial investments

	Footnote	2016 \$m	2015 \$m
Available for sale securities at fair value		<b>389,874</b>	384,853
– treasury and other eligible bills		99,226	104,551
– debt securities		285,981	274,467
– equity securities		4,667	5,835
Held to maturity securities at amortised cost		<b>46,923</b>	44,102
– debt securities	1	<b>46,923</b>	44,102
<b>At 31 Dec</b>		<b>436,797</b>	428,955

1 Fair value \$47.2bn (2015: \$45.3bn).

### Financial investments at amortised cost and fair value

	Footnotes	2016		2015	
		Amortised cost \$m	Fair value <sup>1</sup> \$m	Amortised cost \$m	Fair value <sup>1</sup> \$m
US Treasury		<b>57,135</b>	<b>56,625</b>	61,585	61,779
US Government agencies	2	<b>15,790</b>	<b>15,682</b>	22,910	22,843
US Government sponsored entities	2	<b>14,397</b>	<b>14,442</b>	10,365	10,627
UK Government		<b>27,506</b>	<b>28,480</b>	27,250	27,316
Hong Kong Government		<b>62,500</b>	<b>62,475</b>	53,676	53,674
Other governments		<b>140,943</b>	<b>142,594</b>	141,329	143,370
Asset-backed securities	3	<b>10,246</b>	<b>9,392</b>	14,239	13,375
Corporate debt and other securities		<b>100,180</b>	<b>102,741</b>	89,860	91,292
Equities		<b>3,042</b>	<b>4,667</b>	4,057	5,835
<b>At 31 Dec</b>		<b>431,739</b>	<b>437,098</b>	425,271	430,111

1 Included within 'Fair value' figures are debt securities issued by banks and other financial institutions of \$69bn (2015: \$61bn), of which \$20bn (2015: \$18bn) are guaranteed by various governments.

2 Includes securities that are supported by an explicit guarantee issued by the US Government.

3 Excludes asset-backed securities included under US Government agencies and sponsored entities.

### Maturities of investments in debt securities at their carrying amount

		5 years or less but over 1 year		10 years or less but over 5 years		Over 10 years	Total
		1 year or less \$m	\$m	\$m	\$m		
Available for sale		<b>64,155</b>	<b>142,700</b>	<b>45,385</b>	<b>33,741</b>	285,981	
Held to maturity		2,502	10,210	10,348	23,863	46,923	
<b>At 31 Dec 2016</b>		<b>66,657</b>	<b>152,910</b>	<b>55,733</b>	<b>57,604</b>	332,904	
Available for sale		61,664	131,023	42,140	39,640	274,467	
Held to maturity		2,428	10,242	8,881	22,551	44,102	
<b>At 31 Dec 2015</b>		<b>64,092</b>	<b>141,265</b>	<b>51,021</b>	<b>62,191</b>	318,569	

## Notes on the Financial Statements

Contractual maturities and weighted average yields of investment debt securities

	5 years or less but over 1 year				10 years or less but over 5 years				Over 10 years	
	1 year or less		Amount \$m	Yield %	Amount \$m	Yield %	Amount \$m	Yield %	Amount \$m	Yield %
	Amount \$m	Yield %								
<b>Available for sale</b>										
US Treasury	5,896	1.0	22,807	1.5	19,063	1.9	4,024	3.0		
US Government agencies	2	9.5	118	3.3	95	2.5	6,844	2.2		
US Government-sponsored agencies	200	3.3	3,138	2.8	1,173	2.4	5,829	2.3		
UK Government	2,913	1.3	6,742	0.9	10,132	1.2	547	3.4		
Hong Kong Government	357	0.7	1,143	1.2	—	—	—	—		
Other governments	42,513	1.8	61,734	2.4	8,151	3.0	1,480	6.5		
Asset-backed securities	41	1.8	837	1.2	1,196	1.6	8,166	2.1		
Corporate debt and other securities	11,641	2.0	43,936	1.6	4,524	3.7	7,316	4.2		
<b>Total amortised cost at 31 Dec 2016</b>	<b>63,563</b>		<b>140,455</b>		<b>44,334</b>		<b>34,206</b>			
<b>Total carrying value</b>	<b>64,155</b>		<b>142,700</b>		<b>45,385</b>		<b>33,741</b>			
<b>Held to maturity</b>										
US Treasury	22	4.8	61	4.8	46	5.0	124	4.2		
US Government agencies	—	—	6	1.8	36	3.3	8,690	2.3		
US Government-sponsored agencies	—	—	299	2.2	393	2.8	3,364	2.9		
Hong Kong Government	26	0.3	18	3.0	23	1.5	7	1.4		
Other governments	41	5.6	318	4.0	169	3.9	805	4.3		
Asset-backed securities	—	—	—	—	—	—	5	7.0		
Corporate debt and other securities	2,413	3.2	9,508	3.6	9,681	3.4	10,868	3.9		
<b>Total amortised cost at 31 Dec 2016</b>	<b>2,502</b>		<b>10,210</b>		<b>10,348</b>		<b>23,863</b>			
<b>Total carrying value</b>	<b>2,502</b>		<b>10,210</b>		<b>10,348</b>		<b>23,863</b>			

The maturity distributions of ABSs are presented in the above table on the basis of contractual maturity dates. The weighted average yield for each range of maturities is calculated by dividing the annualised interest income for the year ended 31 December 2016 by the book amount of available-for-sale debt securities at that date. The yields do not include the effect of related derivatives.

## 16 Assets pledged, collateral received and assets transferred

### Assets pledged

Financial assets pledged as collateral

	2016 \$m	2015 \$m
Treasury bills and other eligible securities	7,151	5,941
Loans and advances to banks	17,444	15,582
Loans and advances to customers	74,109	88,927
Debt securities	80,063	69,470
Equity securities	2,655	4,644
Other	1,838	213
<b>Assets pledged at 31 Dec</b>	<b>183,260</b>	<b>184,777</b>

Assets pledged as collateral include all assets categorised as encumbered in the disclosure on page 76.

The amount of assets pledged to secure liabilities may be greater than the book value of assets utilised as collateral. For example, in the case of securitisations and covered bonds, the amount of liabilities issued plus mandatory over-collateralisation is less than the book value of the pool of assets available for use as collateral. This is also the case where assets are placed with a custodian or a settlement agent which has a floating charge over all the assets placed to secure any liabilities under settlement accounts.

These transactions are conducted under terms that are usual and customary to collateralised transactions including, where relevant, standard securities lending and borrowing, repurchase agreements and derivative margining. HSBC places both cash and non-cash collateral in relation to derivative transactions.

Financial assets pledged as collateral which the counterparty has the right to sell or repledge

	2016 \$m	2015 \$m
Trading assets	37,141	32,633
Financial investments	4,044	8,050
<b>At 31 Dec</b>	<b>41,185</b>	<b>40,683</b>

## Collateral received

The fair value of assets accepted as collateral, relating primarily to standard securities lending, reverse repurchase agreements and derivative margining, that HSBC is permitted to sell or repledge in the absence of default was \$250,919m (2015: \$222,065m). The fair value of any such collateral sold or repledged was \$149,185m (2015: \$139,532m).

HSBC is obliged to return equivalent securities. These transactions are conducted under terms that are usual and customary to standard securities lending, reverse repurchase agreements and derivative margining.

## Assets transferred

The assets pledged include transfers to third parties that do not qualify for derecognition, notably secured borrowings such as debt securities held by counterparties as collateral under repurchase agreements and equity securities lent under securities lending agreements. The transferred asset collateral continues to be recognised in full and a related liability, reflecting the Group's obligation to repurchase the assets for a fixed price at a future date is also recognised on the balance sheet. The Group is unable to use, sell or pledge the transferred assets for the duration of the transaction, and remains exposed to interest rate risk and credit risk on these pledged assets. With the exception of 'Other sales' in the table below, the counterparty's recourse is not limited to the transferred assets.

### Transferred financial assets not qualifying for full derecognition and associated financial liabilities

	Carrying amount of:		Fair value of:		Net position \$m
	Transferred assets \$m	Associated liabilities \$m	Transferred assets \$m	Associated liabilities \$m	
<b>At 31 Dec 2016</b>					
Repurchase agreements	40,364	39,568			
Securities lending agreements	3,324	2,655			
Other sales (recourse to transferred assets only)	2,441	2,466	2,455	2,458	(3)
At 31 Dec 2015					
Repurchase agreements	36,153	35,913			
Securities lending agreements	5,275	5,704			
Other sales (recourse to transferred assets only)	2,717	2,768	2,720	2,726	(6)

## 17 Interests in associates and joint ventures

### Associates

At 31 December 2016, the carrying amount of HSBC's interests in associates was \$19,874m (2015: \$18,900m).

### Principal associates of HSBC

	2016		2015	
	Carrying amount \$m	Fair value \$m	Carrying amount \$m	Fair value \$m
Bank of Communications Co., Limited	15,765	10,207	15,344	9,940
The Saudi British Bank	3,280	3,999	3,021	3,957
<b>At 31 Dec</b>	<b>19,045</b>	<b>14,206</b>	<b>18,365</b>	<b>13,897</b>

1 The fair values are based on the quoted market prices of the shares held (Level 1 in the fair value hierarchy).

	At 31 Dec 2016			
	Footnote	Country of incorporation and principal place of business	Principal activity	HSBC's interest %
Bank of Communications Co., Limited	1	PRC	Banking services	19.03
The Saudi British Bank		Saudi Arabia	Banking services	40.00

1 People's Republic of China.

A list of all associates and joint ventures is set out on page 271.

### Bank of Communications Co., Limited

The Group's significant influence in Bank of Communications Co., Limited ('BoCom') was established via representation on BoCom's board of directors and a technical cooperation and exchange programme ('TCEP'). Under the TCEP, a number of HSBC staff have been seconded to assist in the maintenance of BoCom's financial and operating policies.

## Notes on the Financial Statements

### Impairment testing

At 31 December 2016, the fair value of HSBC's investment in BoCom had been below the carrying amount for approximately 56 months. As a result, the Group performed an impairment test on the carrying amount of the investment in BoCom, which confirmed there was no impairment at 31 December 2016.

	At 31 Dec 2016			At 31 Dec 2015		
	VIU \$bn	Carrying value \$bn	Fair value \$bn	VIU \$bn	Carrying value \$bn	Fair value \$bn
		16.1	15.8		10.2	17.0
Bank of Communications Co., Limited						

### Basis of recoverable amount

The impairment test was performed by comparing the recoverable amount of BoCom, determined by a value in use ('VIU') calculation, with its carrying amount. The VIU calculation uses discounted cash flow projections based on management's estimates of earnings. Cash flows beyond the short to medium term are extrapolated in perpetuity using a long-term growth rate. An imputed capital maintenance charge ('CMC') is calculated to reflect expected regulatory capital requirements, and is deducted from forecast cash flows. The principal inputs to the CMC calculation include estimates of asset growth, the ratio of risk-weighted assets to total assets, and the expected regulatory capital requirements. Management judgement is required in estimating the future cash flows of BoCom.

### Key assumptions in value in use calculation

The assumptions we used in our VIU calculation were:

- Long-term profit growth rate 5% (2015: 5%) for periods after 2019, which does not exceed forecast GDP growth in mainland China.
- Long-term asset growth rate: 4% (2015: 4%) for periods after 2019, which is the rate that assets are expected to grow to achieve long-term profit growth of 5%.
- Discount rate: 13% (2015: 13%), which is derived from a range of values obtained by applying a capital asset pricing model ('CAPM') calculation for BoCom, using market data. Management also compares rates derived from the CAPM with discount rates from external sources, and HSBC's discount rate for evaluating investments in mainland China. The discount rate used was within the range of 10.2% to 15.0% (2015: 10.1% to 14.2%) indicated by the CAPM and external sources.
- Loan impairment charge as a percentage of customer advances: a range from 0.72% to 0.87% (2015: 0.71% to 0.78%) in the short to medium term, based on forecasts disclosed by external analysts. For periods after 2019, the ratio is 0.70% (2015: 0.70%), slightly higher than the historical average.
- Risk-weighted assets as a percentage of total assets: 62% for all forecast periods (2015: 67%). This is consistent with the medium-term forecasts disclosed by external analysts.
- Cost-income ratio: 40% (2015: 41%) in the short to medium term. The ratios were consistent with the short- to medium-term range forecasts of 39.9% to 40.2% (2015: 40.3% to 40.7%) disclosed by external analysts.

The following table shows the change to each key assumption in the VIU calculation that on its own would reduce the headroom to nil.

Key assumption	Changes to key assumption to reduce headroom to nil
• Long-term profit growth rate	• Decrease by 13 basis points
• Long-term asset growth rate	• Increase by 14 basis points
• Discount rate	• Increase by 17 basis points
• Loan impairment charge as a percentage of customer advances	• Increase by 3 basis points
• Risk-weighted assets as a percentage of total assets	• Increase by 95 basis points
• Cost-income ratio	• Increase by 60 basis points

The following table illustrates the effect on VIU of reasonably possible changes to key assumptions. This reflects the sensitivity of the VIU to each key assumption on its own, and it is possible that more than one favourable and/or unfavourable change will occur at the same time.

#### Sensitivity of VIU to reasonably possible changes in key assumptions

	Favourable change			Unfavourable change		
	bps	\$bn	VIU \$bn	Decrease In VIU		VIU \$bn
				Increase in VIU	VIU	
<b>At 31 Dec 2016</b>						
Long-term profit growth rate	—	—	<b>16.1</b>	(150)	(3.3)	<b>12.8</b>
Long-term asset growth rate	(80)	1.8	<b>17.8</b>	—	—	<b>16.1</b>
Discount rate	(100)	2.3	<b>18.4</b>	—	—	<b>16.1</b>
Loan impairment charge as a percentage of customer advances	—	—	<b>16.1</b>	<b>2016-19: 0.93%</b> <b>2020 onwards: 0.80%</b>		<b>(1.1)</b>
Risk-weighted assets as a percentage of total assets	(30)	0.1	<b>16.2</b>	<b>170</b>	(0.6)	<b>15.5</b>
Cost-income ratio	(170)	0.9	<b>17.0</b>	<b>250</b>	(1.4)	<b>14.7</b>
<b>At 31 Dec 2015</b>						
Long-term profit growth rate	100	3.2	20.3	(210)	(4.7)	12.3
Long-term asset growth rate	(50)	1.2	18.2	100	(2.8)	14.3
Discount rate	(150)	4.2	21.2	110	(2.1)	14.9
Loan impairment charge as a percentage of customer advances	70 throughout	0.1	17.2	2015-18: 0.85% 2019 onwards: 0.75%		(0.7)
Risk-weighted assets as a percentage of total assets	(350)	1.2	18.2	10	—	17
Cost income ratio	(250)	1.5	18.5	120	(0.7)	16.4

Considering the interrelationship of the changes set out in the table above, management estimates that the reasonably possible range of VIU is \$10.8bn to \$19.0bn.

#### Selected financial information of BoCom

The statutory accounting reference date of BoCom is 31 December. For the year ended 31 December 2016, HSBC included the associate's results on the basis of financial statements for the 12 months ended 30 September 2016, taking into account changes in the subsequent period from 1 October 2016 to 31 December 2016 that would have materially affected the results.

#### Selected balance sheet information of BoCom

	At 30 Sep	
	2016 \$m	2015 \$m
Cash and balances at central banks	<b>137,844</b>	144,702
Loans and advances to banks and other financial institutions	<b>101,436</b>	110,915
Loans and advances to customers	<b>566,126</b>	560,503
Other financial assets	<b>311,207</b>	244,722
Other assets	<b>48,922</b>	49,246
<b>Total assets</b>	<b>1,165,535</b>	1,110,088
Deposits by banks and other financial institutions	<b>297,442</b>	261,211
Customer accounts	<b>680,915</b>	691,959
Other financial liabilities	<b>69,954</b>	46,932
Other liabilities	<b>27,860</b>	29,329
<b>Total liabilities</b>	<b>1,076,171</b>	1,029,431
<b>Total equity</b>	<b>89,364</b>	80,657

#### Reconciliation of BoCom's total shareholders' equity to the carrying amount in HSBC's consolidated financial statements

	At 30 Sep	
	2016 \$m	2015 \$m
HSBC's share of total shareholders' equity	<b>15,285</b>	14,824
Add: Goodwill and other intangible assets	<b>480</b>	520
Carrying amount	<b>15,765</b>	15,344

## Notes on the Financial Statements

### Selected income statement information of BoCom

	For the 12 months ended 30 Sep	
	2016 \$m	2015 \$m
Net interest income	<b>20,614</b>	22,397
Net fee and commission income	<b>5,493</b>	5,432
Loan impairment charges	(4,284)	(3,772)
Depreciation and amortisation	(1,216)	(1,012)
Tax expense	(2,800)	(2,976)
Profit for the year	<b>10,151</b>	10,634
Other comprehensive income	<b>875</b>	377
<b>Total comprehensive income</b>	<b>11,026</b>	11,011
Dividends received from BoCom	<b>580</b>	624

### Summarised aggregate financial information for all associates excluding BoCom

	2016 \$m	2015 \$m
Carrying amount	<b>4,109</b>	3,556
HSBC's share of:		
- total assets	<b>20,757</b>	21,645
- total liabilities	<b>16,661</b>	18,166
- revenues	<b>923</b>	821
- profit or loss from continuing operations	<b>454</b>	508

### Joint ventures

At 31 December 2016, the carrying amount of HSBC's interests in joint ventures was \$155m (2015: \$239m).

### Associates and joint ventures

For the year ended 31 December 2016, HSBC's share of associates' and joint ventures' tax on profit was \$542m (2015: \$575m). This is included within 'Share of profit in associates and joint ventures' in the 'Consolidated income statement'.

### Movements in interests in associates and joint ventures

	Footnote	2016 \$m	2015 \$m
<b>At 1 Jan</b>		<b>19,139</b>	18,181
Additions		<b>76</b>	3
Disposals		(25)	(8)
Share of results		<b>2,354</b>	2,556
Dividends		(751)	(879)
Exchange differences		(1,115)	(718)
Share of other comprehensive income of associates and joint ventures		<b>54</b>	(9)
Other movements		<b>297</b>	13
<b>At 31 Dec</b>	1	<b>20,029</b>	19,139

1 Includes goodwill of \$488m (2015: \$593m).

## 18 Investments in subsidiaries

### Principal subsidiaries of HSBC Holdings

			At 31 Dec 2016
	Country of incorporation or registration	HSBC's interest %	Share class
<b>Europe</b>			
HSBC Bank plc	England and Wales	100	<b>£1 Ordinary and Preferred Ordinary, \$0.01 Non-cumulative third Dollar Preference Shares</b>
HSBC France	France	99.99	<b>€5 Actions</b>
HSBC Assurances Vie (France)	France	100	<b>287.50 EUR Ordinary shares</b>
HSBC Private Banking Holdings (Suisse) SA	Switzerland	100	<b>CHF1,000 Ordinary</b>
HSBC Trinkaus & Burkhardt AG	Germany	80.65	<b>Stückaktien no par value</b>
<b>Asia</b>			
Hang Seng Bank Limited	Hong Kong	62.14	<b>HK\$5 Ordinary</b>
HSBC Bank Australia Limited	Australia	100	<b>Ordinary no par value</b>
HSBC Bank (China) Company Limited	PRC <sup>4</sup>	100	<b>CNY1 Ordinary</b>
HSBC Bank Malaysia Berhad	Malaysia	100	<b>RM0.50 Ordinary</b>
HSBC Bank (Taiwan) Limited	Taiwan	100	<b>TWD10 Ordinary</b>
HSBC Life (International) Limited	Bermuda	100	<b>HK\$1 Ordinary</b>
The Hongkong and Shanghai Banking Corporation Limited	Hong Kong	100	<b>HK\$2.50 Ordinary \$1 CIP<sup>1</sup>, CRP<sup>2</sup> and NIP<sup>3</sup></b>
HSBC Bank (Singapore) Limited	Singapore	100	<b>SGD100 Ordinary</b>
<b>Middle East and North Africa</b>			
HSBC Bank Middle East Limited	United Arab Emirates	100	<b>\$1 Ordinary and \$1 CRP<sup>2</sup></b>
HSBC Bank Egypt S.A.E.	Egypt	94.53	<b>EGP84 Ordinary</b>
<b>North America</b>			
HSBC Bank Canada	Canada	100	<b>Common no par value and Preference no par value</b>
HSBC Bank USA, N.A.	USA	100	<b>\$100 Common and \$0.01 Preference</b>
HSBC Securities (USA) Inc.	USA	100	<b>\$0.05 Common</b>
<b>Latin America</b>			
HSBC Mexico, S.A., Institución de Banca Múltiple, Grupo Financiero HSBC	Mexico	99.99	<b>MXN2 Ordinary</b>

1 Cumulative Irredeemable Preference shares.

2 Cumulative Redeemable Preference shares.

3 Non-cumulative Irredeemable Preference shares.

4 People's Republic of China.

Details of the debt, subordinated debt and preference shares issued by the principal subsidiaries to parties external to the Group are included in Notes 25 'Debt securities in issue', 28 'Subordinated liabilities' and 31 'Non-controlling interests', respectively.

A list of all related undertakings is set out on pages 265 to 271. The principal countries of operation are the same as the countries of incorporation except for HSBC Bank Middle East Limited, which operates mainly in the Middle East and North Africa, and HSBC Life (International) Limited, which operates mainly in Hong Kong.

HSBC is structured as a network of regional banks and locally incorporated regulated banking entities. Each bank is separately capitalised in accordance with applicable prudential requirements and maintains a capital buffer consistent with the Group's risk appetite for the relevant country or region. HSBC's capital management process is incorporated in the Annual Operating Plan, which is approved by the Board.

HSBC Holdings is the primary provider of equity capital to its subsidiaries and also provides them with non-equity capital where necessary. These investments are substantially funded by HSBC Holdings' issuance of equity and non-equity capital and by profit retention. As part of its capital management process, HSBC Holdings seeks to maintain a balance between the composition of its capital and its investment in subsidiaries. Subject to this, there is no current or foreseen impediment to HSBC Holdings' ability to provide funding for such investments. During 2016, consistent with the Group's capital plan, the Group's subsidiaries did not experience any significant restrictions on paying dividends or repaying loans and advances. Also, there are no foreseen restrictions envisaged with regard to planned dividends or payments. However, the ability of subsidiaries to pay dividends or advance monies to HSBC Holdings depends on, among other things, their respective local regulatory capital and banking requirements, exchange controls, statutory reserves, and financial and operating performance.

The amount of guarantees by HSBC Holdings in favour of other HSBC Group entities is set out in Note 33.

Information on structured entities consolidated by HSBC where HSBC owns less than 50% of the voting rights is included in Note 19 'Structured entities'. In each of these cases, HSBC controls and consolidates an entity when it is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

## Notes on the Financial Statements

### Subsidiaries with significant non-controlling interests

	2016	2015
<b>Hang Seng Bank Limited</b>		
Proportion of ownership interests and voting rights held by non-controlling interests	<b>37.86%</b>	37.86%
Place of business	<b>Hong Kong</b>	Hong Kong
	<b>\$m</b>	\$m
Profit attributable to non-controlling interests	<b>814</b>	1,364
Accumulated non-controlling interests of the subsidiary	<b>5,792</b>	5,866
Dividends paid to non-controlling interests	<b>811</b>	523
Summarised financial information:		
– total assets	<b>175,242</b>	169,813
– total liabilities	<b>159,035</b>	153,458
– net operating income before loan impairment	<b>3,937</b>	5,411
– profit for the year	<b>2,148</b>	3,604
– total comprehensive income for the year	<b>2,044</b>	1,636

## 19 Structured entities

HSBC is mainly involved with both consolidated and unconsolidated structured entities through the securitisation of financial assets, conduits and investment funds, established either by HSBC or a third party.

### Consolidated structured entities

#### Total assets of HSBC's consolidated structured entities, split by entity type

	Conduits \$bn	Securitisations \$bn	HSBC managed funds \$bn	Other \$bn	Total \$bn
<b>At 31 Dec 2016</b>	<b>15.8</b>	<b>5.7</b>	<b>4.8</b>	<b>3.7</b>	<b>30.0</b>
At 31 Dec 2015	25.9	5.6	8.2	5.7	45.4

### Conduits

HSBC has established and manages two types of conduits: securities investment conduits ('SICs') and multi-seller conduits.

#### Securities investment conduits

The SICs purchase highly rated ABSs to facilitate tailored investment opportunities.

- Solitaire – At 31 December 2016, Solitaire, HSBC's principal SIC held \$4.7bn of ABSs (2015: \$6.2bn). These are included within the disclosures of ABSs on page 105. It is currently funded entirely by commercial paper ('CP') issued to HSBC. Although HSBC continues to provide a liquidity facility, Solitaire has no need to draw on it as long as HSBC purchases its issued CP, which HSBC intends to do for the foreseeable future. At 31 December 2016, HSBC held \$6.1bn of CP (2015: \$8.0bn).
- Mazarin, Barion and Malachite – All three SICs are predominantly funded by repurchase agreements and medium-term notes. HSBC is exposed to the par value of Mazarin assets through the provision of a liquidity facility equal to the lesser of the amortised cost of issued debt and the amortised cost of non-defaulted assets. At 31 December 2016, this amounted to \$1.0bn (2015: \$1.8bn). HSBC's primary exposure to Barion and Malachite is represented by the amortised cost of the debt required to support the non-cash assets of the vehicles. At 31 December 2016, this amounted to \$0.8bn (2015: \$1.4bn). For all three SICs first loss protection is provided through the capital notes issued by these vehicles, which are held substantially by third parties. At 31 December 2016, HSBC held 12.2% of the capital notes (2015: 7.2%) issued by these vehicles with a par value of \$69.5m (2015: \$55.2m) and a carrying amount of \$27.9m (2015: \$24.7m).

#### Multi-seller conduit

HSBC's multi-seller conduit was established to provide access to flexible market-based sources of finance for its clients. Currently, HSBC bears risk equal to the transaction-specific liquidity facility offered to the multi-seller conduit, amounting to \$10.2bn at 31 December 2016 (2015: \$19.8bn). First loss protection is provided by the originator of the assets, and not by HSBC, through transaction-specific credit enhancements. A layer of secondary loss protection is provided by HSBC in the form of programme-wide enhancement facilities.

#### Securitisations

HSBC uses structured entities to securitise customer loans and advances it originates in order to diversify its sources of funding for asset origination and capital efficiency purposes. The loans and advances are transferred by HSBC to the structured entities for cash or synthetically through credit default swaps, and the structured entities issue debt securities to investors.

#### HSBC managed funds

HSBC has established a number of money market and non-money market funds. Where it is deemed to be acting as principal rather than agent in its role as investment manager, HSBC controls these funds.

## Other

HSBC has also entered into a number of transactions in the normal course of business which include asset and structured finance transactions where it has control of the structured entity. In addition, HSBC is deemed to control a number of third-party managed funds through its involvement as a principal in the funds.

### Unconsolidated structured entities

The term 'unconsolidated structured entities' refers to all structured entities not controlled by HSBC. The Group enters into transactions with unconsolidated structured entities in the normal course of business to facilitate customer transactions and for specific investment opportunities.

#### Nature and risks associated with HSBC interests in unconsolidated structured entities

	<b>Securitisations</b> \$bn	<b>HSBC managed funds</b> \$bn		<b>Non-HSBC managed funds</b> \$bn		<b>Other</b> \$bn	<b>Total</b> \$bn
<b>Total assets of the entities</b>	<b>14.4</b>	<b>200.6</b>		<b>2,016.5</b>		<b>106.3</b>	<b>2,337.8</b>
Total assets in relation to HSBC's interests in the unconsolidated structured entities	2.4	7.1		8.3		10.1	27.9
– trading assets	–	0.4		0.1		2.1	2.6
– financial assets designated at fair value	–	5.9		7.5		–	13.4
– derivatives	–	–		–		3.9	3.9
– loans and advances to banks	–	–		–		0.4	0.4
– loans and advances to customers	2.4	–		–		3.2	5.6
– financial investments	–	0.8		0.7		0.2	1.7
– other assets	–	–		–		0.3	0.3
Total liabilities in relation to HSBC's interests in the unconsolidated structured entities	–	–		–		0.3	0.3
– derivatives	–	–		–		0.1	0.1
– other liabilities	–	–		–		0.2	0.2
<b>HSBC's maximum exposure at 31 Dec 2016</b>	<b>2.4</b>	<b>7.1</b>		<b>11</b>		<b>13.5</b>	<b>34</b>
<b>Total assets of the entities</b>	<b>12.9</b>	<b>227.9</b>		<b>2,003.1</b>		<b>139.9</b>	<b>2,383.8</b>
Total assets in relation to HSBC's interests in the unconsolidated structured entities	1.4	5.6		8.0		9.8	24.8
– trading assets	–	0.1		0.2		2.6	2.9
– financial assets designated at fair value	–	5.3		6.6		–	11.9
– derivatives	–	–		–		3.8	3.8
– loans and advances to banks	–	–		–		0.1	0.1
– loans and advances to customers	1.1	–		0.1		2.9	4.1
– financial investments	0.3	0.2		1.1		0.2	1.8
– other assets	–	–		–		0.2	0.2
Total liabilities in relation to HSBC's interests in the unconsolidated structured entities	–	–		–		0.1	0.1
– other liabilities	–	–		–		0.1	0.1
<b>HSBC's maximum exposure at 31 Dec 2015</b>	<b>3.5</b>	<b>5.6</b>		<b>8.0</b>		<b>14.6</b>	<b>31.7</b>

The maximum exposure to loss from HSBC's interests in unconsolidated structured entities represents the maximum loss it could incur as a result of its involvement with these entities regardless of the probability of the loss being incurred.

- For commitments, guarantees and written credit default swaps, the maximum exposure to loss is the notional amount of potential future losses.
- For retained and purchased investments in and loans to unconsolidated structured entities, the maximum exposure to loss is the carrying value of these interests at the balance sheet reporting date.

The maximum exposure to loss is stated gross of the effects of hedging and collateral arrangements entered into to mitigate HSBC's exposure to loss.

### Securitisations

HSBC has interests in unconsolidated securitisation vehicles through holding notes issued by these entities. In addition, HSBC has investments in ABSs issued by third party structured entities as set out on page 105.

### HSBC managed funds

HSBC establishes and manages money market funds and non-money market investment funds to provide customers with investment opportunities. Further information on funds under management is provided on page 61.

HSBC, as fund manager, may be entitled to receive management and performance fees based on the assets under management. HSBC may also retain units in these funds.

### Non-HSBC managed funds

HSBC purchases and holds units of third-party managed funds in order to facilitate business and meet customer needs. In addition, HSBC enters into derivative contracts to facilitate risk management solutions for non-HSBC managed funds. Note 14 provides information on derivatives entered into by HSBC.

## Notes on the Financial Statements

### Other

HSBC has established structured entities in the normal course of business, such as structured credit transactions for customers, to provide finance to public and private sector infrastructure projects, and for asset and structured finance transactions.

### HSBC sponsored structured entities

The amount of assets transferred to and income received from such sponsored entities during 2016 and 2015 were not significant.

## 20 Goodwill and intangible assets

	Footnote	2016 \$m	2015 \$m
Goodwill		<b>12,330</b>	16,294
Present value of in-force long-term insurance business		<b>6,502</b>	5,685
Other intangible assets	1	<b>2,514</b>	2,626
<b>At 31 Dec</b>		<b>21,346</b>	24,605

1 Included within other intangible assets is internally generated software with a net carrying value of \$1,982m (2015: \$1,934m).

### Movement analysis of goodwill

	2016 \$m	2015 \$m
<b>Gross amount</b>		
<b>At 1 Jan</b>	<b>22,187</b>	25,092
Exchange differences	(562)	(1,610)
Reclassified to held for sale	(183)	(1,319)
Other	3	24
<b>At 31 Dec</b>	<b>21,445</b>	22,187
<b>Accumulated impairment losses</b>		
<b>At 1 Jan</b>	<b>(5,893)</b>	(5,923)
Impairment losses	(3,240)	—
Other	18	30
<b>At 31 Dec</b>	<b>(9,115)</b>	(5,893)
<b>Net carrying amount at 31 Dec</b>	<b>12,330</b>	16,294

### Impairment testing

The Group's impairment test in respect of goodwill allocated to each cash generating unit (CGU) is performed as at 1 July each year. A review for indicators of impairment is undertaken at each subsequent quarter-end and as at 31 December 2016. Subsequent to the 1 July 2016 annual test the CGU for Global Banking and Markets was amended from a regional to a global basis. This change is discussed further below.

### 30 June and 31 December 2016 impairment indicators review

At 30 June 2016, we reviewed the inputs used in our 2015 impairment tests in the light of current economic and market conditions. As a result, impairment tests were performed for Global Private Banking – Europe and Global Banking and Markets – Europe. Following these tests an impairment of \$0.8bn was recognised in respect of the Global Private Banking – Europe.

At 31 December 2016, we reviewed the inputs used in our 1 July 2016 impairment test and identified that indicators of impairment existed within the Global Private Banking – Europe CGU. There were no indicators of impairment in respect of our other CGUs at this time. Refreshed cash flow projections that became available for Global Private Banking – Europe were significantly adverse when compared to those used in the 1 July 2016 impairment test. The reduction in cash flow forecasts is driven by the continuing repositioning of the business and lower net new money and associated return on asset expectations. As a result, an impairment test was performed resulting in an impairment of \$2.4bn.

The assumptions and results of the Global Private Banking – Europe tests are presented below:

	Carrying amount	of which goodwill	Value in use	Impairment	Discount rate	Nominal growth rate beyond initial cash flow projections
	\$bn	\$bn	\$bn	\$bn	%	%
<b>30 Jun 2016</b>	<b>4.4</b>	<b>3.3</b>	<b>3.6</b>	<b>(0.8)</b>	<b>9.7</b>	<b>2.8</b>
<b>31 Dec 2016</b>	<b>3.5</b>	<b>2.4</b>	<b>1.1</b>	<b>(2.4)</b>	<b>9.7</b>	<b>2.8</b>
<b>2016 impairment recognised</b>				<b>(3.2)</b>		

### Basis of the recoverable amount

The recoverable amount of all CGUs to which goodwill has been allocated was equal to its value in use (VIU) at each respective testing date for 2015 and 2016. For each CGU, the VIU is calculated by discounting management's cash flow projections for the CGU. The key assumptions used in the VIU calculation for each significant CGU are discussed below.

### Key assumptions in VIU calculation

Footnote	Goodwill at 1 Jul 2016  \$m	Discount rate  %	Nominal growth rate beyond initial cash flow projections  %	Goodwill at 1 Jul 2015  \$m	Goodwill at 31 Dec 2015  \$m	Discount rate  %	Nominal growth rate beyond initial cash flow projections  %					
				Goodwill at 1 Jul 2015  \$m	Goodwill at 31 Dec 2015  \$m							
<b>Cash-generating unit</b>												
<b>Europe</b>												
RBWM	<b>3,446</b>	<b>8.9</b>	<b>3.6</b>	3,562		6.9	3.3					
GB&M	<b>2,520</b>	<b>10.7</b>	<b>3.8</b>	2,690		9.9	3.5					
CMB	<b>2,517</b>	<b>9.7</b>	<b>3.8</b>	2,603		9.0	3.6					
<b>North America</b>												
GB&M	<b>1</b>	<b>918</b>	<b>10.0</b>	<b>4.6</b>	929	931	10.0					
<b>Latin America</b>												
RBWM		<b>584</b>	<b>11.0</b>	<b>7.4</b>	792		11.0					
							6.9					

<sup>1</sup> GB&M North America comparative discount rate and nominal growth rate beyond initial cash flow project rates are as at 31 December 2015.

At 1 July 2016, aggregate goodwill of \$3,025m (1 July 2015: \$2,787m) had been allocated to CGUs that were not considered individually significant. The Group's CGUs do not carry on their balance sheets any significant intangible assets with indefinite useful lives, other than goodwill.

**Management's judgement in estimating the cash flows of a CGU:** The cash flow projections for each CGU are based on plans approved by the GMB. For the goodwill impairment test conducted at 1 July 2016, management's cash flow projections until the end of 2020 were used.

**Discount rate:** The rate used to discount the cash flows is based on the cost of capital assigned to each CGU, which is derived using a capital asset pricing model ('CAPM'). CAPM depends on a number of inputs reflecting financial and economic variables, including the risk-free rate and a premium to reflect the inherent risk of the business being evaluated. These variables are based on the market's assessment of the economic variables and management's judgement. The discount rates for each CGU are refined to reflect the rates of inflation for the countries within which the CGU operate. In addition, for the purposes of testing goodwill for impairment, management supplements this process by comparing the discount rates derived using the internally generated CAPM, with cost of capital rates produced by external sources for businesses operating in similar markets. For the purpose of goodwill testing as at 1 July 2016, all European CGUs include a 100bps uplift to reflect the increased risk in European markets following the UK referendum on membership of the EU.

**Nominal long-term growth rate:** The long-term growth rate is used to extrapolate the cash flows in perpetuity because of the long-term perspective within the Group of business units making up the CGUs. These growth rates reflect GDP and inflation for the countries within which the CGU operates or derives revenue from.

### Global Banking and Markets CGU basis

As described on page 44, the Group has changed its operating segments from a geographical region to a global businesses basis, and this change prompted a review of the goodwill allocation. Following this review it has been determined that Global Banking and Markets should be assessed as a single CGU rather than on a regional basis reflecting the global management and customer base of this business. An analysis was performed and Global Banking and Markets is considered to have significant headroom to support its goodwill. All other CGUs remain unchanged.

### Sensitivities of key assumptions in calculating VIU

At 1 July 2016, Retail Banking and Wealth Management – Europe was sensitive to reasonably possible adverse changes in the discount rate, growth rate or management's projections of cash flows assumptions supporting the recoverable amount. Changes in one or more of these assumptions could cause an impairment to be recognised. In making an estimate of reasonably possible changes to assumptions, management considers the available evidence in respect of each input to the model such as the external range of discount rates observable, historical performance against forecast and risks attaching to the key assumptions underlying cash flow projections.

The following table presents a summary of the key assumptions underlying the most sensitive inputs to the model for this CGU; the key risks attached; and details of a reasonably possible change to assumptions where, in the opinion of management, these could result in an impairment.

## Notes on the Financial Statements

### Reasonably possible changes in key assumptions

	Input	Key assumptions	Associated risks	Reasonably possible change
<b>Cash-generating unit</b>				
RBWM – Europe	Cash flow projections	<ul style="list-style-type: none"> <li>Level of interest rates and yield curves.</li> <li>Competitors' position within the market.</li> <li>Level and change in unemployment rates.</li> </ul>	<ul style="list-style-type: none"> <li>Uncertain regulatory environment.</li> <li>Customer remediation and regulatory actions.</li> </ul>	<ul style="list-style-type: none"> <li>Cash flow projections decrease by 10%. This does not result in an impairment.</li> </ul>
	Discount rate	<ul style="list-style-type: none"> <li>Discount rate used is a reasonable estimate of a suitable market rate for the profile of the business.</li> </ul>	<ul style="list-style-type: none"> <li>External evidence suggests that the rate used is not appropriate to the business.</li> </ul>	<ul style="list-style-type: none"> <li>Discount rate increases by 100bps.</li> </ul>
	Long-term growth rates	<ul style="list-style-type: none"> <li>Business growth will reflect GDP growth rates in the long term.</li> </ul>	<ul style="list-style-type: none"> <li>Growth does not match GDP or there is a fall in GDP forecasts.</li> </ul>	<ul style="list-style-type: none"> <li>Real GDP growth does not occur or is not reflected in performance.</li> </ul>

### Sensitivity of VIU to reasonably possible changes in key assumptions and changes to current assumptions to achieve nil headroom

At 1 Jul 2016	RBWM – Europe \$bn
<b>In \$ billions (unless otherwise stated)</b>	
Carrying amount	16.6
VIU	19.7
<b>Reasonably possible change in key assumption</b>	
Discount rate – bps	100
Cash flows – %	(10)
Long-term growth rates – bps	(162)
<b>Impact on VIU</b>	
Discount rate	(3.1)
Cash flows	(2.0)
Long-term growth rates	(3.9)
<b>Cumulative impact of all changes</b>	
<b>Changes to current assumptions to achieve nil headroom</b>	
Discount rate – bps	102
Cash flows – %	(15.8)
Long-term growth rates – bps	(122)

### Present value of in-force long-term insurance business

When calculating the present value of in-force insurance business ('PVIF'), expected cash flows are projected after adjusting for a variety of assumptions made by each insurance operation to reflect local market conditions and management's judgement of future trends, and after applying risk margins to reflect any uncertainty in the underlying assumptions. Variations in actual experience and changes to assumptions can contribute to volatility in the results of the insurance business.

Actuarial Control Committees of each key insurance entity meet on a quarterly basis to review and approve PVIF assumptions. All changes to non-economic assumptions, economic assumptions that are not observable and model methodology must be approved by the Actuarial Control Committee.

### Movements in PVIF

	Footnotes	2016 \$m	2015 \$m
<b>PVIF at 1 Jan</b>		5,685	5,307
Change in PVIF of long-term insurance business		902	799
- value of new business written during the year		900	809
- expected return	1	(532)	(552)
- assumption changes and experience variances (see below)		513	504
- other adjustments		21	38
Transfer of assets classified as held for sale	2	(45)	(219)
Exchange differences and other		(40)	(202)
<b>PVIF at 31 Dec</b>		6,502	5,685

1 'Expected return' represents the unwinding of the discount rate and reversal of expected cash flows for the period.

2 Relates to the Brazilian insurance operations which were classified as held for sale in 2015.

### Assumption changes and experience adjustments

Included within this line item are:

- \$279m (2015: \$114m), directly offsetting interest rate-driven changes to liabilities under insurance contracts.
- \$301m (2015: \$209m), reflecting the future sharing of returns with policyholders on contracts with discretionary participation features ('DPF'), to the extent this sharing is not already included in liabilities under insurance contracts.
- \$(67)m (2015: \$181m), driven by other changes in assumptions and experience variances to projected future profits.

### Key assumptions used in the computation of PVIF for main life insurance operations

Economic assumptions are set in a way that is consistent with observable market values. The valuation of PVIF is sensitive to observed market movements and the impact of such changes is included in the sensitivities presented below.

	2016		2015	
	Hong Kong	France <sup>1</sup>	Hong Kong	France <sup>1</sup>
	%	%	%	%
Weighted average risk free rate	2.09	0.99	1.82	1.57
Weighted average risk discount rate	6.34	1.84	6.81	2.55
Expense inflation	3.00	1.66	3.00	1.70

1 For 2016, the calculation of France's PVIF assumes a risk discount rate of 1.84% (2015: 2.55%) plus a risk margin of \$101m (2015: \$51m).

### Sensitivity to changes in economic assumptions

The Group sets the risk discount rate applied to the PVIF calculation by starting from a risk-free rate curve and adding explicit allowances for risks not reflected in the best estimate cash flow modelling. Where the insurance operations provide options and guarantees to policyholders the cost of these options and guarantees is an explicit reduction to PVIF, unless it is already allowed for as an explicit addition to the technical provisions required by regulators. See page 123 for further details of these guarantees and the impact of changes in economic assumptions on our insurance manufacturing subsidiaries.

### Sensitivity to changes in non-economic assumptions

Policyholder liabilities and PVIF are determined by reference to non-economic assumptions including mortality and/or morbidity, lapse rates and expense rates. See page 125 for further details on the impact of changes in non-economic assumptions on our insurance manufacturing operations.

## 21 Prepayments, accrued income and other assets

	2016	2015
	\$m	\$m
Prepayments and accrued income	7,335	7,765
Bullion	15,406	11,501
Endorsements and acceptances	8,574	9,149
Reinsurers' share of liabilities under insurance contracts (Note 3)	1,820	1,378
Employee benefit assets (Note 5)	4,714	5,272
Other accounts	12,298	9,410
Property, plant and equipment	9,373	9,923
<b>At 31 Dec</b>	<b>59,520</b>	<b>54,398</b>

Prepayments, accrued income and other assets include \$26,927 (2015: \$25,310m) of financial assets, the majority of which are measured at amortised cost.

## 22 Assets held for sale and liabilities of disposal groups held for sale

### Assets held for sale and liabilities of disposal groups held for sale

	2016	2015
	\$m	\$m
Held for sale at 31 Dec		
Disposal groups	1,882	41,715
Non-current assets held for sale	2,507	2,185
<b>Total assets</b>	<b>4,389</b>	<b>43,900</b>
Liabilities of disposal groups	2,790	36,840

### Disposal groups

#### Brazil

On 1 July 2016, we completed the sale of our operations in Brazil to Banco Bradesco S.A. for a cash consideration of \$4.8bn. This resulted in a loss on disposal of \$1.7bn which includes the reclassification of cumulative foreign exchange differences of \$1.9bn.

## Notes on the Financial Statements

### 23 Trading liabilities

	Footnotes	2016 \$m	2015 \$m
Deposits by banks	1	<b>24,827</b>	27,054
Customer accounts	1, 2	<b>45,085</b>	40,208
Other debt securities in issue (Note 25)	3	<b>32,656</b>	30,525
Other liabilities – net short positions in securities		<b>51,123</b>	43,827
<b>At 31 Dec</b>		<b>153,691</b>	141,614

1 'Deposits by banks' and 'Customer accounts' include repos, settlement accounts, stock lending and other amounts.

2 Structured deposits placed at HSBC Bank USA and HSBC Trust Company (Delaware) National Association are insured by the Federal Deposit Insurance Corporation, a US government agency, up to \$250,000 per depositor.

3 'Other debt securities in issue' comprises structured notes issued by HSBC for which market risks are actively managed as part of trading portfolios.

At 31 December 2016, the cumulative amount of change in fair value attributable to changes in HSBC's credit risk was a gain of \$2m (2015: gain of \$122m).

### 24 Financial liabilities designated at fair value

#### HSBC

	2016 \$m	2015 \$m
Deposits by banks and customer accounts	135	193
Liabilities to customers under investment contracts	<b>6,002</b>	6,027
Debt securities in issue (Note 25)	<b>57,112</b>	37,678
Subordinated liabilities (Note 28)	<b>23,172</b>	21,168
Preferred securities (Note 28)	<b>411</b>	1,342
<b>At 31 Dec</b>	<b>86,832</b>	66,408

The carrying amount of financial liabilities designated at fair value was \$4,413m more than the contractual amount at maturity (2015: \$4,147m more). The cumulative own credit loss recognised was \$1,672m (2015: gain of \$158m).

#### HSBC Holdings

	2016 \$m	2015 \$m
Debt securities in issue (Note 25)	<b>16,766</b>	7,897
Subordinated liabilities (Note 28)	<b>13,347</b>	11,956
<b>At 31 Dec</b>	<b>30,113</b>	19,853

The carrying amount of financial liabilities designated at fair value was \$2,681m more than the contractual amount at maturity (2015: \$2,127m more). The cumulative amount of change in fair value attributable to changes in credit risk was a loss of \$1,202m (2015: loss of \$172m).

### 25 Debt securities in issue

#### HSBC

	2016 \$m	2015 \$m
Bonds and medium-term notes	<b>133,721</b>	128,348
Other debt securities in issue	<b>21,962</b>	28,804
<b>Total debt securities in issue</b>	<b>155,683</b>	157,152
Included within:		
– trading liabilities (Note 23)	<b>(32,656)</b>	(30,525)
– financial liabilities designated at fair value (Note 24)	<b>(57,112)</b>	(37,678)
<b>At 31 Dec</b>	<b>65,915</b>	88,949

#### HSBC Holdings

	2016 \$m	2015 \$m
Debt securities	<b>38,571</b>	8,857
Included within:		
– financial liabilities designated at fair value (Note 24)	<b>(16,766)</b>	(7,897)
<b>At 31 Dec</b>	<b>21,805</b>	960

## 26 Accruals, deferred income and other liabilities

	2016 \$m	2015 \$m
Accruals and deferred income	<b>10,770</b>	11,129
Endorsements and acceptances	<b>8,567</b>	9,135
Employee benefit liabilities (Note 5)	<b>2,681</b>	2,809
Other liabilities	<b>19,483</b>	15,043
<b>At 31 Dec</b>	<b>41,501</b>	38,116

Accruals, deferred income and other liabilities include \$30,932m (2015: \$29,358m) of financial liabilities, the majority of which are measured at amortised cost.

## 27 Provisions

	Restructuring costs	Contractual commitments	Legal proceedings and regulatory matters	Customer remediation	Other provisions	Total
	\$m	\$m	\$m	\$m	\$m	\$m
<b>At 1 Jan 2016</b>	<b>463</b>	<b>240</b>	<b>3,174</b>	<b>1,340</b>	<b>335</b>	<b>5,552</b>
Additions	415	141	1,258	762	208	2,784
Amounts utilised	(168)	(1)	(1,831)	(680)	(118)	(2,798)
Unused amounts reversed	(115)	(97)	(165)	(94)	(96)	(567)
Unwinding of discounts	—	—	—	—	6	6
Exchange and other movements	(44)	15	—	(204)	29	(204)
<b>At 31 Dec 2016</b>	<b>551</b>	<b>298</b>	<b>2,436</b>	<b>1,124</b>	<b>364</b>	<b>4,773</b>
At 1 Jan 2015	197	234	2,184	1,831	552	4,998
Additions	430	120	2,153	765	138	3,606
Amounts utilised	(95)	(2)	(619)	(856)	(159)	(1,731)
Unused amounts reversed	(29)	(15)	(95)	(170)	(133)	(442)
Unwinding of discounts	—	—	40	6	—	46
Exchange and other movements	(40)	(97)	(489)	(236)	(63)	(925)
At 31 Dec 2015	463	240	3,174	1,340	335	5,552

Further details of 'Legal proceedings and regulatory matters' are set out in Note 35. Legal proceedings include: civil court, arbitration or tribunal proceedings brought against HSBC companies (whether by way of claim or counterclaim); or civil disputes that may, if not settled, result in court, arbitration or tribunal proceedings. Regulatory matters refers to investigations, reviews and other actions carried out by, or in response to the actions of, regulators or law enforcement agencies in connection with alleged wrongdoing by HSBC.

Customer remediation refers to HSBC's activities to compensate customers for losses or damages associated with a failure to comply with regulations or to treat customers fairly. Customer remediation is often initiated by HSBC in response to customer complaints and/or industry developments in sales practices, and is not necessarily initiated by regulatory action. Further details of customer remediation are set out in this note.

### Payment protection insurance

At 31 December 2016, a provision of \$919m (2015: \$1,039m) was held relating to the estimated liability for redress in respect of the possible mis-selling of payment protection insurance ('PPI') policies in previous years. Cumulative provisions made since the Judicial Review ruling in the first half of 2011 amount to \$5.1bn, of which \$4.1bn has been paid as at 31 December 2016.

An increase in provisions of \$492m was recognised during the year, primarily reflecting a delay to the inception of the expected time bar on inbound complaints; and an anticipated adjustment to the redress parameters surrounding 'Plevin' (a 2014 decision of the UK Supreme Court which held that, judged on its own facts, non-disclosure of the amounts of commissions payable in connection with the sale of PPI to a customer created an unfair relationship under the provisions of the UK Consumer Credit Act).

The estimated liability for redress is calculated on the basis of the total premiums paid by the customer plus simple interest of 8% per annum (or the rate inherent in the related loan product where higher). The basis for calculating the redress liability is the same for single premium and regular premium policies. Future estimated redress levels are based on the historically observed redress per policy.

A total of 5.4 million PPI policies have been sold since 2000, generating estimated revenues of \$3.5bn at 2016 average exchange rates. The gross written premiums on these policies were approximately \$4.6bn.

At 31 December 2016, the estimated total complaints expected to be received were 2.0 million, representing 37% of total policies sold. It is estimated that contact will be made with regard to 2.4 million policies, representing 45% of total policies sold. This estimate includes inbound complaints as well as the group's proactive contact exercise on certain policies ('outbound contact').

The following table details the cumulative number of complaints received at 31 December 2016 and the number of claims expected in the future:

## Notes on the Financial Statements

### Cumulative PPI complaints received to 31 December 2016 and future claims expected

	<i>Footnotes</i>	<b>Cumulative actual to 31 Dec 2016</b>	<b>Future expected</b>
Inbound complaints (000s of policies)	1	<b>1,363</b>	<b>320</b>
Outbound contact (000s of policies)		<b>725</b>	—
Response rate to outbound contact		<b>42%</b>	n/a
Average uphold rate per claim	2	<b>76%</b>	<b>84%</b>
Average redress per claim (\$)		<b>2,670</b>	<b>2,702</b>
Complaints to Financial Ombudsman Service (000s of policies)		<b>138</b>	<b>47</b>
Average uphold rate per Financial Ombudsman Service claim		<b>41%</b>	<b>55%</b>

1 Excludes invalid claims for which no PPI policy exists.

2 Claims include inbound and responses to outbound contact.

A 100,000 increase/decrease in the total inbound complaints would increase/decrease the redress provision by approximately \$203m at 2016 average exchange rates.

Each 1% increase/decrease in the response rate to our outbound contact exercise would increase/decrease the redress provision by approximately \$12m.

## 28 Subordinated liabilities

### HSBC

	<b>2016</b> \$m	<b>2015</b> \$m
At amortised cost	<b>20,984</b>	22,702
– subordinated liabilities	<b>19,230</b>	20,773
– preferred securities	<b>1,754</b>	1,929
Designated at fair value (Note 24)	<b>23,583</b>	22,510
– subordinated liabilities	<b>23,172</b>	21,168
– preferred securities	<b>411</b>	1,342
<b>At 31 Dec</b>	<b>44,567</b>	45,212
Issued by HSBC subsidiaries	<b>16,860</b>	19,150
Issued by HSBC Holdings	<b>27,707</b>	26,062

### HSBC's subordinated liabilities

Subordinated liabilities rank behind senior obligations and generally count towards the capital base of HSBC. Capital securities may be called and redeemed by HSBC subject to prior notification to the PRA and, where relevant, the consent of the local banking regulator. If not redeemed at the first call date, coupons payable may step up or become floating rate based on interbank rates. On capital securities other than floating rate notes, interest is payable at fixed rates of up to 10.176%.

The balance sheet amounts disclosed below are presented on an IFRSs basis and do not reflect the amount that the instruments contribute to regulatory capital due to the inclusion of issuance costs, regulatory amortisation and regulatory eligibility limits prescribed in the grandfathering provisions under CRD IV.

### HSBC's subordinated liabilities in issue

		Footnotes	First call date	Maturity date	2016 \$m	2015 \$m
<b>Additional tier 1 capital securities guaranteed by HSBC Holdings plc</b>		1				
€750m	5.13% non-cumulative step-up perpetual preferred securities	2	Mar 2016	—	856	
\$900m	10.176% non-cumulative step-up perpetual preferred securities, series 2		Jun 2030	<b>891</b>	891	
				<b>891</b>	1,747	
<b>Additional tier 1 capital securities guaranteed by HSBC Bank plc</b>		1				
£300m	5.862% non-cumulative step-up perpetual preferred securities		Apr 2020	<b>411</b>	488	
£700m	5.844% non-cumulative step-up perpetual preferred securities		Nov 2031	<b>863</b>	1,038	
				<b>1,274</b>	1,526	
<b>Tier 2 securities issued by HSBC Bank plc</b>						
£350m	5.00% callable subordinated notes	3	Mar 2018	Mar 2023	<b>466</b>	562
£300m	6.50% subordinated notes		—	Jul 2023	<b>369</b>	444
£350m	5.375% callable subordinated step-up notes	4	Nov 2025	Nov 2030	<b>489</b>	569
£500m	5.375% subordinated notes		—	Aug 2033	<b>750</b>	846
£225m	6.25% subordinated notes		—	Jan 2041	<b>276</b>	332
£600m	4.75% subordinated notes		—	Mar 2046	<b>731</b>	879
\$300m	7.65% subordinated notes		—	May 2025	<b>372</b>	386
\$750m	Undated floating rate primary capital notes		Jun 1990	<b>750</b>	750	
\$500m	Undated floating rate primary capital notes		Sep 1990	<b>500</b>	500	
\$300m	Undated floating rate primary capital notes, series 3		Jun 1992	<b>300</b>	300	
				<b>5,003</b>	5,568	
<b>Tier 2 securities issued by The Hongkong and Shanghai Banking Corporation Ltd</b>						
\$400m	Primary capital undated floating rate notes	5	Aug 1990	—	401	
\$400m	Primary capital undated floating rate notes (third series)		Jul 1991	<b>400</b>	400	
				<b>400</b>	801	
<b>Tier 2 securities issued by HSBC Bank Malaysia Berhad</b>						
MYR500m	4.35% subordinated bonds		Jun 2017	Jun 2022	<b>112</b>	116
MYR500m	5.05% subordinated bonds		Nov 2022	Nov 2027	<b>112</b>	116
				<b>224</b>	232	
<b>Tier 2 securities issued by HSBC USA Inc.</b>						
\$750m	5.00% subordinated notes		—	Sep 2020	<b>748</b>	747
\$250m	7.20% subordinated debentures		—	Jul 2097	<b>220</b>	220
Other subordinated liabilities each less than \$150m		6			<b>284</b>	299
					<b>1,252</b>	1,266
<b>Tier 2 securities issued by HSBC Bank USA, N.A.</b>						
\$500m	6.00% subordinated notes		—	Aug 2017	<b>498</b>	502
\$1,250m	4.875% subordinated notes		—	Aug 2020	<b>1,257</b>	1,258
\$1,000m	5.875% subordinated notes		—	Nov 2034	<b>1,137</b>	1,142
\$750m	5.625% subordinated notes		—	Aug 2035	<b>862</b>	850
\$700m	7.00% subordinated notes		—	Jan 2039	<b>701</b>	691
					<b>4,455</b>	4,443
<b>Tier 2 securities issued by HSBC Finance Corporation</b>						
\$2,939m	6.676% senior subordinated notes	7	—	Jan 2021	<b>2,192</b>	2,188
<b>Tier 2 securities issued by HSBC Bank Canada</b>						
CAD400m	4.80% subordinated debentures		Apr 2017	Apr 2022	<b>299</b>	298
CAD200m	4.94% subordinated debentures	5	Mar 2016	Mar 2021	—	144
Other subordinated liabilities each less than \$150m			Oct 1996	Nov 2083	<b>29</b>	29
					<b>328</b>	471
<b>Securities issued by HSBC Mexico, S.A.</b>						
\$300m	Non-convertible subordinated obligations	8, 9	Jun 2014	Jun 2019	<b>240</b>	240
Other subordinated liabilities each less than \$150m		8			<b>198</b>	236
					<b>438</b>	476
<b>Securities issued by other HSBC subsidiaries</b>						
Other subordinated liabilities each less than \$200m		6			<b>403</b>	432
<b>Subordinated liabilities issued by HSBC subsidiaries at 31 Dec</b>					<b>16,860</b>	19,150

1 See paragraph below, 'Guaranteed by HSBC Holdings or HSBC Bank plc'.

2 In February 2016, HSBC gave notice that it will call and redeem the €750m 5.13% non-cumulative step-up perpetual preferred securities.

3 The interest rate payable after March 2018 is the sum of the gross redemption yield of the then prevailing five-year UK gilt plus 1.80 percentage points.

4 The interest rate payable after November 2025 is the sum of the three-month sterling Libor plus 1.50 percentage points.

5 In January 2016, HSBC called and redeemed \$400m Primary capital undated floating rate notes and CAD200m 4.94% subordinated debentures.

6 Some securities included here are ineligible for inclusion in the capital base of HSBC in accordance with CRD IV rules.

7 Approximately \$731m of the senior subordinated notes are held by HSBC Holdings.

8 These securities are ineligible for inclusion in the capital base of HSBC in accordance with CRD IV rules.

9 Approximately \$60m of the subordinated obligations are held by HSBC Holdings.

## Notes on the Financial Statements

### HSBC Holdings

	2016 \$m	2015 \$m
At amortised cost	<b>15,189</b>	15,895
Designated at fair value (Note 24)	<b>13,347</b>	11,956
<b>At 31 Dec</b>	<b>28,536</b>	27,851

### HSBC Holdings' subordinated liabilities

	Footnotes	First call date	Maturity date	2016 \$m	2015 \$m
<b>Tier 2 securities issued by HSBC Holdings plc</b>					
<b>Amounts owed to third parties</b>					
\$488m	7.625% subordinated notes	1	—	May 2032	<b>528</b>
\$222m	7.35% subordinated notes	1	—	Nov 2032	<b>278</b>
\$2,000m	6.5% subordinated notes	1	—	May 2036	<b>2,029</b>
\$2,500m	6.5% subordinated notes	1	—	Sep 2037	<b>3,170</b>
\$1,500m	6.8% subordinated notes	1	—	Jun 2038	<b>1,487</b>
\$2,000m	4.25% subordinated notes	2,4	—	Mar 2024	<b>2,060</b>
\$1,500m	5.25% subordinated notes	2,4	—	Mar 2044	<b>1,747</b>
\$1,500m	4.25% subordinated notes	2	—	Jun 2025	<b>1,539</b>
\$1,500m	4.375% subordinated notes	2	—	Nov 2026	<b>1,520</b>
£900m	6.375% callable subordinated notes	1,3	Oct 2017	Oct 2022	<b>1,163</b>
£650m	5.75% subordinated notes	2	—	Dec 2027	<b>932</b>
£650m	6.75% subordinated notes	2	—	Sep 2028	<b>793</b>
£750m	7.0% subordinated notes	2	—	Apr 2038	<b>971</b>
£900m	6.0% subordinated notes	2	—	Mar 2040	<b>1,086</b>
€1,600m	6.25% subordinated notes	2	—	Mar 2018	<b>1,693</b>
€1,750m	6.0% subordinated notes	2	—	Jun 2019	<b>2,168</b>
€1,500m	3.0% subordinated notes	2	—	Jun 2025	<b>1,716</b>
€1,500m	3.125% subordinated notes	2	—	Jun 2028	<b>1,139</b>
€1,500m	3.375% subordinated notes	2,4	Jan 2019	Jan 2024	<b>1,626</b>
					<b>27,645</b>
<b>Amounts owed to HSBC undertakings</b>					
€750m	5.13% fixed/floating subordinated notes		Mar 2016	Dec 2044	—
\$900m	10.176% subordinated step-up cumulative notes		Jun 2030	Jun 2040	<b>891</b>
					<b>891</b>
<b>At 31 Dec</b>					<b>28,536</b>
					27,851

1 Amounts owed to third parties represent securities included in the capital base of HSBC as tier 2 securities in accordance with the grandfathering provisions under CRD IV rules.

2 These securities are included in the capital base of HSBC as fully CRD IV compliant tier 2 securities on an end point basis.

3 The interest rate payable after October 2017 is the sum of the three-month sterling Libor plus 1.3 percentage points.

4 These subordinated notes are measured at amortised cost in HSBC Holdings, where the interest rate risk is hedged using a fair value hedge, while they are measured at fair value in the Group.

### Additional tier 1 capital securities

Additional tier 1 capital securities are perpetual subordinated securities on which coupon payments may be deferred or cancelled at the discretion of HSBC Holdings. The securities presented in this Note are accounted for as liabilities because HSBC has an obligation to pay dividends in perpetuity. See Note 35 for additional tier 1 capital securities accounted for as equity.

The additional tier 1 securities presented in this section do not meet the identifying criteria in full for recognition as tier 1 capital under CRD IV but are eligible as regulatory capital subject to grandfathering limits and progressive phase-out.

### Guaranteed by HSBC Holdings or HSBC Bank plc

These capital securities were issued by the Jersey limited partnerships and proceeds lent to the respective guarantors by the limited partnerships in the form of subordinated notes. They qualify as additional tier 1 capital for HSBC under CRD IV by virtue of the application of grandfathering provisions, and the two capital securities guaranteed by HSBC Bank plc ('HSBC Bank') also qualify as additional tier 1 capital for HSBC Bank (on a solo and a consolidated basis) under CRD IV by virtue of the same grandfathering process.

These preferred securities, together with the guarantee, are intended to provide investors with economic rights equivalent to the rights that they would have had if they had purchased non-cumulative perpetual preference shares of the relevant issuer. There are limitations on the payment of distributions if such payments are prohibited under UK banking regulations or other requirements, if a payment would cause a breach of HSBC's capital adequacy requirements or if HSBC Holdings or HSBC Bank has insufficient distributable reserves (as defined).

HSBC Holdings and HSBC Bank have individually covenanted that if prevented under certain circumstances from paying distributions on the preferred securities in full, they will not pay dividends or other distributions in respect of their ordinary shares, or repurchase or redeem their ordinary shares, until the distribution on the preferred securities has been paid in full.

Preference shares of HSBC Holdings that have economic terms equal in all material respects to the preferred securities and their guarantee together will be substituted for the preferred securities guaranteed by HSBC Holdings if the total capital ratio of HSBC Holdings falls below the regulatory minimum required, or the Directors expect it to in the near term.

Preference shares of HSBC Bank that have economic terms equal in all material respects to the preferred securities and their guarantee together will be substituted for the preferred securities guaranteed by HSBC Bank if any of the two issues of preferred securities are outstanding in April 2049 or November 2048, respectively; or the total capital ratio of HSBC Bank on a solo and consolidated basis falls below the regulatory minimum required, or the Directors expect it to in the near term.

#### Tier 2 capital securities

These capital securities are included within HSBC's regulatory capital base as tier 2 capital under CRD IV by virtue of the application of grandfathering provisions (with the exception of identified HSBC Holding securities which are compliant with CRD IV end point rules). Tier 2 capital securities are either perpetual subordinated securities or dated securities on which there is an obligation to pay coupons. In accordance with CRD IV, the capital contribution of all tier 2 securities is amortised for regulatory purposes in their final five years before maturity.

## 29 Maturity analysis of assets, liabilities and off-balance sheet commitments

The table on page 248 provides an analysis of consolidated total assets, liabilities and off-balance sheet commitments by residual contractual maturity at the balance sheet date. These balances are included in the maturity analysis as follows:

- Trading assets and liabilities (including trading derivatives but excluding reverse repos, repos and debt securities in issue) are included in the 'Due not more than 1 month' time bucket, because trading balances are typically held for short periods of time.
- Financial assets and liabilities with no contractual maturity (such as equity securities) are included in the 'Due over 5 years' time bucket. Undated or perpetual instruments are classified based on the contractual notice period which the counterparty of the instrument is entitled to give. Where there is no contractual notice period, undated or perpetual contracts are included in the 'Due over 5 years' time bucket.
- Non-financial assets and liabilities with no contractual maturity are included in the 'Due over 5 years' time bucket.
- Financial instruments included within assets and liabilities of disposal groups held for sale are classified on the basis of the contractual maturity of the underlying instruments and not on the basis of the disposal transaction.
- Liabilities under insurance contracts are included in the 'Due over 5 years' time bucket. Liabilities under investment contracts are classified in accordance with their contractual maturity. Undated investment contracts are included in the 'Due over 5 years' time bucket, however, such contracts are subject to surrender and transfer options by the policyholders.
- Loan and other credit-related commitments are classified on the basis of the earliest date they can be drawn down.

## Notes on the Financial Statements

### HSBC

#### Maturity analysis of assets, liabilities and off-balance sheet commitments

	Due not more than 1 month	Due over 1 month but not more than 3 months	Due over 3 months but not more than 6 months	Due over 6 months but not more than 9 months	Due over 9 months but not more than 1 year	Due over 1 year but not more than 2 years	Due over 2 years but not more than 5 years	Due over 5 years	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Financial assets</b>									
Cash and balances at central banks	128,009	—	—	—	—	—	—	—	128,009
Items in the course of collection from other banks	5,003	—	—	—	—	—	—	—	5,003
Hong Kong Government certificates of indebtedness	31,228	—	—	—	—	—	—	—	31,228
Trading assets	232,550	758	230	415	1,172	—	—	—	235,125
Financial assets designated at fair value	176	182	75	178	363	749	2,486	20,547	24,756
Derivatives	287,749	149	207	96	110	704	1,056	801	290,872
Loans and advances to banks	59,636	13,404	4,494	2,375	1,765	2,879	2,298	1,275	88,126
Loans and advances to customers	167,531	61,693	47,664	30,115	30,362	85,144	192,787	246,208	861,504
– personal	39,295	7,812	6,723	5,928	6,799	22,664	53,620	194,985	337,826
– corporate and commercial	108,906	48,333	35,180	21,317	19,573	54,739	126,890	45,271	460,209
– financial	19,330	5,548	5,761	2,870	3,990	7,741	12,277	5,952	63,469
Reverse repurchase agreements	115,942	25,525	10,378	5,220	2,350	479	1,080	—	160,974
Financial investments	36,932	59,826	30,403	16,800	19,564	50,255	104,933	118,084	436,797
Assets held for sale	893	1,663	120	64	64	205	682	283	3,974
Accrued income and other financial assets	15,992	6,387	1,617	343	398	216	351	1,624	26,928
<b>Financial assets at 31 Dec 2016</b>	<b>1,081,641</b>	<b>169,587</b>	<b>95,188</b>	<b>55,606</b>	<b>56,148</b>	<b>140,631</b>	<b>305,673</b>	<b>388,822</b>	<b>2,293,296</b>
Non-financial assets	—	—	—	—	—	—	—	81,690	81,690
<b>Total assets at 31 Dec 2016</b>	<b>1,081,641</b>	<b>169,587</b>	<b>95,188</b>	<b>55,606</b>	<b>56,148</b>	<b>140,631</b>	<b>305,673</b>	<b>470,512</b>	<b>2,374,986</b>
<b>Off-balance sheet commitments received</b>									
Loan and other credit-related commitments	2,813	—	2,050	—	—	110	—	—	4,973
<b>Financial liabilities</b>									
Hong Kong currency notes in circulation	31,228	—	—	—	—	—	—	—	31,228
Deposits by banks	46,306	4,075	2,085	665	489	422	4,842	1,055	59,939
Customer accounts <sup>1</sup>	1,180,641	45,245	19,187	10,277	8,325	4,709	3,500	502	1,272,386
– personal	590,654	22,222	12,024	5,823	4,786	3,484	2,483	121	641,597
– corporate and commercial	436,666	17,460	6,178	3,951	3,082	1,200	967	360	469,864
– financial	153,321	5,563	985	503	457	25	50	21	160,925
Repurchase agreements	82,330	2,707	2,871	50	—	—	1,000	—	88,958
Items in the course of transmission to other banks	5,977	—	—	—	—	—	—	—	5,977
Trading liabilities	121,707	2,053	1,423	1,845	3,013	6,219	9,010	8,421	153,691
Financial liabilities designated at fair value	1,659	958	1,396	3	1,701	5,046	17,989	58,080	86,832
– debt securities in issue: covered bonds	1,587	—	303	—	—	207	1,348	2,558	6,003
– debt securities in issue: unsecured	25	15	1,091	3	1,700	4,839	14,056	29,380	51,109
– subordinated liabilities and preferred securities	—	—	—	—	—	—	2,578	21,005	23,583
– other	47	943	2	—	1	—	7	5,137	6,137
Derivatives	274,965	39	39	112	273	506	1,471	2,414	279,819
Debt securities in issue	4,708	8,598	8,280	5,996	4,610	10,953	19,432	3,338	65,915
– covered bonds	—	—	1	71	1	3	24	26	126
– otherwise secured	3,207	823	893	114	329	1,882	2,680	1,181	11,109
– unsecured	1,501	7,775	7,386	5,811	4,280	9,068	16,728	2,131	54,680
Liabilities of disposal groups held for sale	2,472	107	113	36	34	7	21	—	2,790
Accruals and other financial liabilities	16,580	8,065	2,279	797	485	878	1,278	568	30,930
Subordinated liabilities	12	—	143	61	497	1,788	5,056	13,427	20,984
<b>Total financial liabilities at 31 Dec 2016</b>	<b>1,768,585</b>	<b>71,847</b>	<b>37,816</b>	<b>19,842</b>	<b>19,427</b>	<b>30,528</b>	<b>63,599</b>	<b>87,805</b>	<b>2,099,449</b>
Non-financial liabilities	—	—	—	—	—	—	—	92,959	92,959
<b>Total liabilities at 31 Dec 2016</b>	<b>1,768,585</b>	<b>71,847</b>	<b>37,816</b>	<b>19,842</b>	<b>19,427</b>	<b>30,528</b>	<b>63,599</b>	<b>180,764</b>	<b>2,192,408</b>
<b>Off-balance sheet commitments given</b>									
Loan and other credit-related	466,780	39,922	14,909	12,537	36,281	11,241	45,778	28,395	655,843
– personal	158,054	4,932	5,297	287	4,063	1,129	788	9,260	183,810
– corporate and commercial	259,231	33,421	9,248	11,592	26,829	7,242	40,740	15,173	403,476
– financial	49,495	1,569	364	658	5,389	2,870	4,250	3,962	68,557

**Maturity analysis of assets, liabilities and off-balance sheet commitments (continued)**

	Due not more than 1 month	Due over 1 month but not more than 3 months	Due over 3 months but not more than 6 months	Due over 6 months but not more than 9 months	Due over 9 months but not more than 1 year	Due over 1 year but not more than 2 years	Due over 2 years but not more than 5 years	Due over 5 years	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Financial assets</b>									
Cash and balances at central banks	98,934	—	—	—	—	—	—	—	98,934
Items in the course of collection from other banks	5,768	—	—	—	—	—	—	—	5,768
Hong Kong Government certificates of indebtedness	28,410	—	—	—	—	—	—	—	28,410
Trading assets	224,691	34	—	—	—	112	—	—	224,837
Financial assets designated at fair value	429	194	222	83	390	896	2,603	19,035	23,852
Derivatives	285,797	215	223	198	33	499	841	670	288,476
Loans and advances to banks	57,296	14,530	4,063	1,964	2,499	5,134	3,274	1,641	90,401
Loans and advances to customers	176,862	69,638	54,730	33,095	34,774	81,560	201,253	272,542	924,454
– personal	39,191	8,328	8,510	7,457	9,350	22,438	57,283	218,646	371,203
– corporate and commercial	123,901	54,711	40,489	21,081	21,811	50,355	131,166	49,564	493,078
– financial	13,770	6,599	5,731	4,557	3,613	8,767	12,804	4,332	60,173
Reverse repurchase agreements – non-trading	110,478	21,978	7,220	2,786	580	2,985	228	—	146,255
Financial investments	35,104	59,098	36,897	19,102	17,293	48,634	94,549	118,278	428,955
Assets held for sale	15,816	2,628	2,544	1,218	2,611	4,675	6,365	4,422	40,279
Accrued income and other financial assets	12,732	6,682	1,995	483	395	463	445	2,115	25,310
Financial assets at 31 Dec 2015	1,052,317	174,997	107,894	58,929	58,575	144,958	309,558	418,703	2,325,931
Non-financial assets	—	—	—	—	—	—	—	—	83,725
Total assets at 31 Dec 2015	1,052,317	174,997	107,894	58,929	58,575	144,958	309,558	502,428	2,409,656
<b>Off-balance sheet commitments received</b>									
Loan and other credit-related commitments	3,472	—	2,149	—	—	111	—	—	5,732
<b>Financial liabilities</b>									
Hong Kong currency notes in circulation	28,410	—	—	—	—	—	—	—	28,410
Deposits by banks	46,693	2,225	1,049	325	116	712	3,182	69	54,371
Customer accounts <sup>1</sup>	1,185,091	50,831	21,397	10,421	10,869	6,596	3,852	529	1,289,586
– personal	574,468	27,646	13,032	7,371	7,990	3,566	2,920	354	637,347
– corporate and commercial	459,813	18,802	7,314	2,479	2,495	2,926	828	156	494,813
– financial	150,810	4,383	1,051	571	384	104	104	19	157,426
Repurchase agreements – non-trading	73,478	3,788	1,816	164	154	—	500	500	80,400
Items in the course of transmission to other banks	5,638	—	—	—	—	—	—	—	5,638
Trading liabilities	111,691	1,471	1,529	882	2,184	4,344	10,105	9,408	141,614
Financial liabilities designated at fair value	2,036	1,822	2,943	342	1,900	4,930	14,316	38,119	66,408
– debt securities in issue: covered bonds	—	—	—	—	—	2,012	1,608	2,577	6,197
– debt securities in issue: unsecured	1,972	973	2,926	342	1,786	2,918	9,819	10,745	31,481
– subordinated liabilities and preferred securities	—	848	—	—	—	—	2,773	18,889	22,510
– other	64	1	17	—	114	—	116	5,908	6,220
Derivatives	276,765	34	251	213	52	524	1,063	2,169	281,071
Debt securities in issue	16,536	9,326	16,295	5,542	1,365	10,754	22,866	6,265	88,949
– covered bonds	—	—	1	—	1	83	17	33	135
– otherwise secured	8,436	173	195	206	173	2,082	4,354	1,118	16,737
– unsecured	8,100	9,153	16,099	5,336	1,191	8,589	18,495	5,114	72,077
Liabilities of disposal groups held for sale	20,350	1,416	1,548	1,344	1,246	5,050	1,484	115	32,553
Accruals and other financial liabilities	14,802	7,965	2,467	659	421	925	1,454	665	29,358
Subordinated liabilities	—	401	—	—	34	650	4,579	17,038	22,702
Total financial liabilities at 31 Dec 2015	1,781,490	79,279	49,295	19,892	18,341	34,485	63,401	74,877	2,121,060
Non-financial liabilities	—	—	—	—	—	—	—	—	91,078
Total liabilities at 31 Dec 2015	1,781,490	79,279	49,295	19,892	18,341	34,485	63,401	165,955	2,212,138
<b>Off-balance sheet commitments given</b>									
Loan and other credit-related commitments	472,277	45,792	16,271	9,798	47,122	11,325	48,756	15,089	666,430
– personal	161,843	11,547	6,333	963	19,607	1,207	425	1,018	202,943
– corporate and commercial	272,044	32,764	9,126	8,372	23,984	8,227	38,838	12,558	405,913
– financial	38,390	1,481	812	463	3,531	1,891	9,493	1,513	57,574

<sup>1</sup> ‘Customer accounts’ includes \$343,782m (2015: \$342,908m) insured by guarantee schemes.

## Notes on the Financial Statements

### HSBC Holdings

#### Maturity analysis of assets, liabilities and off-balance sheet commitments

	Due not more than 1 month  \$m	Due over 1 month but not more than 3 months  \$m	Due over 3 months but not more than 6 months  \$m	Due over 6 months but not more than 9 months  \$m	Due over 9 months but not more than 1 year  \$m	Due over 1 year but not more than 2 years  \$m	Due over 2 years but not more than 5 years  \$m	Due over 5 years  \$m	Total  \$m
<b>Financial assets</b>									
Cash at bank and in hand:									
– balances with HSBC undertakings	<b>247</b>	—	—	—	—	—	—	—	<b>247</b>
Derivatives	<b>1,702</b>	—	—	—	—	—	93	353	<b>2,148</b>
Loans and advances to HSBC undertakings	<b>16,372</b>	—	—	—	—	167	14,204	46,678	<b>77,421</b>
Financial investments in HSBC undertakings	<b>40</b>	<b>2</b>	—	—	—	—	838	<b>2,710</b>	<b>3,590</b>
Accrued income and other financial assets	<b>12</b>	—	—	—	—	—	—	<b>107</b>	<b>119</b>
<b>Total financial assets at 31 Dec 2016</b>	<b>18,373</b>	<b>2</b>	—	—	—	<b>167</b>	<b>15,135</b>	<b>49,848</b>	<b>83,525</b>
Non-financial assets	—	—	—	—	—	—	—	<b>97,273</b>	<b>97,273</b>
<b>Total assets at 31 Dec 2016</b>	<b>18,373</b>	<b>2</b>	—	—	—	<b>167</b>	<b>15,135</b>	<b>147,121</b>	<b>180,798</b>
<b>Financial liabilities</b>									
Amounts owed to HSBC undertakings	<b>2,052</b>	—	—	—	—	—	<b>105</b>	—	<b>2,157</b>
Financial liabilities designated at fair value	—	—	—	—	—	<b>2,167</b>	<b>5,845</b>	<b>22,101</b>	<b>30,113</b>
– debt securities in issue	—	—	—	—	—	—	<b>5,845</b>	<b>10,921</b>	<b>16,766</b>
– subordinated liabilities and preferred securities	—	—	—	—	—	<b>2,167</b>	—	<b>11,180</b>	<b>13,347</b>
Derivatives	<b>3,841</b>	—	—	—	—	—	<b>592</b>	<b>592</b>	<b>5,025</b>
Debt securities in issue	—	—	—	—	—	<b>953</b>	<b>4,822</b>	<b>16,030</b>	<b>21,805</b>
Accruals and other financial liabilities	<b>75</b>	<b>1,268</b>	<b>142</b>	<b>22</b>	—	—	—	—	<b>1,507</b>
Subordinated liabilities	—	—	—	—	—	<b>1,693</b>	—	<b>13,496</b>	<b>15,189</b>
<b>Total financial liabilities at 31 Dec 2016</b>	<b>5,968</b>	<b>1,268</b>	<b>142</b>	<b>22</b>	—	<b>4,813</b>	<b>11,364</b>	<b>52,219</b>	<b>75,796</b>
Non-financial liabilities	—	—	—	—	—	—	—	<b>144</b>	<b>144</b>
<b>Total liabilities at 31 Dec 2016</b>	<b>5,968</b>	<b>1,268</b>	<b>142</b>	<b>22</b>	—	<b>4,813</b>	<b>11,364</b>	<b>52,363</b>	<b>75,940</b>
Off-balance sheet commitments given									
Undrawn formal standby facilities, credit lines and other commitments to lend	—	—	—	—	—	—	—	—	—

**Maturity analysis of assets, liabilities and off-balance sheet commitments (continued)**

	Due not more than 1 month \$m	Due over 1 month but not more than 3 months \$m	Due over 3 months but not more than 6 months \$m	Due over 6 months but not more than 9 months \$m	Due over 9 months but not more than 1 year \$m	Due over 1 year but not more than 2 years \$m	Due over 2 years but not more than 5 years \$m	Due over 5 years \$m	Total \$m
<b>Financial assets</b>									
Cash at bank and in hand:									
– balances with HSBC undertakings	242	—	—	—	—	—	—	—	242
Derivatives	1,990	—	—	—	—	—	109	368	2,467
Loans and advances to HSBC undertakings	7,805	2,629	4,618	—	—	—	—	29,298	44,350
Financial investments in HSBC undertakings	40	6	—	—	—	—	—	4,239	4,285
Accrued income and other financial assets	7	—	—	—	—	—	—	109	116
<b>Total financial assets at 31 Dec 2015</b>	<b>10,084</b>	<b>2,635</b>	<b>4,618</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>109</b>	<b>34,014</b>	<b>51,460</b>
Non-financial assets	—	—	—	—	—	—	—	98,734	98,734
<b>Total assets at 31 Dec 2015</b>	<b>10,084</b>	<b>2,635</b>	<b>4,618</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>109</b>	<b>132,748</b>	<b>150,194</b>
<b>Financial liabilities</b>									
Amounts owed to HSBC undertakings	1,629	—	—	—	—	415	—	108	2,152
Financial liabilities designated at fair value	—	960	—	—	—	—	2,285	16,608	19,853
– debt securities in issue	—	—	—	—	—	—	—	6,937	7,897
– subordinated liabilities and preferred securities	—	—	—	—	—	—	2,285	9,671	11,956
Derivatives	2,065	—	—	—	—	—	213	—	2,278
Debt securities in issue	—	—	—	—	—	—	—	960	960
Accruals and other financial liabilities	1,231	195	132	20	—	—	—	—	1,578
Subordinated liabilities	—	—	—	—	—	—	1,749	14,146	15,895
<b>Total financial liabilities at 31 Dec 2015</b>	<b>4,928</b>	<b>1,155</b>	<b>132</b>	<b>20</b>	<b>—</b>	<b>415</b>	<b>4,247</b>	<b>31,822</b>	<b>42,716</b>
Non-financial liabilities	—	—	—	—	—	—	—	64	64
<b>Total liabilities at 31 Dec 2015</b>	<b>4,925</b>	<b>1,155</b>	<b>132</b>	<b>20</b>	<b>—</b>	<b>415</b>	<b>4,247</b>	<b>31,886</b>	<b>42,780</b>
<b>Off-balance sheet commitments given</b>									
Undrawn formal standby facilities, credit lines and other commitments to lend	—	—	—	—	—	—	—	—	—

## 30 Offsetting of financial assets and financial liabilities

The 'Amounts not set off in the balance sheet' include transactions where:

- the counterparty has an offsetting exposure with HSBC and a master netting or similar arrangement is in place with a right to set off only in the event of default, insolvency or bankruptcy, or the offset criteria are otherwise not satisfied; and
- in the case of derivatives and reverse repurchase/repurchase, stock borrowing/lending and similar agreements, cash and non-cash collateral has been received/pledged.

For risk management purposes, the net amounts of loans and advances to customers are subject to limits, which are monitored and the relevant customer agreements are subject to review and updated, as necessary, to ensure that the legal right to set off remains appropriate.

Footnotes	Amounts subject to enforceable netting arrangements										Total	
	Amounts not set off in the balance sheet											
	Gross amounts	Amounts offset	Net amounts in the balance sheet	Financial instruments	Non-cash collateral	Cash collateral	Net amount	Amounts not subject to enforceable netting arrangements <sup>5</sup>				
Financial assets	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	
Derivatives (Note 14)	1	387,999	(106,555)	281,444	(210,067)	(11,647)	(40,188)	19,542	9,428	290,872		
Reverse repos, stock borrowing and similar agreements classified as:	2											
- trading assets		9,859	-	9,859	(475)	(9,383)	-	1	348	10,207		
- non-trading assets		222,485	(87,929)	134,556	(4,779)	(129,373)	(215)	189	26,418	160,974		
Loans and advances to customers	3	46,296	(14,602)	31,694	(24,459)	-	(248)	6,987	743	32,437		
<b>At 31 Dec 2016</b>		<b>666,639</b>	<b>(209,086)</b>	<b>457,553</b>	<b>(239,780)</b>	<b>(150,403)</b>	<b>(40,651)</b>	<b>26,719</b>	<b>36,937</b>	<b>494,490</b>		
Derivatives (Note 14)	1	385,682	(105,860)	279,822	(215,531)	(8,621)	(34,040)	21,630	8,654	288,476		
Reverse repos, stock borrowing and similar agreements classified as:	2											
- trading assets		7,496	-	7,496	-	(7,495)	-	1	60	7,556		
- non-trading assets		200,921	(77,925)	122,996	(544)	(121,981)	(270)	201	23,259	146,255		
Loans and advances to customers	3	77,547	(31,643)	45,904	(40,790)	-	-	5,114	1,487	47,391		
<b>At 31 Dec 2015</b>		<b>671,646</b>	<b>(215,428)</b>	<b>456,218</b>	<b>(256,865)</b>	<b>(138,097)</b>	<b>(34,310)</b>	<b>26,946</b>	<b>33,460</b>	<b>489,678</b>		
<b>Financial liabilities</b>												
Derivatives (Note 14)	1	378,571	(106,555)	272,016	(210,035)	(15,512)	(33,754)	12,715	7,803	279,819		
Repos, stock lending and similar agreements classified as:	2											
- trading liabilities		5,034	-	5,034	(475)	(4,515)	-	44	37	5,071		
- non-trading liabilities		148,443	(87,929)	60,514	(6,202)	(54,126)	(146)	40	28,444	88,958		
Customer accounts	4	45,422	(14,602)	30,820	(24,459)	-	(248)	6,113	228	31,048		
<b>At 31 Dec 2016</b>		<b>577,470</b>	<b>(209,086)</b>	<b>368,384</b>	<b>(241,171)</b>	<b>(74,153)</b>	<b>(34,148)</b>	<b>18,912</b>	<b>36,512</b>	<b>404,896</b>		
Derivatives (Note 14)	1	377,930	(105,860)	272,070	(215,508)	(13,629)	(30,063)	12,870	9,001	281,071		
Repos, stock lending and similar agreements classified as:	2											
- trading liabilities		9,300	-	9,300	-	(9,299)	-	1	1	9,301		
- non-trading liabilities		126,740	(77,925)	48,815	(2,034)	(46,731)	(26)	24	31,585	80,400		
Customer accounts	4	83,085	(31,643)	51,442	(40,790)	-	(1)	10,651	729	52,171		
<b>At 31 Dec 2015</b>		<b>597,055</b>	<b>(215,428)</b>	<b>381,627</b>	<b>(258,332)</b>	<b>(69,659)</b>	<b>(30,090)</b>	<b>23,546</b>	<b>41,316</b>	<b>422,943</b>		

<sup>1</sup> At 31 December 2016, the amount of cash margin received that had been offset against the gross derivatives assets was \$3,720m (2015: \$4,135m). The amount of cash margin paid that had been offset against the gross derivatives liabilities was \$5,862m (2015: \$4,224m).

<sup>2</sup> For the amount of repos, reverse repos, stock lending, stock borrowing and similar agreements recognised on the balance sheet within 'Trading assets' \$10,207m (2015: \$7,556m) and 'Trading liabilities' \$5,071m (2015: \$9,301m), see the 'Funding sources and uses' table on page 107.

<sup>3</sup> At 31 December 2016, the total amount of 'Loans and advances to customers' was \$861,504m (2015: \$924,454m) of which \$31,694m (2015: \$45,904m) was subject to offsetting.

<sup>4</sup> At 31 December 2016, the total amount of 'Customer accounts' was \$1,272,386m (2015: \$1,289,586m) of which \$30,820m (2015: \$51,442m) was subject to offsetting.

<sup>5</sup> These exposures continue to be secured by financial collateral, but we may not have sought or been able to obtain a legal opinion evidencing enforceability of the right of offset.

## 31 Non-controlling interests

	2016 \$m	2015 \$m
Non-controlling interests attributable to holders of ordinary shares in subsidiaries	<b>6,932</b>	6,981
Preferred securities issued by subsidiaries	<b>260</b>	2,077
<b>At 31 Dec</b>	<b>7,192</b>	9,058

Hang Seng Bank Limited is the only subsidiary in the Group that gives rise to significant non-controlling interest. For summarised financial information of Hang Seng Bank Limited see Note 18 'Investment in subsidiaries'.

### Preferred securities issued by subsidiaries

Preferred securities are securities for which there is no obligation to pay a dividend and, if the dividend is not paid, it may not be cumulative. Such securities do not generally carry voting rights but rank higher than ordinary shares for dividend payments and in the event of a winding-up. These securities have no stated maturity date but may be called and redeemed by the issuer, subject to prior notification to the PRA and, where relevant, the consent of the local banking regulator.

All non-cumulative preferred securities are classified as additional tier 1 capital.

#### Preferred securities issued by HSBC's subsidiaries

	Footnotes	First call date	2016 \$m	2015 \$m
<b>HSBC USA Inc.</b>				
\$518m Floating rate non-cumulative preferred stock, series F	1	Apr 2010	—	518
\$374m Floating rate non-cumulative preferred stock, series G	1	Jan 2011	—	374
\$374m 6.50% non-cumulative preferred stock, series H	2	Jul 2011	—	374
<b>HSBC Finance Corporation</b>				
\$575m 6.36% non-cumulative preferred stock, series B	2	Jun 2010	—	559
<b>HSBC Bank Canada</b>				
C\$175m Non-cumulative redeemable class 1 preferred shares, series C		Jun 2010	<b>130</b>	126
C\$175m Non-cumulative class 1 preferred shares, series D		Dec 2010	<b>130</b>	126
<b>At 31 Dec</b>			<b>260</b>	2,077

1 In June 2016, HSBC redeemed its floating non-cumulative preferred stock, series F and G for \$892m.

2 In June 2016, HSBC redeemed its non-cumulated preferred stock, series H and B, for \$949m.

## 32 Called up share capital and other equity instruments

### Called up share capital and share premium

#### HSBC Holdings ordinary shares of \$0.50 each, issued and fully paid

	Footnote	2016		2015	
		Number	\$m	Number	\$m
<b>At 1 Jan</b>		<b>19,685,096,934</b>	<b>9,842</b>	19,217,874,260	9,609
Shares issued under HSBC employee share plans		<b>69,187,052</b>	<b>35</b>	91,265,909	45
Shares issued in lieu of dividends		<b>437,302,228</b>	<b>219</b>	375,956,765	188
<b>At 31 Dec</b>	1	<b>20,191,586,214</b>	<b>10,096</b>	19,685,096,934	9,842

#### HSBC Holdings non-cumulative preference shares of \$0.01 each

	Footnote	2016		2015	
		Number	\$m	Number	\$m
<b>At 1 Jan and 31 Dec</b>	2	<b>1,450,000</b>	<b>—</b>	1,450,000	—

#### HSBC Holdings share premium

	Footnote	2016		2015	
		Number	\$m	Number	\$m
<b>At 31 Dec</b>		<b>12,619</b>	<b>—</b>	12,421	—

#### Total called up share capital and share premium

	Footnote	2016		2015	
		Number	\$m	Number	\$m
<b>At 31 Dec</b>		<b>22,715</b>	<b>—</b>	22,263	—

1 All HSBC Holdings ordinary shares in issue, excluding 325,273,407 shares held in treasury, confer identical rights, including in respect of capital, dividends and voting.

2 Included in the capital base of HSBC as additional tier 1 capital in accordance with the CRD IV rules, by virtue of the application of grandfathering provisions.

## Notes on the Financial Statements

### HSBC Holdings non-cumulative preference shares of \$0.01

HSBC Holdings pays dividends on non-cumulative preference shares of \$0.01 each ('dollar preference shares') quarterly, at the sole and absolute discretion of the Board. The Board will not declare a dividend on them if this would stop the company from meeting the PRA's capital adequacy requirements, or if profit available for distribution as dividends is insufficient to also pay dividends on other shares that are equally entitled and scheduled on the same date.

HSBC Holdings may not declare or pay dividends on shares ranking lower in the right to dividends than dollar preference shares, or redeem or purchase any of its other shares ranking equal or lower than dollar preference shares, unless it has fully paid, or set aside an amount to fully pay, the dividends on the dollar preference shares for the then current dividend period.

The dollar preference shares carry no rights to conversion into ordinary shares. Holders of dollar preference shares are only entitled to attend and vote at shareholder meetings if dividends on these shares have not been paid in full on four consecutive dividend payment dates. In such circumstances, holders of these shares are entitled to vote at shareholder meetings until HSBC Holdings has paid a full dividend on them. Since 16 December 2010, HSBC Holdings has been able to redeem dollar preference shares at any time, subject to prior notification to the PRA.

### HSBC Holdings non-cumulative preference share of £0.01

The one non-cumulative sterling preference share of £0.01 ('sterling preference share') has been in issue since 29 December 2010 and is held by a subsidiary of HSBC Holdings. Dividends are paid quarterly at the sole and absolute discretion of the Board. The sterling preference share carries no rights of conversion into ordinary shares of HSBC Holdings and no rights to attend and vote at shareholder meetings of HSBC Holdings. HSBC Holdings may redeem it at any time.

### Other equity instruments

HSBC Holdings includes three types of additional tier 1 capital securities in its tier 1 capital. Two are presented in this Note and are accounted for as equity because HSBC does not have an obligation to transfer cash or a variable number of its own ordinary shares to holders under any circumstances outside its control. See Note 28 for additional tier 1 securities accounted for as liabilities.

#### Additional tier 1 capital securities

Additional tier 1 capital securities are perpetual subordinated securities on which coupon payments may be deferred at HSBC Holdings' discretion. While any coupon payments are unpaid or deferred, HSBC Holdings will not declare or pay dividends or make distributions or similar periodic payments in respect of any securities of lower or equal rank, or repurchase or redeem them. Such securities do not generally carry voting rights but rank higher than ordinary shares for coupon payments, and in the event of a winding-up. They do not meet the identifying criteria in full for recognition as tier 1 capital under CRD IV but are eligible as regulatory capital subject to grandfathering limits and progressive phase-out.

At HSBC Holdings' discretion, and subject to certain conditions being satisfied, the capital securities may be exchanged on any coupon payment date for non-cumulative preference shares to be issued by HSBC Holdings and ranking pari passu with the dollar and sterling preference shares in issue. The preference shares would be issued at a nominal value of \$0.01 per share and a premium of \$24.99 per share, with both amounts being subscribed and fully paid. These securities may be called and redeemed by HSBC subject to prior notification to the PRA.

#### HSBC's additional tier 1 capital securities in issue which are accounted for in equity

		First call date	2016 \$m	2015 \$m
\$2,200m	8.125% perpetual subordinated capital securities	Apr 2013	<b>2,133</b>	2,133
\$3,800m	8.00% perpetual subordinated capital securities, Series 2	Dec 2015	<b>3,718</b>	3,718
<b>At 31 Dec</b>			<b>5,851</b>	5,851

#### Additional tier 1 capital – contingent convertible securities

During 2016, HSBC continued to issue contingent convertible securities that are included in HSBC's capital base as fully CRD IV compliant additional tier 1 capital securities on an end point basis. The net proceeds of the issuances will be used for general corporate purposes and to further strengthen the capital base to meet requirements under CRD IV. These securities bear a fixed rate of interest until their initial call dates. After the initial call dates, if they are not redeemed, the securities will bear interest at rates fixed periodically in advance for five-year periods based on prevailing market rates. Interest on the contingent convertible securities will be due and payable only at the sole discretion of HSBC, and HSBC has sole and absolute discretion at all times to cancel for any reason (in whole or in part) any interest payment that would otherwise be payable on any payment date. Distributions will not be paid if they are prohibited under UK banking regulations or if the company has insufficient reserves or fails to meet the solvency conditions defined in the securities' terms.

The contingent convertible securities are undated and are repayable, at the option of HSBC, in whole at the initial call date, or on any fifth anniversary after this date. In addition, the securities are repayable at the option of HSBC in whole for certain regulatory or tax reasons. Any repayments require the prior consent of the PRA. These securities rank pari passu with HSBC's dollar and sterling preference shares and are therefore ahead of ordinary shares. The contingent convertible securities will be converted into fully paid ordinary shares of HSBC at a pre-determined price, should HSBC's consolidated end point CET1 ratio fall below 7.0%. Therefore, in accordance with the terms of the securities, if the end point CET1 ratio breaches the 7.0% trigger, the securities will convert into ordinary shares at fixed contractual conversion prices in the issuance currencies of the relevant securities, equivalent to £2.70 at the prevailing rate of exchange on the issuance date, subject to certain anti-dilution adjustments.

### HSBC's additional tier 1 capital – contingent convertible securities in issue which are accounted for in equity

		First call date	2016 \$m	2015 \$m
\$2,250m	6.375% perpetual subordinated contingent convertible securities	Sep 2024	<b>2,244</b>	2,244
\$1,500m	5.625% perpetual subordinated contingent convertible securities	Jan 2020	<b>1,494</b>	1,494
€1,500m	5.25% perpetual subordinated contingent convertible securities	Sep 2022	<b>1,943</b>	1,943
\$2,450m	6.375% perpetual subordinated contingent convertible securities	Mar 2025	<b>2,459</b>	2,459
€1,000m	6.000% perpetual subordinated contingent convertible securities	Sep 2023	<b>1,121</b>	1,121
\$2,000m	6.875% perpetual subordinated contingent convertible securities	Jun 2021	<b>1,998</b>	—
<b>At 31 Dec</b>			<b>11,259</b>	9,261

### Shares under option

For details of the options outstanding to subscribe for HSBC Holdings ordinary shares under the HSBC Holdings savings-related share option plans, see Note 5.

### Aggregate options outstanding under these plans

31 Dec 2016			31 Dec 2015		
Number of HSBC Holdings ordinary shares	Period of exercise	Exercise price	Number of HSBC Holdings ordinary shares	Period of exercise	Exercise price
<b>69,217,725</b>	<b>2016 to 2022</b>	<b>£4.0472–5.4738</b>	72,840,810	2015 to 2021	£4.0472–5.4738
<b>504,467</b>	<b>2016 to 2018</b>	<b>HK\$55.4701–63.9864</b>	1,114,830	2015 to 2018	HK\$55.4701–63.9864
<b>86,916</b>	<b>2016 to 2018</b>	<b>€5.3532–5.7974</b>	153,610	2015 to 2018	€5.3532–6.0657
<b>217,738</b>	<b>2016 to 2018</b>	<b>\$7.1456–8.2094</b>	665,445	2015 to 2018	\$7.1456–8.2094

### Maximum obligation to deliver HSBC Holdings ordinary shares

At 31 December 2016, the maximum obligation to deliver HSBC Holdings ordinary shares under all of the above option arrangements and the HSBC International Employee Share Purchase Plan, together with GPSP awards and restricted share awards granted under the HSBC Share Plan and/or the HSBC Share Plan 2011, was 198,483,750 (2015: 193,178,906). The total number of shares at 31 December 2016 held by employee benefit trusts that may be used to satisfy such obligations to deliver HSBC Holdings ordinary shares was 3,997,619 (2015: 4,753,747).

## 33 Contingent liabilities, contractual commitments and guarantees

	HSBC		HSBC Holdings <sup>1</sup>	
	2016 \$m	2015 \$m	2016 \$m	2015 \$m
<b>Guarantees and other contingent liabilities:</b>				
– financial guarantees and similar contracts	<b>37,072</b>	46,116	<b>7,619</b>	68,333
– other guarantees	<b>44,394</b>	39,739	—	—
– other contingent liabilities	<b>553</b>	490	—	—
<b>At 31 Dec</b>	<b>82,019</b>	86,345	<b>7,619</b>	68,333
<b>Commitments:</b>				
– documentary credits and short-term trade-related transactions	<b>9,190</b>	10,168	—	—
– forward asset purchases and forward deposits placed	<b>5,386</b>	981	—	—
– standby facilities, credit lines and other commitments to lend	<b>641,267</b>	655,281	—	—
<b>At 31 Dec</b>	<b>655,843</b>	666,430	—	—

<sup>1</sup> Guarantees by HSBC Holdings are all in favour of other Group entities.

The above table discloses the nominal principal amounts, which represents the maximum amounts at risk should the contracts be fully drawn upon and clients default. As a significant portion of guarantees and commitments is expected to expire without being drawn upon, the total of the nominal principal amounts is not indicative of future liquidity requirements.

Approximately half the guarantees have a term of less than one year, while guarantees with terms of more than one year are subject to HSBC's annual credit review process.

Contingent liabilities arising from legal proceedings, regulatory and other matters against Group companies are disclosed in Notes 27 and 35.

### Financial Services Compensation Scheme

The Financial Services Compensation Scheme ('FSCS') has provided compensation to consumers following the collapse of a number of deposit takers. The compensation paid out to consumers is currently funded through loans from HM Treasury, which at 31 December 2016 stood at approximately £15.7bn (\$19.3bn). The Group could be liable to pay a proportion of the outstanding amount that the FSCS has borrowed from HM Treasury. The ultimate FSCS levy to the industry as a result of the collapses cannot currently be estimated reliably as it is dependent on various uncertain factors including the potential recoveries of assets by the FSCS and changes in the level of protected deposits and the population of FSCS members at the time.

### Associates

HSBC's share of associates' contingent liabilities amounted to \$35.3bn at 31 December 2016 (2015: \$39.2bn). No matters arose where HSBC was severally liable.

### 34 Lease commitments

#### Operating lease commitments

At 31 December 2016, future minimum lease payments under non-cancellable operating leases for land, buildings and equipment were \$3,893m (2015: \$5,333m).

#### Finance lease receivables

HSBC leases a variety of assets to third parties under finance leases, including transport assets (such as aircraft), property and general plant and machinery. At the end of lease terms, assets may be sold to third parties or leased for further terms. Rentals are calculated to recover the cost of assets less their residual value, and earn finance income.

	2016			2015		
	Total future minimum payments	Unearned finance income	Present value	Total future minimum payments	Unearned finance income	Present value
	\$m	\$m	\$m	\$m	\$m	\$m
<b>Lease receivables:</b>						
No later than one year	<b>3,248</b>	(330)	<b>2,918</b>	3,382	(332)	3,050
Later than one year and no later than five years	<b>6,563</b>	(702)	<b>5,861</b>	7,219	(837)	6,382
Later than five years	<b>4,548</b>	(633)	<b>3,915</b>	4,897	(702)	4,195
<b>At 31 Dec</b>	<b>14,359</b>	(1,665)	<b>12,694</b>	15,498	(1,871)	13,627

### 35 Legal proceedings and regulatory matters

HSBC is party to legal proceedings and regulatory matters in a number of jurisdictions arising out of its normal business operations. Apart from the matters described below, HSBC considers that none of these matters are material. The recognition of provisions is determined in accordance with the accounting policies set out in Note 1. While the outcome of legal proceedings and regulatory matters is inherently uncertain, management believes that, based on the information available to it, appropriate provisions have been made in respect of these matters as at 31 December 2016 (see Note 27). Where an individual provision is material, the fact that a provision has been made is stated and quantified, except to the extent doing so would be seriously prejudicial. Any provision recognised does not constitute an admission of wrongdoing or legal liability. It is not practicable to provide an aggregate estimate of potential liability for our legal proceedings and regulatory matters as a class of contingent liabilities.

#### Securities litigation

Household International, Inc. ('Household International') and certain former officers were named as defendants in a securities class action lawsuit, Jaffe v. Household International, Inc., et al., filed in the US District Court for the Northern District of Illinois (the 'Illinois District Court') in August 2002. The complaint asserted claims under the US Securities Exchange Act and alleged that the defendants knowingly or recklessly made false and misleading statements of material fact relating to Household International's Consumer Lending operations (some of which ultimately led to a 2002 settlement with 46 states and the District of Columbia) and certain accounting practices, as evidenced by an August 2002 restatement of previously reported consolidated financial statements. A class was certified on behalf of all persons who acquired and disposed of Household International common stock between July 1999 and October 2002. In April 2009, a jury trial was decided partly in favour of the plaintiffs and, in October 2013, the Illinois District Court entered a partial final judgment against the defendants in the amount of approximately \$2.5bn (including pre-judgment interest). The defendants appealed the partial final judgment and, in May 2015, the US Court of Appeals for the Seventh Circuit reversed the partial final judgment of the Illinois District Court and remanded the case for a new trial on loss causation.

In June 2016, HSBC reached an agreement to pay \$1.6bn to settle all claims. Final court approval of the settlement and a final court order of dismissal with prejudice was granted in November 2016.

#### Bernard L. Madoff Investment Securities LLC

Bernard L. Madoff ('Madoff') was arrested in December 2008 and later pleaded guilty to running a Ponzi scheme. His firm, Bernard L. Madoff Investment Securities LLC ('Madoff Securities'), is being liquidated in the US by a trustee (the 'Trustee').

Various non-US HSBC companies provided custodial, administration and similar services to a number of funds incorporated outside the US whose assets were invested with Madoff Securities. Based on information provided by Madoff Securities, as at 30 November 2008, the purported aggregate value of these funds was \$8.4bn, including fictitious profits reported by Madoff.

Based on information available to HSBC, the funds' actual transfers to Madoff Securities minus their actual withdrawals from Madoff Securities during the time HSBC serviced the funds are estimated to have totalled approximately \$4bn. Various HSBC companies have been named as defendants in lawsuits arising out of Madoff Securities' fraud.

**US/UK litigation:** The Trustee has brought lawsuits against various HSBC companies in the US Bankruptcy Court and in the English High Court, seeking recovery of transfers from Madoff Securities to HSBC in an amount not yet pleaded or determined. HSBC and other parties to the action have moved to dismiss the Trustee's US actions. The US Bankruptcy Court granted HSBC's motion to dismiss with respect to certain of the Trustee's claims in November 2016, though this ruling is subject to appeal.

The deadline by which the Trustee must serve HSBC with his English action has been extended to September 2017 for UK-based defendants and November 2017 for all other defendants.

Alpha Prime Fund Ltd ('Alpha Prime') and Senator Fund SPC ('Senator'), co-defendants in one of the Trustee's US actions, have each brought cross-claims against certain HSBC defendants. In December 2016, the US Bankruptcy Court granted HSBC's motion to dismiss the cross-claims and Alpha Prime and Senator's failure to appeal renders the court's ruling final.

Fairfield Sentry Limited, Fairfield Sigma Limited and Fairfield Lambda Limited (together, 'Fairfield') (in liquidation since July 2009) have brought lawsuits in the US and the British Virgin Islands ('BVI') against fund shareholders, including HSBC companies that

acted as nominees for clients, seeking restitution of redemption payments. In October 2016, the liquidators for Fairfield ('Fairfield Liquidators') filed a motion seeking leave to amend their complaints in the US Bankruptcy Court. Briefing on the defendants' opposition to the Liquidators' motion and the defendants' own motion to dismiss is underway. In January 2017, the defendants filed their consolidated motion to dismiss and opposition to the Fairfield Liquidators' motion seeking leave to amend.

In December 2014, three additional actions were filed in the US. A purported class of direct investors in Madoff Securities asserted common law claims against various HSBC companies in the United States District Court for the Southern District of New York (the 'New York District Court'). In September 2016, the New York District Court granted HSBC's motion to dismiss this action and the plaintiffs' failure to appeal renders the court's ruling final. Two investors in Hermes International Fund Limited ('Hermes') also asserted common law claims against various HSBC companies in the New York District Court. HSBC's motion to dismiss this action remains pending. In addition, SPV Optimal SUS Ltd ('SPV OSUS'), the purported assignee of the Madoff-invested company, Optimal Strategic US Equity Ltd ('Optimal'), filed a lawsuit in New York state court against various HSBC companies and others, seeking damages on various alleged grounds, including breach of fiduciary duty and breach of trust. This action has been stayed pending the issuance of a potentially dispositive decision in an action initiated by Optimal regarding the validity of the assignment of its claims to SPV OSUS.

**BVI litigation:** Beginning in October 2009, the Fairfield Liquidators commenced lawsuits against fund shareholders, including HSBC companies that acted as nominees for clients, seeking recovery of redemption payments. In March 2016, the BVI court denied a motion brought by certain non-HSBC defendants challenging the Fairfield Liquidators' authorisation to pursue their US claims, which those defendants have appealed. In August 2016, the Fairfield Liquidators voluntarily discontinued their actions against the HSBC defendants.

**Bermuda litigation:** In January 2009, Kingate Global Fund Limited and Kingate Euro Fund Limited (together, 'Kingate') brought an action against HSBC Bank Bermuda Limited ('HBBM') for recovery of funds held in Kingate's accounts, fees and dividends. This action is pending, but is not expected to move forward until the resolution of the Trustee's US actions against Kingate and HBBM.

Thema Fund Limited ('Thema') and Hermes each brought three actions in 2009. The first set of actions seeks recovery of funds in frozen accounts held at HSBC Institutional Trust Services (Bermuda) Limited. The second set of actions asserts liability against HSBC Institutional Trust Services (Bermuda) Limited in relation to claims for mistake, recovery of fees and damages for breach of contract. The third set of actions seeks return of fees from HBBM and HSBC Securities Services (Bermuda) Limited. The parties have agreed to a standstill in respect of all three sets of actions.

**Cayman Islands litigation:** In February 2013, Primeo Fund Limited ('Primeo') (in liquidation since April 2009) brought an action against HSBC Securities Services Luxembourg ('HSSL') and The Bank of Bermuda (Cayman), alleging breach of contract and breach of fiduciary duty, and claiming damages and equitable compensation. Trial began in November 2016 and is scheduled to run until the end of February 2017.

**Luxembourg litigation:** In April 2009, Herald Fund SPC ('Herald') (in liquidation since July 2013) brought an action against HSSL before the Luxembourg District Court, seeking restitution of cash and securities Herald purportedly lost because of Madoff Securities' fraud, or money damages. The Luxembourg District Court dismissed Herald's securities restitution claim, but reserved Herald's cash restitution claim and its claim for money damages. Herald has appealed this judgment to the Court of Appeal.

In March 2010, Herald (Lux) SICAV ('Herald (Lux)') (in liquidation since April 2009) brought an action against HSSL before the Luxembourg District Court seeking restitution of securities, or the cash equivalent, or money damages. Herald (Lux) has also requested the restitution of fees paid to HSSL.

In October 2009, Alpha Prime and, in December 2014, Senator, each brought an action against HSSL before the Luxembourg District Court, seeking the restitution of securities, or the cash equivalent, or money damages. The action initiated by Senator has been temporarily suspended at Senator's request. In April 2015, Senator commenced an action against the Luxembourg branch of HSBC Bank plc asserting identical claims before the Luxembourg District Court.

HSSL has also been named as a defendant in various actions by shareholders in Primeo Select Fund, Herald, Herald (Lux), and Hermes. Most of these actions have been dismissed, suspended or postponed.

**Ireland litigation:** In November 2013, Defender Limited brought an action against HSBC Institutional Trust Services (Ireland) Limited ('HTIE') and others, alleging breach of contract and claiming damages and indemnification for fund losses. A trial date has not yet been scheduled.

In May 2016, following a hearing on two preliminary issues, HTIE was successful in obtaining an order dismissing two remaining claims by purported shareholders in Thema International Fund plc.

SPV OSUS's action against HTIE and HSBC Securities Services (Ireland) Limited alleging breach of contract and claiming damages and indemnification for fund losses was dismissed in October 2015. SPV OSUS's appeal against this first instance decision was heard in January 2017.

There are many factors that may affect the range of possible outcomes, and the resulting financial impact, of the various Madoff-related proceedings described above, including but not limited to the multiple jurisdictions in which the proceedings have been brought. Based upon the information currently available, management's estimate of possible aggregate damages that might arise as a result of all claims in the various Madoff-related proceedings is up to or exceeding \$800m, excluding costs and interest. Due to uncertainties and limitations of this estimate, the ultimate damages could differ significantly from this amount.

### US mortgage-related investigations

In April 2011, HSBC Bank USA N.A. ('HSBC Bank USA') entered into a consent order (the 'OCC Servicing Consent Order') with the Office of the Comptroller of the Currency ('OCC'), and HSBC Finance Corporation ('HSBC Finance') and HSBC North America Holdings Inc. ('HNNA') entered into a similar consent order with the Federal Reserve Board ('FRB') (together with the OCC Servicing Consent Order, the 'Servicing Consent Orders').

The Servicing Consent Orders required prescribed actions to address certain foreclosure practice deficiencies. The Servicing Consent Orders also required an independent foreclosure review which, pursuant to amendments to the Servicing Consent Orders in February 2013, ceased and was replaced by a settlement under which HSBC and 12 other participating servicers agreed to provide cash payments and other assistance to eligible borrowers. In June 2015, the OCC issued an amended OCC Servicing Consent Order citing

## Notes on the Financial Statements

the failure of HSBC Bank USA to be in compliance with all requirements of the OCC Servicing Consent Order and stating that the failure to satisfy all requirements of the OCC Servicing Consent Order may result in a variety of regulatory consequences for HSBC Bank USA, including the imposition of civil money penalties. In January 2017, the OCC terminated the OCC Servicing Consent Order, together with its February 2013 and June 2015 amendments, after determining that HSBC Bank USA had satisfied the requirements thereunder. In connection with the termination of the Servicing Consent Order, the OCC also assessed a civil money penalty against HSBC Bank USA finding that HSBC Bank USA failed to correct deficiencies identified under the OCC Servicing Consent Order in a timely fashion.

In February 2016, HSBC Bank USA, HSBC Finance, HSBC Mortgage Services Inc. and HNAH entered into an agreement with the US Department of Justice (the 'DoJ'), the US Department of Housing and Urban Development, the Consumer Financial Protection Bureau, other federal agencies (the 'Federal Parties') and the Attorneys General of 49 states and the District of Columbia (the 'State Parties') to resolve civil claims related to past residential mortgage loan origination and servicing practices (the 'National Mortgage Settlement Agreement'). In addition, in February 2016, the FRB announced the imposition against HSBC Finance and HNAH of a \$131m civil money penalty in connection with the FRB's consent order of April 2011. Pursuant to the terms of the FRB's civil money penalty order, the penalty will be satisfied through the cash payments made to the Federal Parties and the consumer relief provided under the National Mortgage Settlement Agreement.

The Servicing Consent Orders and the National Mortgage Settlement Agreement do not completely preclude other enforcement actions by regulatory, governmental or law enforcement agencies related to foreclosure and other mortgage servicing practices, including, but not limited to, matters relating to the securitisation of mortgages for investors, which could include the imposition of civil money penalties, criminal fines or other sanctions. In addition, these practices have in the past resulted in private litigation, and may result in further private litigation.

### US mortgage securitisation activity and litigation

HSBC Bank USA was a sponsor or seller of loans used to facilitate whole loan securitisations underwritten by HSBC Securities (USA) Inc. ('HSI'). From 2005 to 2007, HSBC Bank USA purchased and sold approximately \$24bn of such loans to HSI, which were subsequently securitised and sold by HSI to third parties. The outstanding principal balance was approximately \$4.6bn as at 31 December 2016. HSBC notes that the scale of its mortgage securitisation activities was more limited in relation to a number of other banks in the industry. In addition, HSI served as an underwriter on securitisations issued by HSBC Finance or third parties, and HSBC Bank USA served as trustee on behalf of various mortgage securitisation trusts.

**Mortgage foreclosure and trustee matters:** As the industry's residential mortgage foreclosure issues continue, HSBC Bank USA has taken title to a number of foreclosed homes as trustee on behalf of various mortgage securitisation trusts. As nominal record owner of these properties, HSBC Bank USA has been sued by municipalities and tenants alleging various violations of law, including laws relating to property upkeep and tenants' rights. While HSBC believes and continues to maintain that these obligations and any related liabilities are those of the servicer of each trust, HSBC continues to receive significant adverse publicity in connection with these and similar matters, including foreclosures that are serviced by others in the name of 'HSBC, as trustee'.

Beginning in June 2014, a number of lawsuits were filed in state and federal court in New York and Ohio against HSBC Bank USA as trustee of over 320 mortgage securitisation trusts. These lawsuits are brought on behalf of the trusts by a putative class of investors including, among others, BlackRock and PIMCO funds. The complaints allege that the trusts have sustained losses in collateral value of approximately \$38bn. The lawsuits seek unspecified damages resulting from alleged breaches of the US Trust Indenture Act, breach of fiduciary duty, negligence, breach of contract and breach of the common law duty of trust. HSBC's motions to dismiss in several of these lawsuits were, for the most part, denied.

It is not practicable to estimate the possible financial impact of these matters, as there are many factors that may affect the range of possible outcomes; however, the resulting financial impact could be significant.

**Loan repurchase matters:** HSBC Bank USA, HSBC Finance and Decision One Mortgage Company LLC (an indirect subsidiary of HSBC Finance) ('Decision One') have been named as defendants in various mortgage loan repurchase actions brought by trustees of mortgage securitisation trusts. In the aggregate, these actions seek to have the HSBC defendants repurchase mortgage loans, or pay compensatory damages, totalling at least \$1bn. In August 2016, HSBC reached an agreement in principle to settle one of the matters and the other matters remain pending.

HSBC Mortgage Corporation (USA) Inc. and Decision One have also been named as defendants in two separate actions filed by Residential Funding Company LLC ('RFC'), a mortgage loan purchase counterparty, seeking unspecified damages in connection with approximately 25,000 mortgage loans.

It is not practicable to estimate the possible financial impact of these matters, as there are many factors that may affect the range of possible outcomes; however, the resulting financial impact could be significant.

**FIRREA:** Since 2010, various HSBC entities have received subpoenas and requests for information from the DoJ and the Massachusetts state Attorney General seeking the production of documents and information regarding HSBC's involvement in certain RMBS transactions as an issuer, sponsor, underwriter, depositor, trustee, custodian or servicer. In November 2014, HNAH, on behalf of itself and various subsidiaries including, but not limited to, HSBC Bank USA, HSI Asset Securitization Corp., HSI, HSBC Mortgage Corporation (USA), HSBC Finance and Decision One, received a subpoena from the US Attorney's Office for the District of Colorado, pursuant to the Financial Industry Reform, Recovery and Enforcement Act ('FIRREA'), concerning the origination, financing, purchase, securitisation and servicing of subprime and non-subprime residential mortgages.

HSBC continues to cooperate with the DoJ's investigation, which is at or nearing completion. In December 2016, HSBC had an initial discussion with the DoJ, wherein the DoJ stated its preliminary view that HSBC is subject to liability under FIRREA in connection with certain securitisations from 2005 to 2007 with respect to which HSBC Bank USA served as sponsor or seller of loans and HSI served as underwriter. HSBC disagrees with the DoJ's preliminary view, and the DoJ has offered HSBC an opportunity to respond. There can be no assurance as to how or when this matter will be resolved, or whether this matter will be resolved prior to the institution of formal legal proceedings by the DoJ. Moreover, it is possible that any such resolution could result in significant penalties and other costs. To date, at least one bank has been sued by the DoJ and at least eight other banks have reported settlements of mortgage-backed securities-related matters pursuant to FIRREA. The prior DoJ settlements provide no clear guidance as to how those individual settlement amounts were calculated, and due to the high degree of uncertainty involved, it is not practicable to estimate any possible financial effect of this matter, which could be significant.

HSBC expects the focus on mortgage securitisations to continue and may be subject to additional claims, litigation and governmental or regulatory scrutiny relating to its participation in the US mortgage securitisation market.

### **Anti-money laundering and sanctions-related matters**

In October 2010, HSBC Bank USA entered into a consent order with the OCC, and HNAH entered into a consent order with the FRB (each an 'Order' and together, the 'Orders'). These Orders required improvements to establish an effective compliance risk management programme across HSBC's US businesses, including risk management related to the Bank Secrecy Act ('BSA') and AML compliance. HSBC Bank USA is not currently in compliance with the OCC Order. Steps are being taken to address the requirements of the Orders.

In December 2012, HSBC Holdings, HNAH and HSBC Bank USA entered into agreements with US and UK government agencies regarding past inadequate compliance with the BSA, AML and sanctions laws. Among those agreements, HSBC Holdings and HSBC Bank USA entered into a five-year deferred prosecution agreement with, among others, the DoJ (the 'US DPA'); and HSBC Holdings consented to a cease-and-desist order, and HSBC Holdings and HNAH consented to a civil money penalty order with the FRB. HSBC Holdings also entered into an agreement with the Office of Foreign Assets Control ('OFAC') regarding historical transactions involving parties subject to OFAC sanctions, as well as an undertaking with the UK FCA to comply with certain forward-looking AML and sanctions-related obligations. In addition, HSBC Bank USA entered into civil money penalty orders with the Financial Crimes Enforcement Network of the US Treasury Department and the OCC.

Under these agreements, HSBC Holdings and HSBC Bank USA made payments totalling \$1.9bn to US authorities and undertook various further obligations, including, among others, to continue to cooperate fully with the DoJ in any and all investigations, not to commit any crime under US federal law subsequent to the signing of the agreement, and to retain an independent compliance monitor (the 'Monitor'). In February 2017, the Monitor delivered his third annual follow-up review report.

Through his country-level reviews, the Monitor identified potential anti-money laundering and sanctions compliance issues that the DoJ and HSBC are reviewing further. Additionally, as discussed elsewhere in this Note, HSBC is the subject of other ongoing investigations and reviews by the DoJ. HSBC Bank plc is also the subject of an investigation by the FCA into its compliance with UK money laundering regulations and financial crime systems and controls requirements. The potential consequences of breaching the US DPA, as well as the role of the Monitor and his third annual review, are discussed on page 82.

HSBC Bank USA also entered into two consent orders with the OCC. These required HSBC Bank USA to correct the circumstances noted in the OCC's report and to adopt an enterprise-wide compliance programme, and imposed restrictions on acquiring control of, or holding an interest in, any new financial subsidiary, or commencing a new activity in its existing financial subsidiary, without the OCC's prior approval.

These settlements with US and UK authorities have led to private litigation, and do not preclude further private litigation related to HSBC's compliance with applicable BSA, AML and sanctions laws or other regulatory or law enforcement actions for BSA, AML, sanctions or other matters not covered by the various agreements.

In May 2014, a shareholder derivative action was filed by a shareholder of HSBC Holdings purportedly on behalf of HSBC Holdings, HSBC Bank USA, HNAH and HSBC USA Inc. (the 'Nominal Corporate Defendants') in New York state court against certain current and former directors and officers of those HSBC companies (the 'Individual Defendants'). The complaint alleges that the Individual Defendants breached their fiduciary duties to the Nominal Corporate Defendants and caused a waste of corporate assets by allegedly permitting and/or causing the conduct underlying the US DPA. In November 2015, the New York state court granted the Nominal Corporate Defendants' motion to dismiss. The plaintiff has appealed that decision.

In July 2014, a claim was filed in the Ontario Superior Court of Justice against HSBC Holdings and a former employee purportedly on behalf of a class of persons who purchased HSBC common shares and American Depository Shares between July 2006 and July 2012. The complaint, which seeks monetary damages of up to CA\$20bn, alleges that the defendants made statutory and common law misrepresentations in documents released by HSBC Holdings and its wholly owned indirect subsidiary, HSBC Bank Canada, relating to HSBC's compliance with BSA, AML, sanctions and other laws.

Since November 2014, four lawsuits have been filed in federal court in New York, Illinois and Texas, against various HSBC companies and others, on behalf of plaintiffs who are, or are related to, victims of terrorist attacks in Iraq, Jordan and Mexico. In each case, it is alleged that the defendants aided and abetted the unlawful conduct of various sanctioned parties in violation of the US Anti-Terrorism Act. These actions are at an early stage.

Based on the facts currently known, it is not practicable at this time for HSBC to predict the resolution of these lawsuits, including the timing or any possible impact on HSBC, which could be significant.

### **Tax-related investigations**

Various tax administration, regulatory and law enforcement authorities around the world, including in the US, France, Belgium, Argentina and India, are conducting investigations and reviews of HSBC Private Bank (Suisse) SA ('HSBC Swiss Private Bank') and other HSBC companies in connection with allegations of tax evasion or tax fraud, money laundering and unlawful cross-border banking solicitation.

HSBC continues to cooperate in ongoing investigations by the DoJ and the US Internal Revenue Service regarding whether certain HSBC companies and employees, including those associated with HSBC Swiss Private Bank and an HSBC company in India, acted appropriately in relation to certain customers who had US tax reporting obligations. In connection with these investigations, HSBC Swiss Private Bank, with due regard for Swiss law, has produced records and other documents to the DoJ. In August 2013, the DoJ informed HSBC Swiss Private Bank that it was not eligible for the 'Program for Non-Prosecution Agreements or Non-Target Letters for Swiss Banks' since a formal investigation had previously been authorised.

In November 2014, HSBC Swiss Private Bank was placed under formal criminal examination in Belgium for alleged tax-related offences. In November 2014, HSBC Swiss Private Bank was also placed under formal criminal examination in France for alleged tax-related offences in 2006 and 2007 and required to pay bail of €50m. In April 2015, HSBC Holdings was informed that it had been placed under formal criminal examination in France in connection with the conduct of HSBC Swiss Private Bank, and a €1bn bail was imposed. HSBC Holdings appealed the bail decision and, in June 2015, bail was reduced to €100m. The ultimate financial impact of these matters could differ significantly, however, from the bail amounts of €150m. In March 2016, HSBC was informed that the

## **Notes on the Financial Statements**

French magistrates had completed their investigation with respect to HSBC Swiss Private Bank and HSBC Holdings, and have referred the matter to the French public prosecutor for a recommendation on any potential charges. In October 2016, HSBC Swiss Private Bank and HSBC Holdings received the French public prosecutor's brief in which the prosecutor recommended the judge to refer the cases to trial, and HSBC Swiss Private Bank and HSBC Holdings have responded to the prosecutor's brief.

In November 2014, the Argentine tax authority initiated a criminal action against various individuals, including current and former HSBC employees. The criminal action includes allegations of tax evasion, conspiracy to launder undeclared funds and an unlawful association among HSBC Swiss Private Bank, HSBC Bank Argentina, HSBC Bank USA and certain HSBC employees, which allegedly enabled numerous HSBC customers to evade their Argentine tax obligations.

In February 2015, the Indian tax authority issued a summons and request for information to an HSBC company in India. In August 2015 and November 2015, HSBC companies received notices issued by two offices of the Indian tax authority, alleging that the Indian tax authority had sufficient evidence to initiate prosecution against HSBC Swiss Private Bank and an HSBC company in Dubai for allegedly abetting tax evasion of four different Indian individuals and/or families and requesting that the HSBC companies show why such prosecution should not be initiated. HSBC Swiss Private Bank and the HSBC company in Dubai have responded to the show cause notices.

HSBC is cooperating with the relevant authorities. As at 31 December 2016, HSBC has recognised a provision for these various matters in the amount of \$773m. There are many factors that may affect the range of outcomes, and the resulting financial impact, of these investigations and reviews. Due to uncertainties and limitations of these estimates, the ultimate penalties could differ significantly from the amount provided.

In light of the media attention regarding these matters, it is possible that other tax administration, regulatory or law enforcement authorities will also initiate or enlarge similar investigations or regulatory proceedings.

### **Mossack Fonseca & Co.**

HSBC has received requests for information from various regulatory and law enforcement authorities around the world concerning persons and entities believed to be linked to Mossack Fonseca & Co., a service provider of personal investment companies. HSBC is cooperating with the relevant authorities.

Based on the facts currently known, it is not practicable at this time for HSBC to predict the resolution of this matter, including the timing or any possible impact on HSBC, which could be significant.

### **London interbank offered rates, European interbank offered rates and other benchmark interest rate investigations and litigation**

Various regulators and competition and law enforcement authorities around the world, including in the UK, the US, the EU and Switzerland, are conducting investigations and reviews related to certain past submissions made by panel banks and the processes for making submissions in connection with the setting of Libor, Euribor and other benchmark interest rates. As certain HSBC companies are members of such panels, HSBC has been the subject of regulatory demands for information and is cooperating with those investigations and reviews.

In December 2016, the European Commission (the 'Commission') issued a decision finding that HSBC, among other banks, engaged in anti-competitive practices in connection with the pricing of euro interest rate derivatives in early 2007. The Commission determined that the duration of HSBC's infringement was 1 month and fined HSBC. HSBC has appealed the decision.

**US dollar Libor:** Beginning in 2011, HSBC and other panel banks have been named as defendants in a number of private lawsuits filed in the US with respect to the setting of US dollar Libor. The complaints assert claims under various US laws, including US antitrust and racketeering laws, the US Commodity Exchange Act ('US CEA'), and state law. The lawsuits include individual and putative class actions, most of which have been transferred and/or consolidated for pre-trial purposes before the New York District Court.

The New York District Court has issued decisions dismissing certain of the claims in response to motions filed by the defendants. Those decisions resulted in the dismissal of the plaintiffs' federal and state antitrust claims, racketeering claims, and unjust enrichment claims. Dismissal of certain of these claims was appealed to the US Court of Appeals for the Second Circuit, which reversed the New York District Court's dismissal of plaintiffs' antitrust claims in May 2016. In July 2016, defendants filed a joint motion to dismiss all antitrust claims and, in December 2016, the New York District Court granted in part and denied in part the motion, leaving only certain antitrust claims to be litigated. Separately, in October 2016, the New York District Court granted a motion to dismiss claims brought by an individual plaintiff for lack of personal jurisdiction, which dismissal is currently on appeal to the Second Circuit. Finally, in January 2017, the District Court granted defendants' motion to dismiss certain of the remaining antitrust claims against defendants that did not serve on the US dollar Libor submission panel.

**Euroyen Tokyo interbank offered rate ('Tibor') and/or Japanese yen Libor:** In April 2012 and July 2015, HSBC and other panel banks were named as defendants in putative class actions filed in the New York District Court on behalf of persons who transacted in financial instruments allegedly related to the euroyen Tibor and/or Japanese yen Libor. The complaints allege, among other things, misconduct related to euroyen Tibor, although HSBC is not a member of the Japanese Bankers Association's euroyen Tibor panel, as well as Japanese yen Libor, in violation of US antitrust laws, the US CEA, and state law. In May 2016, HSBC reached an agreement in principle with plaintiffs to resolve both of these actions, and the settlement was granted final court approval in November 2016.

**Euribor:** In November 2013, HSBC and other panel banks were named as defendants in a putative class action filed in the New York District Court on behalf of persons who transacted in euro futures contracts and other financial instruments allegedly related to Euribor. The complaint alleges, among other things, misconduct related to Euribor in violation of US antitrust laws, the US CEA and state law. In May 2016, HSBC reached an agreement in principle with plaintiffs to resolve this action, subject to court approval.

### **Singapore Interbank Offered Rate ('SIBOR'), Singapore Swap Offer Rate ('SOR') and Australia Bank Bill Swap Rate ('BBSW')**

**(BBSW):** In July 2016 and August 2016, HSBC and other panel banks were named as defendants in two putative class actions filed in the New York District Court on behalf of persons who transacted in products related to the SIBOR, SOR and BBSW benchmark rates. The complaints allege, among other things, misconduct related to these benchmark rates in violation of US antitrust, commodities and racketeering laws, and state law. These matters are at an early stage.

**US dollar International Swaps and Derivatives Association fix ('ISDAfix'):** In September 2014, HSBC and other panel banks were named as defendants in a number of putative class actions consolidated in the New York District Court on behalf of persons who transacted in interest rate derivatives or purchased or sold financial instruments that were either tied to ISDAfix rates or were executed shortly before, during, or after the time of the daily ISDAfix setting window. The consolidated complaint alleges, among other things, misconduct related to these activities in violation of US antitrust laws, the US CEA and state law. HSBC's motion to dismiss the complaint was denied in March 2016.

There are many factors that may affect the range of outcomes, and the resulting financial impact, of these matters, which could be significant.

### Foreign exchange rate investigations and litigation

Various regulators and competition and law enforcement authorities around the world, including in the US, the EU, Switzerland, Brazil, South Korea and South Africa are conducting investigations and reviews into trading by HSBC and others on the foreign exchange markets. HSBC is cooperating with these investigations and reviews.

In May 2015, the DoJ resolved its investigations with respect to five non-HSBC financial institutions, four of whom agreed to plead guilty to criminal charges of conspiring to manipulate prices in the foreign exchange spot market, and resulting in the imposition of criminal fines in the aggregate of more than \$2.5bn. Additional penalties were imposed at the same time by the FRB and other banking regulators. HSBC was not a party to these resolutions. In August 2016, the DoJ indicted one current and one former HSBC employee and charged them with wire fraud and conspiracy relating to a 2011 foreign exchange transaction. The trial is currently scheduled to begin in September 2017. HSBC was not named as a defendant in the indictment, and investigations into HSBC by the DoJ, FRB and others continue.

In December 2016, HSBC Bank plc entered into a settlement with Brazil's Administrative Council of Economic Defense ('CADE') in connection with its investigation into 15 banks, including HSBC Bank plc, as well as 30 individuals, relating to practices in the offshore foreign exchange market. Under the terms of the settlement, HSBC Bank plc agreed to pay a financial penalty to CADE.

In February 2017, the Competition Commission of South Africa referred a complaint for proceedings before the South African Competition Tribunal against 18 financial institutions, including HSBC Bank plc, for alleged misconduct related to the foreign exchange market in violation of South African antitrust laws. These proceedings are at an early stage.

In late 2013 and early 2014, HSBC and other banks were named as defendants in various putative class actions consolidated in the New York District Court. The consolidated complaint alleged, among other things, that the defendants conspired to manipulate the WM/Reuters foreign exchange benchmark rates. In September 2015, HSBC reached an agreement with plaintiffs to resolve the consolidated action, subject to court approval. In December 2015, the court granted preliminary approval of the settlement, and HSBC made payment of the agreed settlement amount into an escrow account. The final settlement approval hearing is scheduled for October 2017.

In June 2015, a putative class action was filed in the New York District Court making similar allegations on behalf of Employee Retirement Income Security Act of 1974 ('ERISA') plan participants, and another complaint was filed in the US District Court for the Northern District of California in May 2015. The court dismissed the claims in the ERISA action, and the plaintiffs have appealed to the US Court of Appeals for the Second Circuit. HSBC filed a motion to transfer the California action to New York, which was granted in November 2015. In September 2016, a putative class action making similar allegations on behalf of purported 'indirect' purchasers of foreign exchange products was filed in New York. This action is at an early stage.

In September 2015, two additional putative class actions making similar allegations under Canadian law were issued in Canada against various HSBC companies and other financial institutions.

As at 31 December 2016, HSBC has recognised a provision for these various matters in the amount of \$1.2bn. There are many factors that may affect the range of outcomes, and the resulting financial impact, of these matters. Due to uncertainties and limitations of these estimates, the ultimate penalties could differ significantly from the amount provided.

### Precious metals fix-related investigations and litigation

Various regulators and competition and law enforcement authorities, including in the US and the EU, are conducting investigations and reviews relating to HSBC's precious metals operations and trading. HSBC is cooperating with these investigations and reviews. In November 2014, the Antitrust Division and Criminal Fraud Section of the DoJ issued a document request to HSBC Holdings, seeking the voluntary production of certain documents in connection with a criminal investigation that the DoJ is conducting of alleged anti-competitive and manipulative conduct in precious metals trading. In January 2016, the Antitrust Division of the DoJ informed HSBC that it was closing its investigation; however, the Criminal Fraud Section's investigation remains ongoing.

**Gold:** Beginning in March 2014, numerous putative class actions were filed in the New York District Court and the US District Courts for the District of New Jersey and the Northern District of California, naming HSBC and other members of The London Gold Market Fixing Limited as defendants. The complaints allege that, from January 2004 to the present, defendants conspired to manipulate the price of gold and gold derivatives for their collective benefit in violation of US antitrust laws, the US CEA and New York state law. The actions were consolidated in the New York District Court. Defendants' motion to dismiss the consolidated action was granted in part and denied in part in October 2016.

In December 2015, a putative class action under Canadian law was filed in the Ontario Superior Court of Justice against various HSBC companies and other financial institutions. Plaintiffs allege that, among other things, from January 2004 to March 2014, defendants conspired to manipulate the price of gold and gold derivatives in violation of the Canadian Competition Act and common law. This action is at an early stage.

**Silver:** Beginning in July 2014, numerous putative class actions were filed in the US District Courts for the Southern and Eastern Districts of New York, naming HSBC and other members of The London Silver Market Fixing Ltd as defendants. The complaints allege that, from January 1999 to the present, defendants conspired to manipulate the price of silver and silver derivatives for their collective benefit in violation of US antitrust laws, the US CEA and New York state law. The actions were consolidated in the New York District Court. Defendants' motion to dismiss the consolidated action was granted in part and denied in part in October 2016.

In April 2016, two putative class actions under Canadian law were filed in the Ontario and Quebec Superior Courts of Justice against various HSBC companies and other financial institutions. Plaintiffs in both actions allege that, from January 1999 to August 2014,

## **Notes on the Financial Statements**

defendants conspired to manipulate the price of silver and silver derivatives in violation of the Canadian Competition Act and common law. The Ontario action is at an early stage. The Quebec action has been temporarily stayed.

**Platinum and palladium:** Between late 2014 and early 2015, numerous putative class actions were filed in the New York District Court, naming HSBC and other members of The London Platinum and Palladium Fixing Company Limited as defendants. The complaints allege that, from January 2008 to the present, defendants conspired to manipulate the price of platinum group metals ('PGM') and PGM-based financial products for their collective benefit in violation of US antitrust laws and the US CEA. Defendants have moved to dismiss the action.

There are many factors that may affect the range of outcomes, and the resulting financial impact, of these matters, which could be significant.

### **Credit default swap litigation**

Various HSBC companies, among other financial institutions, ISDA, and Markit, were named as defendants in numerous putative class actions filed in the New York District Court and the Illinois District Court. The actions alleged that the defendants violated US antitrust laws by, among other things, conspiring to restrict access to credit default swap pricing exchanges and block new entrants into the exchange market. The actions were subsequently consolidated in the New York District Court. In September 2015, the HSBC defendants reached an agreement with the plaintiffs to resolve the consolidated action, and final court approval of that settlement was granted in April 2016.

### **Treasury auctions**

Beginning in July 2015, HSI, amongst other financial institutions, was named as a defendant in several putative class actions filed in the New York District Court. The complaints generally allege that the defendants violated US antitrust laws and the US CEA by colluding to manipulate prices of US Treasury securities sold at auction. The cases have been consolidated in the New York District Court. This matter is at an early stage.

The DoJ has requested information from HSBC and reportedly other banks regarding US Treasury securities trading practices. HSBC is cooperating with this ongoing investigation.

Based on the facts currently known, it is not practicable at this time for HSBC to predict the resolution of these matters, including the timing or any possible impact on HSBC, which could be significant.

### **Interest rate swap litigation**

In February 2016, various HSBC companies, among others, were named as defendants in a putative class action filed in the New York District Court. The complaint alleged that the defendants violated US antitrust laws by, among other things, conspiring to boycott and eliminate various entities and practices that would have brought exchange trading to buy-side investors in the interest rate swaps marketplace. In June 2016, this action along with other complaints filed in the New York District Court and the Illinois District Court were consolidated in the New York District Court, and in January 2017, the defendants filed a motion to dismiss. This matter is at an early stage.

Based on the facts currently known, it is not practicable at this time for HSBC to predict the resolution of this matter, including the timing or any possible impact on HSBC, which could be significant.

### **Fédération Internationale de Football Association ('FIFA') related investigations**

HSBC has received inquiries from the DoJ regarding its banking relationships with certain individuals and entities that are or may be associated with FIFA. The DoJ is investigating whether multiple financial institutions, including HSBC, permitted the processing of suspicious or otherwise improper transactions, or failed to observe applicable AML laws and regulations. HSBC is cooperating with the DoJ's investigation.

Based on the facts currently known, it is not practicable at this time for HSBC to predict the resolution of this matter, including the timing or any possible impact on HSBC, which could be significant.

### **Hiring practices investigation**

The US Securities and Exchange Commission (the 'SEC') is investigating multiple financial institutions, including HSBC, in relation to hiring practices of candidates referred by or related to government officials or employees of state-owned enterprises in Asia-Pacific. HSBC has received various requests for information and is cooperating with the SEC's investigation.

Based on the facts currently known, it is not practicable at this time for HSBC to predict the resolution of this matter, including the timing or any possible impact on HSBC, which could be significant.

## **36 Related party transactions**

Related parties of the Group and HSBC Holdings include subsidiaries, associates, joint ventures, post-employment benefit plans for HSBC employees, Key Management Personnel ('KMP') as defined by IAS 24, close family members of KMP and entities which are controlled or jointly controlled by KMP or their close family members. KMP are defined as those persons having authority and responsibility for planning, directing and controlling the activities of HSBC Holdings. These individuals also constitute 'senior management' for the purposes of the Hong Kong Listing Rules. Following a review of the application of IAS 24, it was determined that the roles of Chief Legal Officer, Group Head of Internal Audit and Group Head of Human Resources did not meet the criteria for KMP as provided for in the standard.

Particulars of transactions with related parties are tabulated below. The disclosure of the year-end balance and the highest amounts outstanding during the year is considered to be the most meaningful information to represent the amount of the transactions and outstanding balances during the year.

### **Key Management Personnel**

Details of Directors' remuneration and interest in shares are disclosed in the Directors' remuneration report on pages 153 to 170. IAS 24 'Related party disclosures' requires the following additional information for key management compensation.

### Compensation of Key Management Personnel

	2016 \$m	2015 \$m	2014 \$m
Short-term employee benefits	<b>41</b>	40	41
Post-employment benefits	—	1	1
Other long-term employee benefits	<b>5</b>	9	7
Share-based payments	<b>37</b>	51	54
<b>Year ended 31 Dec</b>	<b>83</b>	101	103

### Shareholdings, options and other securities of Key Management Personnel

	2016 (000s)	2015 (000s)
Number of options held over HSBC Holdings ordinary shares under employee share plans	<b>18</b>	29
Number of HSBC Holdings ordinary shares held beneficially and non-beneficially	<b>22,283</b>	18,961
<b>At 31 Dec</b>	<b>22,301</b>	18,990

### Transactions and balances during the year with Key Management Personnel

Footnote	2016		2015	
	Balance at 31 Dec	Highest amounts outstanding during year	Balance at 31 Dec	Highest amounts outstanding during year
<b>Key Management Personnel</b>				
Advances and credits	1	<b>215</b>	<b>220</b>	218
Guarantees	—	<b>55</b>	<b>63</b>	67
Deposits	<b>229</b>	<b>677</b>	387	768

1 Advances and credits entered into by subsidiaries of HSBC Holdings during 2016 with Directors, disclosed pursuant to Section 413 of the Companies Act 2006, totalled \$2m (2015: \$4m).

Some of the transactions were connected transactions as defined by the Rules Governing The Listing of Securities on The Stock Exchange of Hong Kong Limited, but were exempt from any disclosure requirements under the provisions of those rules. The above transactions were made in the ordinary course of business and on substantially the same terms, including interest rates and security, as for comparable transactions with persons of a similar standing or, where applicable, with other employees. The transactions did not involve more than the normal risk of repayment or present other unfavourable features.

### Associates and joint ventures

The Group provides certain banking and financial services to associates and joint ventures including loans, overdrafts, interest and non-interest bearing deposits and current accounts. Details of the interests in associates and joint ventures are given in Note 17.

### Transactions and balances during the year with associates and joint ventures

	2016		2015	
	Highest balance during the year	Balance at 31 Dec	Highest balance during the year	Balance at 31 Dec
Unsubordinated amounts due from joint ventures	<b>126</b>	<b>113</b>	195	151
Unsubordinated amounts due from associates	<b>3,136</b>	<b>2,881</b>	4,209	2,035
Amounts due to associates	<b>1,112</b>	<b>576</b>	1,047	92
Guarantees and commitments	<b>776</b>	<b>594</b>	905	904

The above outstanding balances arose in the ordinary course of business and on substantially the same terms, including interest rates and security, as for comparable transactions with third-party counterparties.

### Post-employment benefit plans

At 31 December 2016, \$4.4bn (2015: \$4.3bn) of HSBC post-employment benefit plan assets were under management by HSBC companies, earning management fees of \$6m in 2016 (2015: \$8m). At 31 December 2016 HSBC's post-employment benefit plans had placed deposits of \$710m (2015: \$811m) with its banking subsidiaries, earning interest payable to the schemes of \$1m (2015: nil). The above outstanding balances arose from the ordinary course of business and on substantially the same terms, including interest rates and security, as for comparable transactions with third-party counterparties.

The HSBC Bank (UK) Pension Scheme and International Staff Retirement Benefit Scheme enter into swap transactions with HSBC to manage inflation and interest rate sensitivity of its liabilities and selected assets. At 31 December 2016 the gross notional value of the swaps with HSBC Bank (UK) Pension Scheme was \$10.5bn (2015: \$13.3bn); these swaps had a positive fair value to the scheme of \$0.9bn (2015: \$0.5bn); and HSBC had delivered collateral of \$0.9bn (2015: \$1.1bn) to the scheme in respect of these arrangements.

At 31 December 2016, the gross notional value of the swaps with the International Staff Retirement Benefit Scheme was \$1.2bn (2015: \$1.7bn) and the swaps had a net negative fair value to the scheme of \$85m (2015: \$96m negative). All swaps were executed at prevailing market rates and within standard market bid/offer spreads.

### HSBC Holdings

## Notes on the Financial Statements

Details of HSBC Holdings' subsidiaries are shown in Note 38.

### Transactions and balances during the year with subsidiaries

	2016		2015	
	Highest balance during the year \$m	Balance at 31 Dec \$m	Highest balance during the year \$m	Balance at 31 Dec \$m
<b>Assets</b>				
Cash at bank	997	247	620	242
Derivatives	4,494	2,148	3,409	2,466
Loans and advances	77,732	77,421	47,229	44,350
Financial investments	4,314	3,590	4,427	4,285
Investments in subsidiaries	97,827	95,850	97,770	97,770
<b>Total related party assets at 31 Dec</b>	<b>185,364</b>	<b>179,256</b>	<b>153,455</b>	<b>149,113</b>
<b>Liabilities</b>				
Amounts owed to HSBC undertakings	3,823	2,157	2,892	2,152
Derivatives	5,025	5,025	2,459	2,277
Subordinated liabilities	1,749	891	2,652	1,746
<b>Total related party liabilities at 31 Dec</b>	<b>10,597</b>	<b>8,073</b>	<b>8,003</b>	<b>6,175</b>
Guarantees and commitments	63,719	7,619	68,349	68,333

The above outstanding balances arose in the ordinary course of business and on substantially the same terms, including interest rates and security, as for comparable transactions with third-party counterparties.

Some employees of HSBC Holdings are members of the HSBC Bank (UK) Pension Scheme, which is sponsored by a separate Group company. HSBC Holdings incurs a charge for these employees equal to the contributions paid into the scheme on their behalf. Disclosure in relation to the scheme is made in Note 5.

### 37 Events after the balance sheet date

A fourth interim dividend for 2016 of \$0.21 per ordinary share (a distribution of approximately \$4,172m) was declared by the Directors after 31 December 2016.

On 21 February 2017, the Board approved a share buy-back programme of up to \$1.0bn.

These accounts were approved by the Board of Directors on 21 February 2017 and authorised for issue.

## 38 HSBC Holdings' subsidiaries, joint ventures and associates

In accordance with Section 409 of the Companies Act 2006 a list of HSBC Holdings plc's subsidiaries, joint ventures and associates, the registered office address and the effective percentage of equity owned at 31 December 2016 is disclosed below.

Unless otherwise stated, the share capital comprises ordinary or common shares which are held by Group subsidiaries. The ownership percentage is provided for each undertaking. The undertakings below are consolidated by HSBC unless otherwise indicated.

### Subsidiaries

Subsidiaries	Group interest %	Footnotes
ACN 087 652 113 Pty Limited	100.00	182
AEA Investors (Cayman) IA L.P.	100.00	1, 19, 130
Allblack Investments Limited	100.00	16, 162
Almacenadora Banpacifico S.A.	99.99	201
AMP Client HSBC Custody Nominee (UK) Limited	100.00	1, 94
Assetfinance December (F) Limited	100.00	94
Assetfinance December (H) Limited	100.00	94
Assetfinance December (M) Limited	100.00	94
Assetfinance December (P) Limited	100.00	94
Assetfinance December (R) Limited	100.00	94
Assetfinance December (W) Limited	100.00	94
Assetfinance June (A) Limited	100.00	94
Assetfinance June (D) Limited	100.00	94
Assetfinance June (E) Limited	100.00	94
Assetfinance Limited	100.00	94
Assetfinance March (B) Limited	100.00	84
Assetfinance March (D) Limited	100.00	94
Assetfinance March (F) Limited	100.00	94
Assetfinance September (F) Limited	100.00	94
Assetfinance September (G) Limited	100.00	94
B&Q Financial Services Limited	100.00	131
Banco Nominees (Guernsey) Limited	99.98	1, 108
Banco Nominees 2 (Guernsey) Limited	100.00	108
Banco Nominees Limited	100.00	87
Bank of Bermuda (Cayman) Limited	100.00	166
Beau Soleil Limited Partnership	99.99	19, 27
Beijing Miyun HSBC Rural Bank Company Limited	100.00	22, 148
Beneficial Company LLC	100.00	10, 127
Beneficial Consumer Discount Company	100.00	135
Beneficial Financial I Inc.	100.00	142
Beneficial Florida Inc.	100.00	127
Beneficial Homeowner Service Corporation	100.00	127
Beneficial Kentucky Inc.	100.00	127
Beneficial Loan & Thrift Co.	100.00	127
Beneficial Louisiana Inc.	100.00	127
Beneficial Maine Inc.	100.00	127
Beneficial Massachusetts Inc.	100.00	127
Beneficial Michigan Inc.	100.00	127
Beneficial New Hampshire Inc.	100.00	127
Beneficial Oregon Inc.	100.00	127
Beneficial Rhode Island Inc.	100.00	127
Beneficial South Dakota Inc.	100.00	127
Beneficial Tennessee Inc.	100.00	141
Beneficial West Virginia, Inc.	100.00	143
Beneficial Wyoming Inc.	100.00	136
BerCay Holdings Limited	100.00	166
Bermuda International Securities Limited	100.00	87
BFC Insurance Agency of Nevada	100.00	61
Billingsgate City Securities Limited	100.00	94
Billingsgate Nominees Limited	100.00	94
Cal-Pacific Services, Inc.	100.00	142
Canada Crescent Nominees (UK) Limited	100.00	1, 94
Canada Square Nominees (UK) Limited	100.00	94
Canada Square Property Participations Limited	100.00	1, 94
Canada Water Nominees (UK) Limited	100.00	1, 94
Capco/Cove, Inc.	100.00	101

Subsidiaries	Group interest %	Footnotes
Card-Flo #1, Inc.	100.00	36
Card-Flo #3, Inc.	100.00	127
Cayman International Finance Limited	100.00	166
Cayman Nominees Limited	100.00	228
CBS/Holdings, Inc.	100.00	101
CC&H Holdings LLC	100.00	10, 133
CCF & Partners Asset Management Limited	100.00	94
CCF Charterhouse GmbH	100.00	4, 233
CCF Charterhouse GmbH & Co Asset Leasing KG	100.00	9, 233
CCF Holding (LIBAN) S.A.L. (in liquidation)	74.99	1, 220
Charterhouse Administrators (D.T.) Limited	100.00	94
Charterhouse Development Limited	100.00	94
Charterhouse Management Services Limited	100.00	94
Charterhouse Pensions Limited	100.00	1, 94
Chongqing Dazu HSBC Rural Bank Company Limited	100.00	22, 190
Chongqing Fengdu HSBC Rural Bank Company Limited	100.00	22, 191
Chongqing Rongchang HSBC Rural Bank Company Limited	100.00	22, 195
CL Residential Limited	100.00	94
COIF Nominees Limited	100.00	1, 8, 94
Cordico Management AG	100.00	109
Corhold Limited	100.00	151
Dalian Pulandian HSBC Rural Bank Company Limited	100.00	22, 147
Decision One Mortgage Company, LLC	100.00	10, 139
Dem 5	100.00	4, 74
Dem 9	100.00	4, 74
Dempar 1	100.00	4, 29
Dempar 4	100.00	4, 29
Desarrollo Turistico, S.A. de C.V.	100.00	201
Eagle Rock Holdings, Inc.	100.00	101
Ellenville Holdings, Inc.	100.00	101
Elysees GmbH	100.00	6, 233
Elysées Immo Invest	100.00	4, 89
Emerging Growth Real Estate II GP Limited	100.00	108
EMTT Limited	100.00	1, 94
Endeavour Personal Finance Limited	100.00	153
Equator Holdings Limited	100.00	94
Eton Corporate Services Limited	100.00	200
Far East Leasing SA	100.00	1, 189
Fdm 5 SAS	100.00	4, 74
FEPC Leasing Ltd.	100.00	16, 234
Finanpar 2	100.00	4, 89
Finanpar 7	100.00	4, 89
First Corporate Director Inc.	100.00	151
First Direct Investments (UK) Limited	100.00	94
Flandres Contentieux S.A.	100.00	1, 4, 44
Foncière Elysées	100.00	4, 29
Forward Trust Rail Services Limited	100.00	16, 94
Fujian Yongan HSBC Rural Bank Company Limited	100.00	22, 192
Fulcher Enterprises Company Limited	62.14	96
Fundacion HSBC, A.C.	60.00	1, 20, 201
G.M. Gilt-Edged Nominees Limited	100.00	1, 94
Gesellschaft fur Industrielle Beteiligungen und Finanzierung mbH	100.00	176
Gesico International SA	100.00	113

## Notes on the Financial Statements

Subsidiaries	Group interest %	Footnotes
Giller Ltd.	100.00	101
GPIF Co-Investment, LLC	80.00	10, 127
GPIF-I Equity Co., Ltd.	100.00	1, 11, 118
GPIF-I Finance Co., Ltd	100.00	1, 11, 118
Griffin International Limited	100.00	94
Grundstuecksgesellschaft Trinkausstrasse Kommanditgesellschaft	100.00	176
Grupo Financiero HSBC, S. A. de C. V.	100.00	201
Guangdong Enping HSBC Rural Bank Company Limited	100.00	22, 196
GZ Trust Corporation	100.00	151
Hang Seng (Nominee) Limited	62.14	96
Hang Seng Bank (China) Limited	62.14	22, 71
Hang Seng Bank (Trustee) Limited	62.14	96
Hang Seng Bank Limited	62.14	96
Hang Seng Bullion Company Limited	62.14	96
Hang Seng Credit Limited	62.14	96
Hang Seng Data Services Limited	62.14	96
Hang Seng Finance Limited	62.14	96
Hang Seng Financial Information Limited	62.14	96
Hang Seng Futures Limited	62.14	96
Hang Seng Indexes Company Limited	62.14	96
Hang Seng Insurance Company Limited	62.14	96
Hang Seng Investment Management Limited	62.14	96
Hang Seng Investment Services Limited	62.14	96
Hang Seng Life Limited	62.14	96
Hang Seng Real Estate Management Limited	62.14	96
Hang Seng Securities Limited	62.14	96
Hang Seng Security Management Limited	62.14	96
Haseba Investment Company Limited	62.14	96
HBL Nominees Limited	100.00	1, 94
HDSAP GP Limited	100.00	108
HFC Bank Limited	100.00	94
HFC Company LLC	100.00	10, 127
High Meadow Management, Inc.	100.00	101
High Time Investments Limited	62.14	96
HITG Administration GmbH	100.00	34
Honey Green Enterprises Ltd.	100.00	103
Hongkong International Trade Finance (Holdings) Limited	100.00	94
Household Capital Markets LLC	100.00	10, 127
Household Commercial Financial Services, Inc.	100.00	127
Household Finance Consumer Discount Company	100.00	127
Household Finance Corporation II	100.00	127
Household Finance Corporation III	100.00	127
Household Finance Corporation of Alabama	100.00	137
Household Finance Corporation of California	100.00	127
Household Finance Corporation of West Virginia	100.00	143
Household Finance Industrial Loan Company of Iowa	100.00	138
Household Finance Realty Corporation of Nevada	100.00	127
Household Finance Realty Corporation of New York	100.00	127
Household Financial Center Inc.	100.00	141
Household Industrial Finance Company	100.00	126
Household Industrial Loan Company of Kentucky	100.00	140
Household Insurance Group Holding Company	100.00	86
Household International Europe Limited	100.00	16, 94
Household Pooling Corporation	100.00	226
Household Realty Corporation	100.00	127
HPUT A Limited	100.00	1, 94
HPUT B Limited	100.00	1, 94
HRMG Nominees Limited	100.00	108
HSBC (BGF) Investments Limited	100.00	94
HSBC (General Partner) Limited	100.00	2, 163
HSBC (Kuala Lumpur) Nominees Sdn Bhd	100.00	31
HSBC (Malaysia) Trustee Berhad	100.00	40
HSBC (Singapore) Nominees Pte Ltd	100.00	58

Subsidiaries	Group interest %	Footnotes
HSBC Administradora de Inversiones S.A.	100.00	111
HSBC AFS (USA) LLC	100.00	10, 101
HSBC Agency (India) Private Limited	100.00	85
HSBC Alpha Funding (UK) Holdings	100.00	166
HSBC Alternative Investments Limited	100.00	94
HSBC Amanah Malaysia Berhad	100.00	94
HSBC Americas Corporation (Delaware)	100.00	127
HSBC Argentina Holdings S.A.	100.00	150
HSBC Asia Holdings (UK) Limited	100.00	94
HSBC Asia Holdings B.V.	100.00	16, 94
HSBC Asia Pacific Holdings (UK) Limited	100.00	16, 94
HSBC Asset Finance (UK) Limited	100.00	94
HSBC Asset Finance Holdings Limited	100.00	94
HSBC Asset Finance M.O.G. Holdings (UK) Limited	100.00	94
HSBC Asset Management (India) Private Limited	100.00	76
HSBC Assurances Vie (France)	100.00	4, 44
HSBC Australia Holdings Pty Limited	100.00	16, 182
HSBC Bank (Chile)	100.00	171
HSBC Bank (China) Company Limited	100.00	22, 157
HSBC Bank (General Partner) Limited	100.00	163
HSBC Bank (Mauritius) Limited	72.96	91
HSBC Bank (RR) (Limited Liability Company)	100.00	23, 57
HSBC Bank (Singapore) Limited	100.00	58
HSBC Bank (Taiwan) Limited	100.00	38
HSBC Bank (Uruguay) S.A.	100.00	211
HSBC Bank (Vietnam) Ltd.	100.00	227
HSBC Bank A.S.	100.00	146
HSBC Bank Argentina S.A.	99.99	149
HSBC Bank Armenia cjsc	70.00	90
HSBC Bank Australia Limited	100.00	182
HSBC Bank Bermuda Limited	100.00	87
HSBC Bank Canada	100.00	16, 98
HSBC Bank Capital Funding (Sterling 1) LP	100.00	19, 163
HSBC Bank Capital Funding (Sterling 2) LP	100.00	19, 163
HSBC Bank Egypt S.A.E	94.53	69
HSBC Bank International Limited	100.00	162
HSBC Bank Malaysia Berhad	100.00	31
HSBC Bank Malta p.l.c.	70.03	35
HSBC Bank Middle East Limited	100.00	16, 177
HSBC Bank Middle East Limited, Representative Office Morocco SARL	100.00	229
HSBC Bank Nominee (Jersey) Limited	100.00	162
HSBC Bank Oman S.A.O.G.	51.00	105
HSBC Bank Pension Trust (UK) Limited	100.00	94
HSBC Bank plc	100.00	2, 16, 94
HSBC Bank Polska S.A.	100.00	16, 214
HSBC Bank USA, National Association	100.00	16, 52
HSBC Branch Nominee (UK) Limited	100.00	1, 94
HSBC Brasil Holding S.A.	100.00	216
HSBC BRASIL S.A. BANCO DE INVESTIMENTO	100.00	216
HSBC Broking Forex (Asia) Limited	100.00	27
HSBC Broking Futures (Asia) Limited	100.00	14, 27
HSBC Broking Futures (Hong Kong) Limited	100.00	27
HSBC Broking Nominees (Asia) Limited	100.00	27
HSBC Broking Securities (Asia) Limited	100.00	27
HSBC Broking Securities (Hong Kong) Limited	100.00	27
HSBC Broking Services (Asia) Limited	100.00	27
HSBC Canada Holdings (UK) Limited	100.00	94
HSBC Capital (Canada) Inc.	100.00	68
HSBC Capital (USA), Inc.	100.00	127
HSBC Capital Funding (Dollar 1) L.P.	100.00	19, 163
HSBC Capital Limited	100.00	27
HSBC Card Services Inc.	100.00	127
HSBC Casa de Bolsa, S.A. de C.V., Grupo Financiero HSBC	100.00	201
HSBC Cayman Services Limited	100.00	166

Subsidiaries	Group interest %	Footnotes
HSBC City Funding Holdings	100.00	94
HSBC Client Holdings Nominee (UK) Limited	100.00	1, 94
HSBC Client Share Offer Nominee (UK) Limited	100.00	1, 94
HSBC Columbia Funding, LLC	100.00	10, 127
HSBC Consumer Lending (USA) Inc.	100.00	127
HSBC Corporate Advisory (Malaysia) Sdn Bhd	100.00	31
HSBC Corporate Finance (Hong Kong) Limited	100.00	27
HSBC Corporate Trustee Company (UK) Limited	100.00	94
HSBC Credit Center, Inc.	100.00	127
HSBC Custody Nominees (Australia) Limited	100.00	182
HSBC Custody Services (Guernsey) Limited	100.00	108
HSBC Daisy Investments (Mauritius) Limited	100.00	123
HSBC Electronic Data Processing (Guangdong) Limited	100.00	22, 77
HSBC Electronic Data Processing (Malaysia) Sdn Bhd	100.00	222
HSBC Electronic Data Processing (Philippines), Inc.	100.00	169
HSBC Electronic Data Processing India Private Limited	100.00	165
HSBC Electronic Data Processing Lanka (Private) Limited	100.00	79
HSBC Electronic Data Service Delivery (Egypt) S.A.E.	100.00	219
HSBC Enterprise Investment Company (UK) Limited	100.00	94
HSBC Epargne Entreprise (France)	100.00	4, 44
HSBC Equator (UK) Limited	100.00	94
HSBC Equipment Finance (UK) Limited	100.00	94
HSBC Equities (Luxembourg) S.a.r.l.	100.00	1, 45
HSBC Equity (UK) Limited	100.00	94
HSBC Europe B.V.	100.00	94
HSBC European Clients Depositary Receipts Nominee (UK) Limited	100.00	1, 94
HSBC Executor & Trustee Company (UK) Limited	100.00	94
HSBC Factoring (France)	100.00	4, 29
HSBC Finance (Brunei) Berhad	100.00	230
HSBC Finance (Netherlands)	100.00	2, 94
HSBC Finance Corporation	100.00	16, 127
HSBC Finance Limited	100.00	94
HSBC Finance Mortgages Inc.	100.00	224
HSBC Finance Transformation (UK) Limited	100.00	2, 94
HSBC Financial Services (Middle East) Limited	100.00	158
HSBC Financial Services (Lebanon) s.a.l.	99.70	158
HSBC Financial Services (Uruguay) S.A.	100.00	237
HSBC Fondo 1, S.A. de C.V., Sociedad de Inversion de Renta Variable	100.00	1, 201
HSBC Fondo 3, S.A. de C.V., Sociedad de Inversion de Renta Variable	100.00	1, 201
HSBC Fondo 4, S.A. de C.V., Sociedad de Inversion de Renta Variable	100.00	1, 201
HSBC Fondo 5, S.A. de C.V., Sociedad de Inversion de Renta Variable	100.00	1, 201
HSBC Fondo 6, S.A. de C.V., Sociedad de Inversion de Renta Variable	100.00	1, 201
HSBC Fondo Global 1, S.A. de C.V., Sociedad de Inversion de Renta Variable	100.00	1, 201
HSBC France	99.99	24, 29
HSBC Fund Administration (Jersey) Limited	100.00	162
HSBC Fund Services (Korea) Limited	92.96	1, 178
HSBC Funding (UK) Holdings	100.00	94
HSBC Funds Nominee (Jersey) Limited	100.00	162
HSBC Germany Holdings GmbH	100.00	176
HSBC Gestion (Monaco) SA	99.80	48
HSBC Global Asset Management (Bermuda) Limited	100.00	16, 87
HSBC Global Asset Management (Canada) Limited	100.00	64
HSBC Global Asset Management (Deutschland)	100.00	176
HSBC Global Asset Management (France)	100.00	4, 170
HSBC Global Asset Management (Hong Kong) Limited	100.00	27
HSBC Global Asset Management (International) Limited	100.00	168

Subsidiaries	Group interest %	Footnotes
HSBC Global Asset Management (Japan) K. K.	100.00	155
HSBC Global Asset Management (Malta) Limited	70.03	95
HSBC Global Asset Management (México), S.A. de C.V., Sociedad Operadora de Fondos de Inversión, Grupo Financiero HSBC	100.00	201
HSBC Global Asset Management (Oesterreich) GmbH	100.00	6, 152
HSBC Global Asset Management (Singapore) Limited	100.00	58
HSBC Global Asset Management (Switzerland) AG	100.00	4, 109
HSBC Global Asset Management (Taiwan) Limited	100.00	63
HSBC Global Asset Management (UK) Limited	100.00	94
HSBC Global Asset Management (USA) Inc.	100.00	80
HSBC Global Asset Management Holdings (Bahamas) Limited	100.00	187
HSBC Global Asset Management Limited	100.00	94
HSBC Global Custody Nominee (UK) Limited	100.00	1, 94
HSBC Global Custody Proprietary Nominee (UK) Limited	100.00	1, 94
HSBC Global Services (UK) Limited	100.00	94
HSBC Global Services Limited	100.00	2, 94
HSBC Global Shared Services (India) Private Limited	100.00	1, 85
HSBC Group Management Services Limited	100.00	94
HSBC Group Nominees UK Limited	100.00	1, 2, 94
HSBC Guyerzeller Trust Company	100.00	82
HSBC Holdings B.V.	100.00	16, 94
HSBC Home Equity Loan Corporation II	100.00	127
HSBC IM Pension Trust Limited	100.00	1, 94
HSBC Infrastructure Limited	100.00	94
HSBC INKA Investment-AG TGV	100.00	24, 112
HSBC Inmobiliaria (Mexico), S.A. de C.V.	99.96	201
HSBC Institutional Trust Services (Asia) Limited	100.00	27
HSBC Institutional Trust Services (Bermuda) Limited	100.00	87
HSBC Institutional Trust Services (Ireland) DAC	100.00	26
HSBC Institutional Trust Services (Mauritius) Limited	100.00	160
HSBC Institutional Trust Services (Singapore) Limited	100.00	58
HSBC Insurance (Asia) Limited	100.00	53
HSBC Insurance (Asia-Pacific) Holdings Limited	100.00	16, 181
HSBC Insurance (Bermuda) Limited	100.00	87
HSBC Insurance (Singapore) Pte. Limited	100.00	58
HSBC Insurance Agency (USA) Inc.	100.00	80
HSBC Insurance Brokers (Philippines) Inc	100.00	102
HSBC Insurance Brokers (Taiwan) Limited	100.00	46
HSBC Insurance Holdings Limited	100.00	2, 94
HSBC Insurance Management Services Limited	100.00	94
HSBC Insurance Services (Lebanon) S.A.L.	100.00	158
HSBC Insurance Services Holdings Limited	100.00	94
HSBC International Finance Corporation (Delaware)	100.00	66
HSBC International Financial Services (UK) Limited	100.00	15, 94
HSBC International Holdings (Jersey) Limited	100.00	162
HSBC International Nominees Limited	100.00	1, 208
HSBC International Trade Finance Limited	100.00	94
HSBC International Trustee (BVI) Limited	100.00	17, 235
HSBC International Trustee (Holdings) Pte. Limited	100.00	58
HSBC International Trustee Limited	100.00	208
HSBC Inversiones S.A.	100.00	171
HSBC Inversiones y Servicios Financieros Limitada	100.00	171
HSBC InvestDirect (India) Limited	99.54	100
HSBC InvestDirect Financial Services (India) Limited	100.00	100
HSBC InvestDirect Sales & Marketing (India) Limited	99.00	85
HSBC InvestDirect Securities (India) Private Limited	100.00	16, 100
HSBC Investment Asia Holdings Limited	100.00	27
HSBC Investment Bank Holdings B.V.	100.00	94
HSBC Investment Bank Holdings Limited	100.00	2, 94
HSBC Investment Company (Egypt) S.A.E	100.00	1, 65
HSBC Investment Funds (Canada) Inc.	100.00	16, 64
HSBC Investment Funds (Hong Kong) Limited	100.00	27
HSBC Investment Funds (Luxembourg) SA	100.00	45
HSBC Investment Holdings (Guernsey) Limited	100.00	200
HSBC Investment Services (Africa) (Pty) Limited	100.00	56

## Notes on the Financial Statements

Subsidiaries	Group interest %	Footnotes
HSBC Investments (Bahamas) Limited	100.00	188
HSBC Invoice Finance (UK) Limited	100.00	59
HSBC Iris Investments (Mauritius) Ltd	100.00	123
HSBC Issuer Services Common Depositary Nominee (UK) Limited	100.00	1, 94
HSBC Issuer Services Depositary Nominee (UK) Limited	100.00	1, 94
HSBC Land Title Agency (USA) LLC	55.00	10, 70
HSBC Latin America B.V.	100.00	94
HSBC Latin America Holdings (UK) Limited	100.00	2, 94
HSBC Leasing (Asia) Limited	100.00	27
HSBC Leasing (France)	100.00	4, 74
HSBC Life (International) Limited	100.00	87
HSBC Life (UK) Limited	100.00	94
HSBC Life Assurance (Malta) Limited	70.03	95
HSBC Life Insurance Company Limited	50.00	51
HSBC Lodge Funding (UK) Holdings	100.00	94
HSBC London Holdings Limited	100.00	1, 2, 94
HSBC LU Nominees Limited	100.00	94
HSBC Management (Guernsey) Limited	100.00	108
HSBC Markets (Asia) Limited (In Liquidation)	100.00	25
HSBC Markets (USA) Inc.	100.00	127
HSBC Marking Name Nominee (UK) Limited	100.00	1, 94
HSBC Mexico, S.A., Institucion de Banca Multiple, Grupo Financiero HSBC	99.99	201
HSBC Middle East Finance Company Limited	80.00	218
HSBC Middle East Holdings B.V.	100.00	16, 94
HSBC Middle East Leasing Partnership	100.00	19, 183
HSBC Middle East Securities L.L.C	49.00	154
HSBC Mortgage Corporation (Canada)	100.00	16, 98
HSBC Mortgage Corporation (USA)	100.00	127
HSBC Mortgage Services Inc.	100.00	127
HSBC Nominees (Asing) Sdn Bhd	100.00	31
HSBC Nominees (Hong Kong) Limited	100.00	27
HSBC Nominees (New Zealand) Limited	100.00	164
HSBC Nominees (Tempatan) Sdn Bhd	100.00	31
HSBC North America Holdings Inc.	100.00	16, 127
HSBC Odeme Sistemleri Bilgisayar Teknolojileri Basin Yayin Ve Musteri Hizmetleri	99.99	115
HSBC Overseas Holdings (UK) Limited	100.00	2, 94
HSBC Overseas Investments (UK) Limited	100.00	2, 94
HSBC Overseas Investments Corporation (New York)	100.00	128
HSBC Overseas Nominee (UK) Limited	100.00	1, 94
HSBC Participaciones (Argentina) S.A.	100.00	150
HSBC PB Corporate Services 1 Limited	100.00	167
HSBC PB Services (Suisse) SA	100.00	210
HSBC Pension Trust (Ireland) DAC	100.00	26
HSBC Pensiones, S.A.	100.00	202
HSBC PI Holdings (Mauritius) Limited	100.00	160
HSBC Portfoy Yonetimi A.S.	100.00	114
HSBC Preferential LP (UK)	100.00	94
HSBC Private Bank (C.I.) Limited	100.00	200
HSBC Private Bank (Luxembourg) S.A.	100.00	45
HSBC Private Bank (Monaco) SA	100.00	4, 48
HSBC Private Bank (Suisse) SA	100.00	210
HSBC Private Bank (UK) Limited	100.00	94
HSBC Private Bank International	100.00	41
HSBC Private Banking Holdings (Suisse) SA	100.00	210
HSBC Private Banking Nominee 3 (Jersey) Limited	100.00	167
HSBC Private Equity Advisors LLC	100.00	10, 127
HSBC Private Equity Investments (UK) Limited	100.00	94
HSBC Private Trustee (Hong Kong) Limited	100.00	27
HSBC Private Wealth Services (Canada) Inc.	100.00	16, 64
HSBC Professional Services (India) Private Limited	100.00	85
HSBC Property (UK) Limited	100.00	94
HSBC Property Funds (Holding) Limited	100.00	94
HSBC Property Funds Investment Limited	100.00	153

Subsidiaries	Group interest %	Footnotes
HSBC Provident Fund Trustee (Hong Kong) Limited	100.00	27
HSBC Quest Trustee (UK) Limited	100.00	1, 2, 94
HSBC Rail (UK) Limited	100.00	94
HSBC Real Estate Leasing (France)	100.00	4, 44
HSBC Realty Credit Corporation (USA)	100.00	16, 127
HSBC REIM (France)	100.00	4, 44
HSBC Representative Office (Nigeria) Limited	100.00	221
HSBC Republic Management Services (Guernsey) Limited	100.00	200
HSBC Retail Services Inc.	100.00	127
HSBC Retirement Benefits Trustee (UK) Limited	100.00	1, 2, 94
HSBC Saudi Arabia Limited	69.40	1, 156
HSBC Savings Bank (Philippines) Inc.	100.00	231
HSBC Securities (Asia) Limited	100.00	14, 27
HSBC Securities (B) Berhad	100.00	1, 161
HSBC Securities (Canada) Inc.	100.00	93
HSBC Securities (Egypt) S.A.E.	94.53	69
HSBC Securities (Japan) Limited	100.00	94
HSBC Securities (Philippines) Inc.	100.00	1, 12, 92
HSBC Securities (Singapore) Pte Limited	100.00	12, 58
HSBC Securities (South Africa) (Pty) Limited	100.00	56
HSBC Securities (Taiwan) Corporation Limited	100.00	38
HSBC Securities (USA) Inc.	100.00	127
HSBC Securities and Capital Markets (India) Private Limited	100.00	16, 85
HSBC Securities Asia International Nominees Limited	100.00	199
HSBC Securities Asia Nominees Limited	100.00	27
HSBC Securities Brokers (Asia) Limited	100.00	27
HSBC Securities Investments (Asia) Limited	100.00	27
HSBC Securities Services (Bermuda) Limited	100.00	87
HSBC Securities Services (Guernsey) Limited	100.00	108
HSBC Securities Services (Ireland) DAC	100.00	26
HSBC Securities Services (Luxembourg) S.A.	100.00	45
HSBC Securities Services (USA) Inc.	100.00	134
HSBC Securities Services Holding Limited	100.00	208
HSBC Securities Services Holdings (Ireland) DAC	100.00	26
HSBC Seguros de Retiro (Argentina) S.A.	100.00	150
HSBC Seguros de Vida (Argentina) S.A.	100.00	150
HSBC Seguros, S.A de C.V., Grupo Financiero HSBC	100.00	202
HSBC Service Delivery (Polska) Sp. z o.o.	100.00	174
HSBC Services (France)	100.00	4, 29
HSBC Services Japan Limited	100.00	188
HSBC Servicios Financieros, S.A. de C.V	100.00	201
HSBC Servicios, S.A. DE C.V., Grupo Financiero HSBC	100.00	201
HSBC SFH (France)	100.00	4, 44
HSBC Software Development (Canada) Inc	100.00	223
HSBC Software Development (Guangdong) Limited	100.00	22, 215
HSBC Software Development (India) Private Limited	100.00	159
HSBC Software Development (Malaysia) Sdn Bhd	100.00	222
HSBC South Point Investments (Barbados) LLP	100.00	19, 42
HSBC Specialist Investments Limited	100.00	16, 94
HSBC Stockbroker Services (Client Assets) Nominees Limited	100.00	1, 94
HSBC Stockbrokers Nominee (UK) Limited	100.00	1, 94
HSBC Structured Funds (Asia) Limited	100.00	27
HSBC Taxpayer Financial Services Inc.	100.00	127
HSBC Technology & Services (China) Limited	100.00	22, 179
HSBC Technology & Services (USA) Inc.	100.00	127
HSBC TFS I 2005 LLC	100.00	10, 36
HSBC TKM Limited	100.00	1, 94
HSBC Transaction Services GmbH	80.65	6, 238
HSBC Trinkaus & Burkhardt (International) S.A.	80.65	1, 45
HSBC Trinkaus & Burkhardt AG	80.65	24, 176
HSBC Trinkaus & Burkhardt Gesellschaft fur Bankbeteiligungen mbH	80.65	176
HSBC Trinkaus Consult GmbH	80.65	176
HSBC Trinkaus Europa Immobilien-Fonds Nr. 5 GmbH	80.65	176

Subsidiaries	Group interest %	Footnotes
HSBC Trinkaus Family Office GmbH	80.65	6, 176
HSBC Trinkaus Immobilien Beteiligungs KG	80.65	176
HSBC Trinkaus Real Estate GmbH	80.65	6, 176
HSBC Trust Company (BVI) Limited	100.00	151
HSBC Trust Company (Canada)	100.00	98
HSBC Trust Company (Delaware), National Association	100.00	1,67
HSBC Trust Company (UK) Limited	100.00	94
HSBC Trust Company AG	100.00	109
HSBC Trustee (C.I.) Limited	100.00	167
HSBC Trustee (Cayman) Limited	100.00	207
HSBC Trustee (Guernsey) Limited	100.00	200
HSBC Trustee (Hong Kong) Limited	100.00	27
HSBC Trustee (Mauritius) Limited	100.00	122
HSBC Trustee (Singapore) Limited	100.00	58
HSBC UK RFB Limited	100.00	1, 2, 94
HSBC USA Inc.	100.00	16, 119
HSBC Valores S.A.	100.00	110
HSBC Violet Investments (Mauritius) Limited	100.00	123
HSBC Wealth Advisory Israel Ltd	100.00	1, 107
HSBC Wealth Client Nominee Limited	100.00	1, 94
HSBC Yatirim Menkul Degerler A.S.	100.00	114
HSBC-D1, S.A. de C.V., Sociedad de Inversion en Instrumentos de Deuda	100.00	1, 201
HSBCD10, S. A. de C. V., Sociedad de Inversion en Instrumentos de Deuda	100.00	1, 201
HSBC-D2, S.A. de C.V., Sociedad de Inversion en Instrumentos de Deuda	100.00	1, 201
HSBC-D7, S.A. de C.V., Sociedad de Inversion en Instrumentos de Deuda	100.00	1, 201
HSBC-D9, S.A. de C.V., Sociedad de Inversion en Instrumentos de Deuda	100.00	1, 201
HSBC-DE, S.A. de C.V., Sociedad de Inversion en Instrumentos de Deuda	100.00	1, 201
HSBC-DG, S. A. de C. V., Sociedad de Inversion en Instrumentos de Deuda	100.00	1, 201
HSBC-DH, S. A. de C. V., Sociedad de Inversion en Instrumentos de Deuda	100.00	1, 201
HSBC-DL, S. A. de C. V., Sociedad de Inversion en Instrumentos de Deuda	100.00	1, 201
HSBC-E2, S.A. de C. V., Sociedad de Inversion de Renta Variable	100.00	1, 201
HSBC-E3, S.A. de C.V., Sociedad de Inversion en Instrumentos de Deuda	100.00	1, 201
HSBC-FF, S.A. de C.V., Sociedad de Inversion de Renta Variable	100.00	1, 201
HSBC-V2, S.A. de C.V., Sociedad de Inversion de Renta Variable	100.00	1, 201
HSBC-V3, S.A. de C.V., Sociedad de Inversion de Renta Variable	100.00	1, 201
HSI Asset Securitization Corporation	100.00	127
HSI International Limited	62.14	96
HSIL Investments Limited	100.00	94
Hubei Macheng HSBC Rural Bank Company Limited	100.00	22, 197
Hubei Suizhou Cengdu HSBC Rural Bank Company Limited	100.00	22, 194
Hubei Tianmen HSBC Rural Bank Company Limited	100.00	22, 99
Hunan Pingjiang HSBC Rural Bank Company Limited	100.00	22, 213
Imenson Limited	62.14	96
INKA Internationale Kapitalanlagegesellschaft mbH	80.65	238
Inmobiliaria Banci, S.A. de C.V.	99.99	201
Inmobiliaria Bisa, S.A. de C.V.	99.99	201
Inmobiliaria Grufin, S.A. de C.V.	99.99	201
Inmobiliaria Guatusi, S.A. de C.V.	99.99	201
IRERE Property Investments (French Offices) Sarl	100.00	1, 88
James Capel & Co. Limited	100.00	94
James Capel (Channel Islands) Nominees Limited	100.00	168

Subsidiaries	Group interest %	Footnotes
James Capel (Custodian) Nominees Limited	100.00	94
James Capel (Nominees) Limited	100.00	94
James Capel (Second Nominees) Limited	100.00	94
James Capel (Taiwan) Nominees Limited	100.00	94
James Capel (Third Nominees) Limited	100.00	94
John Lewis Financial Services Limited	100.00	94
Katonah Close Corp.	100.00	101
Keyser Ullmann Limited	100.00	94
Kings Meadow Nominees Limited	100.00	175
Legend Estates Limited	100.00	94
Lemasco Nominees Limited	100.00	168
Lion Corporate Services Limited	100.00	1, 27
Lion International Corporate Services Limited	100.00	208
Lion International Management Limited	100.00	208
Lion Management (Hong Kong) Limited	100.00	1, 27
Lyndholme Limited	100.00	27
MAGIM Client HSBC GIS Nominee (UK) Limited	100.00	1, 94
Marks and Spencer Financial Services plc	100.00	175
Marks and Spencer Retail Financial Services Holdings Limited	100.00	175
Marks and Spencer Savings and Investments Limited	100.00	175
Marks and Spencer Unit Trust Management Limited	100.00	175
Maxima S.A. AFJP	100.00	150
Mercantile Company Limited	100.00	14, 94
Mexicana de Fomento, S.A. de C.V.	99.99	201
Midcorp Limited	100.00	2, 16, 94
Midland Australia Pty Limited	100.00	182
Midland Bank (Branch Nominees) Limited	100.00	1, 94
Midland Nominees Limited	100.00	1, 94
MIL (Cayman) Limited	100.00	166
MM Mooring #2 Corp.	100.00	101
MW Gestion SA	100.00	150
Oakwood Holdings, Inc.	100.00	101
Promocion en Bienes Raices, S.A. de C.V.	100.00	16, 201
ProServe Bermuda Limited	50.00	125
Prudential Client HSBC GIS Nominee (UK) Limited	100.00	1, 94
PT Bank HSBC Indonesia	98.94	236
PT HSBC Securities Indonesia	85.00	83
PTC New LLC	100.00	10, 127
R/CLIP Corp.	100.00	127
Real Estate Collateral Management Company	100.00	127
Republic Nominees Limited	100.00	200
Republic Overseas Capital Corporation	100.00	80
S.A.P.C. - Ufipro Recouvrement	99.98	20, 74
Saf Baiyun	100.00	4, 89
Saf Chang Jiang	100.00	4, 89
Saf Chang Jiang Shi Liu	100.00	4, 89
Saf Chang Jiang Shi Wu	100.00	1, 4, 89
Saf Chang Jiang Shi'Er	100.00	4, 89
Saf Chang Jiang Shiyi	100.00	1, 4, 89
Saf Guangzhou	100.00	4, 89
Saf Zhu Jiang	100.00	4, 89
Saf Zhu Jiang Yi	100.00	4, 89
Saf Zhu Jiang Ba	100.00	4, 89
Saf Zhu Jiang Er	100.00	4, 89
Saf Zhu Jiang Jiu	100.00	4, 89
Saf Zhu Jiang Liu	100.00	4, 89
Saf Zhu Jiang Qi	100.00	4, 89
Saf Zhu Jiang San	100.00	4, 89
Saf Zhu Jiang Shi	100.00	4, 89
Saf Zhu Jiang Shi Ba	100.00	4, 89
Saf Zhu Jiang Shi Er	100.00	4, 89
Saf Zhu Jiang Shi Jiu	100.00	4, 89
Saf Zhu Jiang Shi Liu	100.00	4, 89
Saf Zhu Jiang Shi Qi	100.00	4, 89
Saf Zhu Jiang Shi Wu	100.00	4, 89
Saf Zhu Jiang Shiyi	100.00	4, 89

## Notes on the Financial Statements

<b>Subsidiaries</b>	<b>Group interest %</b>	<b>Footnotes</b>
Saf Zhu Jiang Wu	100.00	4, 89
Samada Limited	100.00	167
Samuel Montagu & Co. Limited	100.00	1, 94
SAS Bosquet -Audrain	94.90	1, 4, 43
SAS Cyatheas Pasteur	94.93	1, 4, 74
SAS Orona	94.93	1, 4, 28
SCI Hervet Mathurins	100.00	20, 89
SCI HSBC Assurances Immo	100.00	1, 20, 44
Secondary Club Deal I GP Limited	100.00	108
Secondary Club Deal II GP Limited	100.00	108
SFSS Nominees (Pty) Limited	100.00	56
Shandong Rongcheng HSBC Rural Bank Company Limited	100.00	22, 198
Shenfield Nominees Limited	100.00	1, 94
Sico Limited	100.00	235
SNC Dorique	100.00	1, 20, 78
SNC Kerouan	100.00	1, 20, 89
SNC Les Mercuriales	100.00	1, 20, 89
SNC Les Oliviers D'Antibes	60.00	20, 89
SNC Makala	100.00	1, 20, 89
SNC Nuku-Hiva Bail	100.00	1, 20, 89
SNCB/M6 - 2008 A	100.00	1, 4, 89
SNCB/M6-2007 A	100.00	1, 4, 89
SNCB/M6-2007 B	100.00	1, 4, 89
Societe CCF Finance Moyen-Orient S.A.L. (in liquidation)	99.90	1, 220
Société Financière et Mobilière	100.00	4, 29
Société Française et Suisse	100.00	4, 89
Societe Immobiliere Atlas S.A.	100.00	210
Somers & Co	100.00	19, 121
Somers Dublin DAC	100.00	26
Somers Nominees (Far East) Limited	100.00	87
Sopinest	100.00	4, 89
South Yorkshire Light Rail Limited	100.00	1, 94
SPE 1 2005 Manager Inc.	100.00	36
St Cross Trustees Limited	100.00	1, 94
Sterling Credit Limited	100.00	131
Sun Hung Kai Development (Lujiazui III) Limited	100.00	22, 212
Swan National Leasing (Commercials) Limited	100.00	94
Swan National Limited	100.00	94
Tasfiye Halinde HSBC Internet ve Telekomunikasyon Hizmetleri Anonim Sirketi	96.00	12, 116
Tayside Holdings Limited (In liquidation)	100.00	1, 12, 187

<b>Subsidiaries</b>	<b>Group interest %</b>	<b>Footnotes</b>
Tempus Management AG	100.00	109
Thasosfin	100.00	4, 44
The Hongkong and Shanghai Banking Corporation Limited	100.00	13, 27
The Venture Catalysts Limited	100.00	94
Timberlink Settlement Services (USA) Inc.	100.00	127
TKM International Limited	100.00	94
Tooley Street View Limited	100.00	1, 94
Tower Investment Management	100.00	32
Trinkaus Australien Immobilien Fonds Nr. 1 Brisbane GmbH & Co. KG	80.65	176
Trinkaus Australien Immobilien-Fonds Nr. 1 Treuhand-GmbH	80.65	6, 176
Trinkaus Canada Immobilien-Fonds Nr. 1 Verwaltungs-GmbH	80.65	176
Trinkaus Europa Immobilien-Fonds Nr.3 Objekt Utrecht Verwaltungs-GmbH	80.65	176
Trinkaus Immobilien-Fonds Geschaeftsuehrungs-GmbH	80.65	6, 176
Trinkaus Immobilien-Fonds Verwaltungs-GmbH	80.65	6, 176
Trinkaus Private Equity Management GmbH	80.65	176
Trinkaus Private Equity Verwaltungs GmbH	80.65	6, 176
Tropical Nominees Limited	100.00	166
Trumball Management, Inc.	100.00	101
Turnsonic (Nominees) Limited	100.00	1, 94
Vadep Holding AG	100.00	203
Valeurs Mobilières Elysées	100.00	4, 30
Vintage 2016 HV GP Limited	100.00	108
Vintage 2016 KKR GP Limited	100.00	108
Vintage 2017 Athyrium GP Limited	100.00	1, 108
Vintage I Secondary GP Limited	100.00	108
Vintage III Special Situations GP Limited	100.00	108
Wardley Limited	100.00	27
Wayfoong Credit Limited	100.00	27
Wayfoong Finance Limited	100.00	27
Wayfoong Nominees Limited	100.00	27
Wayhong (Bahamas) Limited	100.00	187
Westminster House, LLC	100.00	10, 127
Woodex Limited	100.00	87
Yan Nin Development Company Limited	62.14	96

## Joint Ventures

The undertakings below are Joint Ventures and equity accounted.

	Group interest %	<i>Footnotes</i>
Joint Ventures		
GSI Retail Property Holdings Limited	50.00	1, 217
HCM Holdings Limited	51.00	153
HOUSE Network Sdn Bhd	25.00	1, 225
HSBC Jintrust Fund Management Company Limited	49.00	1, 22, 50
HSBC Kingdom Africa Investments (Cayman) Limited	50.00	1, 186
Vaultex UK Limited	50.00	60
Vaultex Isle of Man Insurance Limited	50.00	55

## Associates

The undertakings below are associates and equity accounted.

Associates	Group interest %	<i>Footnotes</i>
AREIT Management Ltd	41.90	1, 206
Ashwood Energy Limited	25.00	1, 129
Bank of Communications Co., Ltd.	19.03	193
Barrowgate Limited	15.31	81
Business Growth Fund plc	24.31	37
Canara HSBC Oriental Bank of Commerce Life Insurance Company Limited	26.00	232
CFAC Payment Scheme Limited	33.33	1, 21, 47
Chemi & Cotex (Rwanda) Limited	33.33	173
Chemi & Cotex Kenya Limited	34.00	185
Chemi and Cotex Industries Limited	34.00	1, 204
Electronic Payment Services Company (Hong Kong) Limited	19.33	1, 27
EPS Company (Hong Kong) Limited	38.66	1, 27
GIE GNIFI	25.00	1, 7, 73
GZHS Research Co Ltd	20.51	1, 10, 33
Hang Seng Qianhai Fund Management Company Limited	43.50	22, 62
HSBC Amanah Takaful (Malaysia) Berhad	49.00	31
HSBC Middle East Securities L.L.C	49.00	154
HSBC Mortgage LLP	33.30	1, 19, 72
HSBC TFS II 2005 LLC	20.00	10, 36
Icon Brickell LLC	24.90	1, 10, 117
Intercede Holdco Limited	29.92	1, 106
Jeppe Star Limited	34.00	1, 129
MENA Infrastructure Fund (GP) Ltd	33.33	1, 180
NAS Holding Limited	22.13	1, 129
NAS United Healthcare Services LLC	22.13	1, 10, 39
Northstar Trade Finance Inc.	17.89	97
Novo Star Limited	34.00	1, 172
SABB Takaful	45.50	209
SCI Karuvefa	33.33	1, 20, 184
sino AG	20.16	5, 145
The Headland Asian Ventures Fund 3 Limited	32.59	1, 16, 166
The London Gold Market Fixing Limited	25.00	1, 8, 120
The Saudi British Bank	40.00	104
Trinkaus Europa Immobilien-Fonds Nr. 7 Frankfurt Mertonviertel KG	33.22	1, 9, 176

# Notes on the Financial Statements

## Footnotes for Note 38

1 Management has determined that these undertakings are excluded from consolidation in the Group accounts as these entities do not meet the definition of subsidiaries in accordance with IFRSs. HSBC's consolidation policy is described in Note 1.2(a).

2 Directly held by HSBC Holdings plc

3 Entity is incorporated in The Netherlands

## Description of shares

4 Actions shares

5 Aktiengesellschaft (AG) shares

6 GmbH Anteil

7 Groupeurment D'intérêt Economique shares

8 Guarantee shares

9 Kommanditgesellschaft (KG) shares

10 Limited Liability Company – no shares

11 Liquidating shares

12 Nominal shares

13 Ordinary and Cumulative Irredeemable and Non-cumulative Irredeemable Preference shares

14 Ordinary and Deferred shares

15 Ordinary and Non-Voting Redeemable shares

16 Ordinary and Preference shares

17 Ordinary Non-Participating, Non Voting shares

18 Ordinary Redeemable Non Participating shares

19 Partnership shares

20 Parts shares

21 Preference shares

22 Registered Capital shares

23 Russian limited liability company shares

24 Stückaktien

## Registered Offices

25 (Liquidator's address) 62/F One Island East 18 Westlands Road, Island East Hong Kong

26 1 Grand Canal Square, Grand Canal Harbour, Dublin 2, D02 P820, Ireland

27 1 Queen's Road Central, Hong Kong

28 10, Rue Jean Jaurès BP Q5 Noumea 98845 Nouvelle Calédonie

29 103, Avenue des Champs-Elysées, 75008, Paris, France

30 109, Avenue des Champs-Elysées, 75008, Paris, France

31 10th Floor, North Tower 2, Lebuh Ampang 50100, Kuala Lumpur, Malaysia

32 11 Dr. Roy's Drive PO Box 6934GT Grand Cayman KY1-1107 Cayman Islands

33 1101-J46, 11/F, Nansha Financial Building 171 Haibin Road, Nansha District Guangzhou China

34 11-17, Ludwig-Erhard-Str., 20459, Hamburg, Germany

35 116 Archbishop Street Valletta Malta

36 1209 Orange Street, Wilmington, Delaware 19899, United States

37 13-15 York Buildings, London, Great Britain, WC2N 6JU, United Kingdom

38 13F-14F, 333 Keeling Road, Sec. 1 Taipei 110 Taiwan, Province of China

39 13th Floor, Lulu Center Building, Salam Street, PO Box 44505, Abu Dhabi, United Arab Emirates

40 13th Floor, South Tower 2, Lebuh Ampang, 50100 Kuala Lumpur, Malaysia

41 1441 Brickell Avenue, Miami FL 33131, United States

42 15 Canada Square, London E14 5GL, United Kingdom

43 15 Rue Guyneret BP 412 Noumea 98845 Nouvelle Calédonie

44 15, Rue Vernet, 75008, Paris France

45 16 Boulevard d'Avranches, L-1160, Luxembourg

46 16F, 369 Zhongxiao East Road, Section 7 Nangang District, Taipei 115, Taiwan

47 17 Rochester Row, London SW1P 1QT, United Kingdom

48 17, Avenue d'Ostende, 98000, Monaco

49 171, Old Bakery Street, Valletta VLT 1455, Malta

50 17F, HSBC Building, Shanghai IFC, 8 Century Avenue, Pudong, Shanghai, China

51 18/F, HSBC Building, 8 Century Avenue, China (Shanghai) Pilot Free Trade Zone, 200120, China

52 1800 Tysons Boulevard, Suite 50, McLean, Virginia 22102, United States

53 18th Floor, Tower 1, HSBC Centre, 1 Sham Mong Road, Kowloon, Hong Kong

54 192 Old Bakery Street, Valletta, Malta

55 1st Floor Rose House, 51-59 Circular Road, Douglas IM1 1RE, Isle of Man

56 2 Exchange Square, 85 Maude Street, Sandown, Sandton 2196, South Africa

57 2 Paveletskaya square, building 2, 115054 Moscow, Russia

58 21 Collyer Quay, #13-02, HSBC Building, 49320, Singapore

59 21 Farcombe Road, Worthing, Sussex BN11 2BW, England

60 21, Garlick Hill, London, EC4V 2AU, United Kingdom

61 2156 Horse Prairie Drive, Henderson, NV 89052, United States

2-3/F, Unit 21A, Qianhai Enterprise Dream Park, No. 63 Qian Wan Yi Road, Qianhai Shenzhen-Hongkong Cooperation Zone, Shenzhen China

63 24th Fl., 99, Sec.2, Tunhwa S. Rd., Taipei, Taiwan, R.O.C.

64 2910 Virtual Way, Vancouver BC, V5M 0B2, Canada

65 3, Aboul Feda Street, Zamalek, Cairo Egypt

66 300 Delaware Avenue, Suite 1400, Wilmington, DE 19801, United States

67 300 Delaware Avenue, Suite 1401, Wilmington, DE 19801, United States

68 300, 885 West Georgia Street Vancouver BC V6C 3E9 Canada

69 306 Corniche El Nil Maadi, Cairo 11728, Egypt

70 3303 Express Drive North Islandia NY 11749 United States

71 34/F and 36/F, Hang Seng Bank Tower, 1000 Lujiazui Ring Road 27/F, Shanghai Stock Exchange Bldg, 528 Pudong South Road Shanghai 200120 China

72 35 Great St Helens, London EC3A 6AP, United Kingdom

73 37 Avenue Henri Lafleur Nouméa, BP K3 98849, New Caledonia

74 39, Rue de Bassano, 75008, Paris, France

75 3rd Floor, HSBC Bank Middle East Limited Building Al Souq Road, Bur Dubai PO Box 4604, Dubai United Arab Emirates

76 3rd Floor, Merchantile Bank Chamber 16, Veer Nariman Road Fort Mumbai Maharashtra 400001 India

77 4-17/F, Office Tower 2 TaiKoo Hui, No. 381 Tian He Road, Tian He District Guangzhou Guangdong China

78 43, Rue de Paris, Saint Denis 97400, Reunion

79 439, Sri Jayawardenapura Mawatha Welikada, Rajagiriya, Colombo, Sri Lanka

80 452 Fifth Avenue, New York, NY10018, United States

81 49/F, The Lee Gardens, 33 Hysan Avenue Hong Kong

82 4th Floor, Harbour Place 103 South Church Street George Town Grand Cayman KY1-1002 Cayman Islands

83 4th Floor, World Trade Center, J1, Jend. Sudirman Kav. 29-31 Jakarta 12920 Indonesia

84 5 Donegal Square South Belfast BT1 5JP Northern Ireland

85 52/60, M G Road Fort, Mumbai, Maharashtra 400 001 India

86 545 Washington Blvd., 11th Floor Jersey City NJ 07310 United States

87 6 Front Street, Hamilton HM 11, Bermuda

88 6, Rue Adolphe Grand-Duchy of Luxembourg L-1116 Luxembourg

89 64, Rue Galilée, 75008, Paris, France

90 66 Teryan street Yerevan 9 Armenia

91 6th Floor, HSBC Centre, 18, Cybercity, Ebene Mauritius

92 7/F The Enterprise Centre - Tower I, 6766 Ayala Avenue corner Paseo De Roxas, Makati City, Philippines

93 70 York Street, 7th Floor, Toronto ON, M5J 1S9 Canada

94 8 Canada Square, London E14 5HQ, United Kingdom

95 80, Mill Street, Qormi, QRM 3101, Malta

96 83 Des Voeux Road, Central, Hong Kong SAR

97 833 Three Bentall Centre, 595 Burrard Street, Vancouver BC V7X 1C4, Canada

98 885 West Georgia Street, Suite 300, Vancouver BC, V6C 3E9, Canada

99 89 Jingling Hongjian Avenue Tianmen Hubei Province 431700 China

100 9-11 Floors, NESCO IT Park Building No. 3, Western Express Highway, Goregaon (East), Mumbai, Maharashtra 400063, India

101 95 Washington Street, Buffalo NY, 14203, United States

102 9th Floor, HSBC Centre 3058 Fifth Avenue West, Bonifacio Global City Taguig City Philippines

103 Akara Bldg. 24 De Castro Street Wickhams Cay I, Road Town Tortola Virgin Islands, British

104 Al Amir Abdulaziz Ibn Mossaib Jalawi Street Riyadh Saudi Arabia

105 Al Khuwair Office PO Box 1727 PC111 CPO Seeb Muscat Oman

Alderflat Drive, Newstead Industrial Estate, Trentham Stoke on Trent, ST4 8HX, United Kingdom

106 Amot Atrium Tower, 30th Floor, 2 Jabolinsky St., Ramat Gan 5250501, Israel

108 Arnold House, St Julians Avenue, St Peter Port, GY1 3NF, Guernsey

109 Bederstrasse 49, CH-8002, Zurich, Switzerland

110 Bouchard 680, 11° Ciudad de Buenos Aires 1106 Argentina

111 Bouchard 680, 9° Ciudad de Buenos Aires 1106 Argentina

112 Breite Str. 29/31 40213 Düsseldorf Germany

113 Bufete Tapia, PO Box 7412 Panama 5 Panama

114 Büyükdere Cad. No:128 D Blok Esentepe, Sisli İstanbul, Turkey

115 Büyükdere Cad. No:124 B Blok Kat 9 Oda:1, Esentepe, Sisli, I Turkey

116 Buyukdere Cad. No:124 B Blok Kat 9 Oda:2 34394 , Sisli / Ese Turkey

117 C T Corporation System 1200 South Pine Island Road Plantation FL 33324 United States

C/O Bank of Bermuda (Cayman) Limited, PO Box 513, HSBC House, 68 West Bay Road,

118 C/O Corporation Trust Incorporated, 351 West Camden Street, Baltimore MD 21201, United States

120 C/O Hackwood Secretaries Limited, One Silk Street, London EC2Y 8HQ, United Kingdom

121 C/O HSBC AFS (USA) LLC, 452 Fifth Avenue, New York, NY 10018, United States

122 C/O HSBC Bank (Mauritius) Limited 6th Floor, HSBC Centre, 18 Cyber City, Ebene, Mauritius

C/O Kross Border Trust Services Limited, St. Louis Business Centre, Cnr Desroches & St Louis Streets, Port Louis, Mauritius

123 2156 Horse Prairie Drive, Henderson, NV 89052, United States

124	C/O Morrison & Foerster (UK) LLP, City Point, 1 Ropemake Street, London EC2Y 9AW, United Kingdom	182	Level 36, Tower 1, International Towers Sydney, 100 Barangaroo Avenue, Sydney, NSW 2000, Australia
125	C/O MUFG Fund Services (Bermuda) Limited The Belvedere Building 69 Pitts Bay Road Pembroke HM08 Bermuda	183	Level 4, Building 4, The Gate Dubai International Financial Centre PO Box 506553 Dubai United Arab Emirates
126	C/O The Corporation Trust Company 100 S. 5th Street-Suite 1075 Minneapolis MN 55401 United States	184	Lot n°5, la Rocade , Grand Camp LES ABYMES 97142 Guadeloupe
127	C/O The Corporation Trust Company, 1209 Orange Street, Wilmington DE 19801, United States	185	LR No. 1758/13 Greville Grove Road Kalamu House PO Box 47323-00100 Nairobi Kenya
128	C/O The Corporation Trust Incorporated 351 West Camden Street Baltimore MD 21201 United States	186	Maples Corporate Services Limited, PO Box 309, Ugland House, South Church Street, George Town, Grand Cayman, KY1-1104, Cayman Islands
129	C/O Trident Trust Company, Trident Chambers, PO Box 146, Tortola, British Virgin Islands	187	Mareva House, 4 George Street, Nassau, Bahamas
130	C/O Walkers SPV Limited, Walker House 87 Mary Street, PO Box 908GT George Town Grand Cayman Cayman Islands	188	MB&H Corporate Services Ltd, Mareva House, 4 George Street, Nassau, New Providence, Bahamas
131	Camden House West, The Parade, Birmingham, B1 3PY, United Kingdom	189	MMG Tower, 23 Floor Ave. Paseo del Mar Urbanizacion Costa del Este Panama
132	City Gate House 22 Southwark Bridge Road London SE1 9HB	190	No 1, Bei Huan East Road Dazu County Chongqing China
133	Corporation Service Company 2711 Centerville Road Suite 400 Wilmington DE 19808 United States	191	No 107, Ping Du Avenue (E), Sanhe Town, Fengdu County Chongqing China
134	Corporation Service Company 830 Bear Tavern Road West Trenton NJ 08628 United States	192	No. 1 1211 Yanjiang Zhong Road Yongan Fujian China
135	CT Corporation System 1515 Market Street Registered Office Philadelphia PA 19102 United States	193	No. 188 Yincheng Zhong Lu, Pudong New District Shanghai 200120 China
136	CT Corporation System 1720 Carey Avenue Cheyenne WY 82001 United States	194	No. 205, Lie Shan Road Suizhou Hubei China
137	CT Corporation System 2 North Jackson Street Suite 605 Montgomery AL 36104 United States	195	No. 3, 5, 7, Haitang Erzhi Road Changyuan, Rongchang Chongqing 402460 China
138	CT Corporation System 2222 Grand Avenue Des Moines IA 50312 United States	196	No. 44, Xin Ping Road Central, Encheng, Enping Guangdong 529400 China
139	CT Corporation System 225 Hillsborough Street Raleigh NC 27603 United States	197	No. 56, Yu Rong Street Macheng Hubei Province 438300 China
140	CT Corporation System Kentucky Home Life Building Louisville KY 40202 United States	198	No.198-2, Chengshan Avenue (E) Rongcheng Shandong 264300 China
141	CT Corporation System, 530 Gay Street, Knoxville, TN 37902, United States	199	Palm Grove House PO Box 438 Road Town Tortola British Virgin Islands
142	CT Corporation System, 800 S. Figueroa, Los Angeles, California 90017, United States	200	Park Place, Park Street, St Peter Port, GY1 1EE, Guernsey
143	CT Corporation System, Secretary of State, 707 Virginia Street, East Charleston, WV 25301, United States	201	Paseo de la Reforma 347, Col. Cuauhtemoc, 6500, Mexico
144	Drake House, Three Rivers Court, Homestead Road, Rickmansworth, Hertfordshire, WD3 1FX, United Kingdom	202	Paseo de la Reforma 359, 6th Floor, D.F. 6500, Mexico
145	Ernst-Schneider-Platz 1 40212 Duesseldorf Germany	203	Philippe Kaiser Baerstrasse 8 6300 Zug Switzerland
146	Esenetepe Mah. Büyükköy Caddesi No.128 İstanbul 34394 Turkey	204	Plot No. 89-90 Mbezi Industrial Area Box 347 Dar es Salaam City United Republic of Tanzania
147	First & Second Floor, No.3 Nanshan Road, Pulandian Dalian Liaoning Province China	205	PO Box 1109, HSBC House 68 West Bay Road Grand Cayman KY1-1102 Cayman Islands
148	First Floor, Xinhua Bookstore Xindong Road (SE of roundabout) Miyun District Beijing China	206	PO Box 309 Ugland House, South Church Street George Town Grand Cayman KY1 - 1104 Cayman Islands
149	Florida 201 10°, Ciudad de Buenos Aires C1005AAE Argentina	207	PO Box 484, Ground Floor, HSBC House 68 West Bay Road Grand Cayman, KY1-1106 Cayman Islands
150	Florida 229, 10° Ciudad de Buenos Aires, C1005AAE, Argentina	208	PO Box 71, Craigmuir Chambers, Road Town, Tortola, British Virgin Islands
151	Harneys Corporate Services Limited, Craigmuir Chambers, PO Box 71, Road Town, Tortola, British Virgin Islands	209	PO Box 9086 Riyadh 11413 Saudi Arabia
152	Herrengasse 1-3 1010 Wien Austria	210	Quai des Bergues 9-17, 1201, Geneva, Switzerland
153	Hill House, 1 Little New Street, London EC4A 3TR, United Kingdom	211	Rincon 391 Montevideo 11000 Uruguay
154	HSBC Bank Middle East Building - level 5, building 5, Emarar Dubai 502601 United Arab Emirates	212	RM 2112, HSBC Building, Shanghai IFC No. 8 Century Road, Pudong Shanghai 200120 China
155	HSBC Building 11-1, Nihonbashi 3-Chome Chuo-ku Tokyo 103-0027 Japan	213	RM101, 102 & 106 Sunshine Fairview, Sunshine Garden Pedestrian Walkway Pingjiang Hunan China
156	HSBC Building 7267 Olaya - Al Murrooj Riyadh 12283 - 2255 Saudi Arabia	214	Rondo ONZ 1 00-124 Warsaw Poland
157	HSBC Building Shanghai IFC 8 Century Avenue, Pudong Shanghai 200120 China	215	Room 305 No.886 Tianhe Bei Road, Tianhe District, Guangzhou Guangdong China
158	HSBC Building, Minet El Hosn, Riad el Solh Beirut 1107-2080, PO Box 11-1380, Lebanon	216	Rua Funchal, nº 160, SP Corporate Towers, Torre Norte, 19º Andar, cj 191A - Parte, São Paulo 04551-060, Brazil
159	HSBC Centre River Side, West Avenue, 25B Raheja woods Kalyan Nagar Pune Maharashtra 411006 India	217	Second Floor, St Peters House, Le Bordage, St Peter Port, GY1 1B, Guernsey
160	HSBC Centre, Eighteen Cybercity Ebene, Mauritius	218	Shop 4 & 5 Ground Floor & Mezzanine, Bldg. of Hilal Salim Bin Tarraf Al Wasel Area, Sheikh Zayed Road PO Box 1956 Dubai United Arab Emirates
161	HSBC Chambers, Corner of Jalan Sultan and Jalan Pemancha Bandar Seri Begawan BS8811 Brunei Darussalam	219	Smart Village 28th Km Cairo- Alexandria Desert Road Building Cairo Egypt
162	HSBC House Esplanade, St. Helier, JE1 1HS, Jersey	220	Solidere - Rue Saad Zaghloul Immeuble - 170 Marfaa, PO Box 17, 5476 Mar Michael, 11042040 Beyrouth, Lebanon
163	HSBC House Esplanade, St. Helier, JE4 8UB, Jersey	221	St Nicholas House, 10th Floor Catholic Mission St Lagos Nigeria
164	HSBC House, Level 9, One Queen Street, Auckland 1010, New Zealand	222	Suite 1005, 10th Floor, Wisma Hamzah Kwong Hing No. 1, Lebuh Ampang 50100, Kuala Lumpur, Malaysia
165	HSBC House Plot No.8, Survey No.64 (Part) Hightec City Layout Madhapur Hyderabad Andhra Pradesh 500081 India	223	Suite 2400, 745 Thurlow Street, Vancouver BC V6E 0C5 Canada
166	HSBC House, 68 West Bay Road, PO Box 1109, George Town, Grand Cayman KY1-1102, Cayman Islands	224	Suite 300, 3381 Steeles Avenue East Toronto ON M2H 3S7 Canada
167	HSBC House, Esplanade, St. Helier, JE1 1GT, Jersey	225	Suite 8-3A, Menara RA, No. 18, Jalan Dataran SD2, Dataran SD, PJU 9, Bandar Sri Damansara 52200 Wilayah Persekutuan Malaysia
168	HSBC House, Esplanade, St. Helier, JE4 8WP, Jersey	226	The Corporation Trust Company of Nevada 311 S. Division Street Carson City NV 89703 United States
169	HSBC, Filinvest One Bldg, Northgate Cyberzone, Filinvest Corporate City Alabang, Muntinlupa City Philippines	227	The Metropolitan 235 Dong Khoi Street District 1, Ho Chi Minh City Viet Nam
170	Immeuble Coeur Défense 110, Esplanade du Général de Gaulle- La Défense 4 92400 Courbevoie France	228	The R&H Trust Co. Ltd. Windward 1, Regatta Office Park PO Box 897 Grand Cayman KY1-1103 Cayman Islands
171	Isidora Goynecchea 2800, 23rd Floor, Las Condes, Santiago 7550647, Chile	229	Tour Crystal 1 10EME Etage BD Al Mohades 20000 Casablanca, ANFA Morocco
172	Jayla Place Wickhams Cay I PO Box 3190 Road Town Tortola British Virgin Islands	230	Unit 04A-04B, 1F, Bangunan Gadong Properties Jalan Gadong Bandar Seri Begawan BE4119 Brunei Darussalam
173	Kacyiru BP 3094 Kigali Rwanda	231	Unit 1 GF The Commercial Complex Madrigal Avenue Ayala Alabang Village Muntinlupa City 1770 Philippines
174	Kapelanka 42A 30-347 Krakow Poland	232	Unit No. 208, 2nd Floor, Kanchenjunga Building, 18 Barakhamba Road, New Delhi - 110001, India
175	Kings Meadow, Chester Business Park, Chester, Cheshire CH9 9FB, United Kingdom	233	Unsoeldstrasse 2, 80538, Munich, Germany
176	Königsallee 21/23, 40212, Düsseldorf Germany	234	Walkers Corporate Services Limited, Walker House, 87 Mary Street, George Town, Grand Cayman KY1-9005, Cayman Islands
177	Level 1, Building No. 8, Gate Village Dubai International Financial Centre PO Box 502601 United Arab Emirates	235	Woodbourne Hall, Road Town, PO Box 916, Tortola, British Virgin Islands
178	Level 12, HSBC Building 37, Chilpa-ro Jung-gu Seoul Korea, Republic of	236	World Trade Center 1, Floor 8-9 Jalan Jenderal Sudirman Kavling 29 - 31 Jakarta 12920 Indonesia
179	Level 19, HSBC Building, Shanghai IFC 8 Century Avenue Pudong Shanghai China	237	World Trade Center Montevideo Avenida Luis Alberto de Herrera 1248 Torre 1, Piso 15, Oficina 1502 Montevideo CP 11300 Uruguay
180	Level 3 Building 4, Gate District Dubai International Financial Centre Dubai MENA United Arab Emirates	238	Yorckstraße 21 - 23, 40476, Düsseldorf, Germany
181	Level 32, HSBC Main Building 1 Queen's Road Central Hong Kong SAR Hong Kong		

**Shareholder information**

	<b>Page</b>
Fourth interim dividend for 2016	<b>274</b>
Interim dividends for 2017	<b>274</b>
2016 Annual General Meeting	<b>274</b>
Earnings Releases and Interim Results	<b>274</b>
Shareholder enquiries and communications	<b>275</b>
Stock symbols	<b>276</b>
Investor relations	<b>276</b>
Where more information about HSBC is available	<b>276</b>
Taxation of shares and dividends	<b>277</b>
Cautionary statement regarding forward-looking statements	<b>279</b>
Certain defined terms	<b>279</b>
Abbreviations	<b>280</b>

*A glossary of terms used in this Annual Report and Accounts can be found in the Investor Relations section of [www.hsbc.com](http://www.hsbc.com)*

**Fourth interim dividend for 2016**

The Directors have declared a fourth interim dividend for 2016 of \$0.21 per ordinary share. Information on the scrip dividend scheme and currencies in which shareholders may elect to have the cash dividend paid will be sent to shareholders on or about 8 March 2017. The timetable for the dividend is:

	<i>Footnote</i>	
Announcement		<b>21 February 2017</b>
American Depository Shares ('ADSs') quoted ex-dividend in New York		<b>22 February 2017</b>
Shares quoted ex-dividend in London, Hong Kong, Paris and Bermuda		<b>23 February 2017</b>
Record date – London, Hong Kong, New York, Paris, Bermuda	1	<b>24 February 2017</b>
Mailing of <i>Annual Report and Accounts 2016</i> and/or <i>Strategic Report 2016</i> and dividend documentation		<b>8 March 2017</b>
Final date for receipt by registrars of forms of election, Investor Centre electronic instructions and revocations of standing instructions for scrip dividends		<b>23 March 2017</b>
Exchange rate determined for payment of dividends in sterling and Hong Kong dollars		<b>27 March 2017</b>
Payment date: dividend warrants, new share certificates or transaction advices and notional tax vouchers mailed and shares credited to stock accounts in CREST		<b>6 April 2017</b>

1 Removals to and from the Overseas Branch register of shareholders in Hong Kong will not be permitted on this date.

**Interim dividends for 2017**

The Board has adopted a policy of paying quarterly interim dividends on ordinary shares. Under this policy it is intended to have a pattern of three equal interim dividends with a variable fourth interim dividend. It is envisaged that the first interim dividend in respect of 2017 will be \$0.10 per ordinary share.

Dividends are declared in US dollars and, at the election of the shareholder, paid in cash in one of, or in a combination of, US dollars, sterling and Hong Kong dollars, or, subject to the Board's determination that a scrip dividend is to be offered in respect of that dividend, may be satisfied in whole or in part by the issue of new shares in lieu of a cash dividend.

**2016 Annual General Meeting**

All resolutions considered at the 2016 Annual General Meeting held at 11.00am on 22 April 2016 at the Queen Elizabeth II Conference Centre, London SW1P 3EE were passed on a poll.

**Earnings Releases and Interim Results**

Earnings Releases are expected to be issued on or around 4 May 2017 and 30 October 2017. The Interim Results for the six months to 30 June 2017 are expected to be issued on 31 July 2017.

## Shareholder enquiries and communications

### Enquiries

Any enquiries relating to shareholdings on the share register (for example, transfers of shares, changes of name or address, lost share certificates or dividend cheques) should be sent to the Registrars at the address given below. The Registrars offer an online facility, Investor Centre, which enables shareholders to manage their shareholding electronically.

#### Principal Register:

Computershare Investor Services PLC  
The Pavilions  
Bridgwater Road  
Bristol BS99 6ZZ  
United Kingdom  
Telephone: +44 (0) 370 702 0137  
Email via website:  
[www.investorcentre.co.uk/contactus](http://www.investorcentre.co.uk/contactus)

#### Hong Kong Overseas Branch Register:

Computershare Hong Kong Investor  
Services Limited  
Rooms 1712-1716, 17th Floor  
Hopewell Centre  
183 Queen's Road East  
Hong Kong SAR  
Telephone: +852 2862 8555  
Email: [hsbc.ecom@computershare.com.hk](mailto:hsbc.ecom@computershare.com.hk)

#### Bermuda Overseas Branch Register:

Investors Relations Team  
HSBC Bank Bermuda Limited  
6 Front Street  
Hamilton HM 11  
Bermuda  
Telephone: +1 441 299 6737  
Email: [hbbm.shareholder.services@hsbc.bm](mailto:hbbm.shareholder.services@hsbc.bm)

#### Investor Centre:

[www.investorcentre.co.uk](http://www.investorcentre.co.uk)

#### Investor Centre:

[www.investorcentre.com/hk](http://www.investorcentre.com/hk)

#### Investor Centre:

[www.investorcentre.com/bm](http://www.investorcentre.com/bm)

Any enquiries relating to ADSs should be sent to the depositary:

The Bank of New York Mellon  
Depository Receipts  
PO Box 30170  
College Station, TX 77842-3170  
USA  
Telephone (US): +1 877 283 5786  
Telephone (International): +1 201 680 6825  
Email: [shrelations@bnymellon.com](mailto:shrelations@bnymellon.com)  
Website: [www.computershare.com/us/contact/Pages/default.aspx](http://www.computershare.com/us/contact/Pages/default.aspx)

Any enquiries relating to shares held through Euroclear France, the settlement and central depositary system for NYSE Euronext Paris, should be sent to the paying agent:

HSBC France  
103, avenue des Champs Elysées  
75419 Paris Cedex 08  
France  
Telephone: +33 1 40 70 22 56  
Website: [www.hsbc.fr](http://www.hsbc.fr)

If you have elected to receive general shareholder communications directly from HSBC Holdings, it is important to remember that your main contact for all matters relating to your investment remains the registered shareholder, or custodian or broker, who administers the investment on your behalf. Therefore any changes or queries relating to your personal details and holding (including any administration of it) must continue to be directed to your existing contact at your investment manager or custodian or broker. HSBC Holdings cannot guarantee dealing with matters directed to it in error.

Further copies of this *Annual Report and Accounts 2016* may be obtained by writing to the following departments:

#### For those in Europe, the Middle East and Africa:

External Affairs  
HSBC Holdings plc  
8 Canada Square  
London E14 5HQ  
United Kingdom

#### For those in Asia:

Communications (Asia)  
The Hongkong and Shanghai Banking  
Corporation Limited  
1 Queen's Road Central  
Hong Kong

#### For those in the Americas:

US Communications  
HSBC Bank USA, N.A.  
1 West 39th Street, 9th Floor  
New York, NY 10018  
USA

### Electronic communications

Shareholders may at any time choose to receive corporate communications in printed form or to receive notifications of their availability on HSBC's website. To receive notifications of the availability of a corporate communication on HSBC's website by email, or revoke or amend an instruction to receive such notifications by email, go to [www.hsbc.com/ecoms](http://www.hsbc.com/ecoms). If you provide an email address to receive electronic communications from HSBC, we will also send notifications of your dividend entitlements by email. If you received a notification of the availability of this document on HSBC's website and would like to receive a printed copy, or if you would like to receive future corporate communications in printed form, please write or send an email (quoting your shareholder reference number) to the appropriate Registrars at the address given above. Printed copies will be provided without charge.

## **Shareholder information**

### **Chinese translation**

A Chinese translation of this *Annual Report and Accounts 2016* will be available upon request after 8 March 2017 from the Registrars:

Computershare Hong Kong Investor Services Limited  
Rooms 1712-1716, 17th Floor  
Hopewell Centre  
183 Queen's Road East  
Hong Kong

Computershare Investor Services PLC  
The Pavilions  
Bridgwater Road  
Bristol BS99 6ZZ  
United Kingdom

Please also contact the Registrars if you wish to receive Chinese translations of future documents, or if you have received a Chinese translation of this document and do not wish to receive them in future.

《2016 年報及賬目》備有中譯本，各界人士可於 2017 年 3 月 8 日之後，向上列股份登記處索閱。

閣下如欲於日後收取相關文件的中譯本，或已收到本文件的中譯本但不希望繼續收取有關譯本，均請聯絡股份登記處。

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### **Stock symbols**

HSBC Holdings ordinary shares trade under the following stock symbols:

London Stock Exchange	HSBA	Euronext Paris	HSB
Hong Kong Stock Exchange	5	Bermuda Stock Exchange	HSBC.BH
New York Stock Exchange (ADS)	HSBC		

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### **Investor relations**

Enquiries relating to HSBC's strategy or operations may be directed to:

Richard O'Connor, Global Head of Investor Relations HSBC Holdings plc 8 Canada Square London E14 5HQ United Kingdom Email: <a href="mailto:investorrelations@hsbc.com">investorrelations@hsbc.com</a>	Hugh Pye, Head of Investor Relations Asia-Pacific The Hongkong and Shanghai Banking Corporation Limited 1 Queen's Road Central Hong Kong Telephone: 852 2822 4908
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### **Where more information about HSBC is available**

This *Annual Report and Accounts 2016*, and other information on HSBC, may be viewed on HSBC's website: [www.hsbc.com](http://www.hsbc.com).

Reports, statements and information that HSBC Holdings files with the Securities and Exchange Commission are available at [www.sec.gov](http://www.sec.gov). Investors can also request hard copies of these documents upon payment of a duplicating fee by writing to the SEC at the Office of Investor Education and Advocacy, 100 F Street N.E., Washington, DC 20549-0213 or by emailing [PublicInfo@sec.gov](mailto:PublicInfo@sec.gov). Investors should call the Commission at (1) 202 551 8090 if they require further assistance. Investors may also obtain the reports and other information that HSBC Holdings files at [www.nyse.com](http://www.nyse.com) (telephone number (1) 212 656 3000).

HM Treasury has transposed the requirements set out under CRD IV and issued the Capital Requirements Country-by-Country Reporting Regulations 2013. The legislation requires HSBC Holdings to publish additional information in respect of the year ended 31 December 2016 by 31 December 2017. This information will be available on HSBC's website: [www.hsbc.com/tax](http://www.hsbc.com/tax).

## Taxation of shares and dividends

### Taxation – UK residents

The following is a summary, under current law, of certain UK tax considerations that are likely to be material to the ownership and disposition of HSBC Holdings ordinary shares. The summary does not purport to be a comprehensive description of all the tax considerations that may be relevant to a holder of shares. In particular, the summary deals with shareholders who are resident solely in the UK for UK tax purposes and only with holders who hold the shares as investments and who are the beneficial owners of the shares, and does not address the tax treatment of certain classes of holders such as dealers in securities. Holders and prospective purchasers should consult their own advisers regarding the tax consequences of an investment in shares in light of their particular circumstances, including the effect of any national, state or local laws.

### Taxation of dividends

Currently, no tax is withheld from dividends paid by HSBC Holdings.

### UK resident individuals

With effect for the tax year beginning 6 April 2016, UK resident individuals are given an annual tax-free allowance of £5,000 on dividend income. To the extent that dividend income received by an individual in the relevant tax year does not exceed the allowance, a nil tax rate will apply. Dividend income in excess of this allowance will be taxed at 7.5% for basic rate taxpayers, 32.5% for higher rate taxpayers and 38.1% for additional rate taxpayers.

### UK resident companies

Shareholders that are within the charge to UK corporation tax should generally be entitled to an exemption from UK corporation tax on any dividends received from HSBC Holdings. However, the exemptions are not comprehensive and are subject to anti-avoidance rules.

If the conditions for exemption are not met or cease to be satisfied, or a shareholder within the charge to UK corporation tax elects for an otherwise exempt dividend to be taxable, the shareholder will be subject to UK corporation tax on dividends received from HSBC Holdings at the rate of corporation tax applicable to that shareholder.

### Scrip dividends

Information on the taxation consequences of the HSBC Holdings scrip dividends offered in lieu of the 2015 fourth interim dividend and the first, second and third interim dividends for 2016 was set out in the Secretary's letters to shareholders of 18 March, 3 June, 25 August and 3 November 2016. In no case was the difference between the cash dividend forgone and the market value of the scrip dividend in excess of 15% of the market value. Accordingly, for individual shareholders, the amount of the dividend income chargeable to tax, and, the acquisition price of the HSBC Holdings ordinary shares for UK capital gains tax purposes, was the cash dividend forgone.

### Taxation of capital gains

The computation of the capital gains tax liability arising on disposals of shares in HSBC Holdings by shareholders subject to UK tax on capital gains can be complex, partly depending on whether, for example, the shares were purchased since April 1991, acquired in 1991 in exchange for shares in The Hongkong and Shanghai Banking Corporation Limited, or acquired subsequent to 1991 in exchange for shares in other companies.

For capital gains tax purposes, the acquisition cost for ordinary shares is adjusted to take account of subsequent rights and capitalisation issues. Any capital gain arising on a disposal by a UK company may also be adjusted to take account of indexation

allowance. If in doubt, shareholders are recommended to consult their professional advisers.

### Stamp duty and stamp duty reserve tax

Transfers of shares by a written instrument of transfer generally will be subject to UK stamp duty at the rate of 0.5% of the consideration paid for the transfer (rounded up to the next £5), and such stamp duty is generally payable by the transferee. An agreement to transfer shares, or any interest therein, normally will give rise to a charge to stamp duty reserve tax at the rate of 0.5% of the consideration. However, provided an instrument of transfer of the shares is executed pursuant to the agreement and duly stamped before the date on which the stamp duty reserve tax becomes payable, under the current practice of UK HM Revenue and Customs ('HMRC') it will not be necessary to pay the stamp duty reserve tax, nor to apply for such tax to be cancelled. Stamp duty reserve tax is generally payable by the transferee.

Paperless transfers of shares within CREST, the UK's paperless share transfer system, are liable to stamp duty reserve tax at the rate of 0.5% of the consideration. In CREST transactions, the tax is calculated and payment made automatically. Deposits of shares into CREST generally will not be subject to stamp duty reserve tax, unless the transfer into CREST is itself for consideration. Following the case HSBC pursued before the European Court of Justice (Case C-569/07 HSBC Holdings plc and Vidacos Nominees Ltd v The Commissioners for HM Revenue & Customs) and a subsequent case in relation to depositary receipts, HMRC now accepts that the charge to stamp duty reserve tax at 1.5% on the issue of shares to a depositary receipt issuer or a clearance service is prohibited.

### Taxation – US residents

The following is a summary, under current law, of the principal UK tax and US federal income tax considerations that are likely to be material to the ownership and disposition of shares or American Depository Shares ('ADS's) by a holder that is a resident of the US for US federal income tax purposes (a 'US holder') and who is not resident in the UK for UK tax purposes.

The summary does not purport to be a comprehensive description of all of the tax considerations that may be relevant to a holder of shares or ADSs. In particular, the summary deals only with US holders that hold shares or ADSs as capital assets, and does not address the tax treatment of holders that are subject to special tax rules, such as banks, tax-exempt entities, insurance companies, dealers in securities or currencies, persons that hold shares or ADSs as part of an integrated investment (including a 'straddle') comprised of a share or ADS and one or more other positions, and persons that own, directly or indirectly, 10% or more of the voting stock of HSBC Holdings. This discussion is based on laws, treaties, judicial decisions and regulatory interpretations in effect on the date hereof, all of which are subject to change.

Holders and prospective purchasers should consult their own advisers regarding the tax consequences of an investment in shares or ADSs in light of their particular circumstances, including the effect of any national, state or local laws.

Any US federal tax advice included in this Annual Report and Accounts is for informational purposes only; it was not intended or written to be used, and cannot be used, for the purpose of avoiding US federal tax penalties.

### Taxation of dividends

Currently, no tax is withheld from dividends paid by HSBC Holdings. For US tax purposes, a US holder must include cash dividends paid on the shares or ADSs in ordinary income on the date that such holder or the ADS depositary receives them, translating dividends paid in UK pounds sterling into US dollars using the exchange rate in effect on the date of receipt. A US holder that elects to receive shares in lieu of a cash dividend must include in ordinary income the fair market value of such

## Shareholder information

shares on the dividend payment date, and the tax basis of those shares will equal such fair market value.

Subject to certain exceptions for positions that are held for less than 61 days or are hedged, and subject to a foreign corporation being considered a 'qualified foreign corporation' (which includes not being classified for US federal income tax purposes as a passive foreign investment company), certain dividends ('qualified dividends') received by an individual US holder generally will be subject to US taxation at preferential rates. Based on the company's audited financial statements and relevant market and shareholder data, HSBC Holdings does not anticipate being classified as a passive foreign investment company. Accordingly, dividends paid on the shares or ADSs generally should be treated as qualified dividends.

### Taxation of capital gains

Gains realised by a US holder on the sale or other disposition of shares or ADSs normally will not be subject to UK taxation unless at the time of the sale or other disposition the holder carries on a trade, profession or vocation in the UK through a branch or agency or permanent establishment and the shares or ADSs are or have been used, held or acquired for the purposes of such trade, profession, vocation, branch or agency or permanent establishment. Such gains will be included in income for US tax purposes, and will be long-term capital gains if the shares or ADSs were held for more than one year. A long-term capital gain realised by an individual US holder generally will be subject to US tax at preferential rates.

### Inheritance tax

Shares or ADSs held by an individual whose domicile is determined to be the US for the purposes of the United States-United Kingdom Double Taxation Convention relating to estate and gift taxes (the 'Estate Tax Treaty') and who is not for such purposes a national of the UK will not, provided any US federal estate or gift tax chargeable has been paid, be subject to UK inheritance tax on the individual's death or on a lifetime transfer of shares or ADSs except in certain cases where the shares or ADSs (i) are comprised in a settlement (unless, at the time of the settlement, the settlor was domiciled in the US and was not a national of the UK), (ii) are part of the business property of a UK permanent establishment of an enterprise, or (iii) pertain to a UK fixed base of an individual used for the performance of independent personal services. In such cases, the Estate Tax Treaty generally provides a credit against US federal tax liability for the amount of any tax paid in the UK in a case where the shares or ADSs are subject to both UK inheritance tax and to US federal estate or gift tax.

### Stamp duty and stamp duty reserve tax – ADSs

If shares are transferred to a clearance service or American Depository Receipt ('ADR') issuer (which will include a transfer of shares to the Depository) under the current HMRC practice UK stamp duty and/or stamp duty reserve tax will be payable. The stamp duty or stamp duty reserve tax is generally payable on the consideration for the transfer and is payable at the aggregate rate of 1.5%.

The amount of stamp duty reserve tax payable on such a transfer will be reduced by any stamp duty paid in connection with the same transfer.

No stamp duty will be payable on the transfer of, or agreement to transfer, an ADS, provided that the ADR and any separate instrument of transfer or written agreement to transfer remain at all times outside the UK, and provided further that any such transfer or written agreement to transfer is not executed in the UK. No stamp duty reserve tax will be payable on a transfer of, or agreement to transfer, an ADS effected by the transfer of an ADR.

### US backup withholding tax and information reporting

Distributions made on shares or ADSs and proceeds from the sale of shares or ADSs that are paid within the US, or through certain financial intermediaries to US holders, are subject to information reporting and may be subject to a US 'backup' withholding tax unless, in general, the US holder complies with certain certification procedures or is a corporation or other person exempt from such withholding. Holders that are not US persons generally are not subject to information reporting or backup withholding tax, but may be required to comply with applicable certification procedures to establish that they are not US persons in order to avoid the application of such information reporting requirements or backup withholding tax to payments received within the US or through certain financial intermediaries.

## **Cautionary statement regarding forward-looking statements**

The *Annual Report and Accounts 2016* contains certain forward-looking statements with respect to HSBC's financial condition, results of operations and business.

Statements that are not historical facts, including statements about HSBC's beliefs and expectations, are forward-looking statements. Words such as 'expects', 'targets', 'anticipates', 'intends', 'plans', 'believes', 'seeks', 'estimates', 'potential' and 'reasonably possible', variations of these words and similar expressions are intended to identify forward-looking statements. These statements are based on current plans, estimates and projections, and therefore undue reliance should not be placed on them. Forward-looking statements speak only as of the date they are made. HSBC makes no commitment to revise or update any forward-looking statements to reflect events or circumstances occurring or existing after the date of any forward-looking statements.

Written and/or oral forward-looking statements may also be made in the periodic reports to the US Securities and Exchange Commission, summary financial statements to shareholders, proxy statements, offering circulars and prospectuses, press releases and other written materials, and in oral statements made by HSBC's Directors, officers or employees to third parties, including financial analysts.

Forward-looking statements involve inherent risks and uncertainties. Readers are cautioned that a number of factors could cause actual results to differ, in some instances materially, from those anticipated or implied in any forward-looking statement. These include, but are not limited to:

- Changes in general economic conditions in the markets in which we operate, such as continuing or deepening recessions and fluctuations in employment beyond those factored into consensus forecasts; changes in foreign exchange rates and interest rates; volatility in equity markets; lack of liquidity in wholesale funding markets; illiquidity and downward price pressure in national real estate markets; adverse changes in central banks' policies with respect to the provision of liquidity support to financial markets; heightened market concerns over sovereign creditworthiness in over-indebted countries; adverse changes in the funding status of public or private defined benefit pensions; and consumer perception as to the continuing availability of credit and price competition in the market segments we serve.
- Changes in government policy and regulation, including the monetary, interest rate and other policies of central banks and other regulatory authorities; initiatives to change the size, scope of activities and interconnectedness of financial institutions in connection with the implementation of stricter regulation of financial institutions in key markets worldwide; revised capital and liquidity benchmarks which could serve to deleverage bank balance sheets and lower returns available from the current business model and portfolio mix; imposition of levies or taxes designed to change business mix and risk appetite; the practices, pricing or responsibilities of financial institutions serving their

consumer markets; expropriation, nationalisation, confiscation of assets and changes in legislation relating to foreign ownership; changes in bankruptcy legislation in the principal markets in which we operate and the consequences thereof; general changes in government policy that may significantly influence investor decisions; extraordinary government actions as a result of current market turmoil; other unfavourable political or diplomatic developments producing social instability or legal uncertainty which in turn may affect demand for our products and services; the costs, effects and outcomes of product regulatory reviews, actions or litigation, including any additional compliance requirements; and the effects of competition in the markets where we operate including increased competition from non-bank financial services companies, including securities firms.

- Factors specific to HSBC, including our success in adequately identifying the risks we face, such as the incidence of loan losses or delinquency, and managing those risks (through account management, hedging and other techniques). Effective risk management depends on, among other things, our ability through stress testing and other techniques to prepare for events that cannot be captured by the statistical models it uses; and our success in addressing operational, legal and regulatory, and litigation challenges, notably compliance with the US DPA; and other risks and uncertainties we identify in 'top and emerging risks' on pages 64 and 67.

## **Certain defined terms**

Unless the context requires otherwise, 'HSBC Holdings' means HSBC Holdings plc and 'HSBC', the 'Group', 'we', 'us' and 'our' refer to HSBC Holdings together with its subsidiaries. Within this document the Hong Kong Special Administrative Region of the People's Republic of China is referred to as 'Hong Kong'. When used in the terms 'shareholders' equity' and 'total shareholders' equity', 'shareholders' means holders of HSBC Holdings ordinary shares and those preference shares and capital securities issued by HSBC Holdings classified as equity. The abbreviations '\$m', '\$bn' and '\$tn' represent millions, billions (thousands of millions) and trillions of US dollars, respectively.

## Other Information

### Abbreviations

#### Currencies

CA\$	Canadian dollar
EGP	Egyptian pound
€	Euro
HK\$	Hong Kong dollar
MXN	Mexican peso
RMB	Chinese renminbi
S\$	Singapore dollar
\$	United States dollar

#### A

ABS <sup>1</sup>	Asset-backed security
ADR	American Depository Receipt
ADS	American Depository Share
AFS	Available for sale
AGM	Annual General Meeting
AIEA	Average interest-earning assets
ALCM	Asset, Liability and Capital Management
ALCO	Asset and Liability Management Committee
AML	Anti-money laundering
ARM <sup>1</sup>	Adjustable-rate mortgage
ARS	Argentine peso
AT1	Additional tier 1

#### B

Barion	Barion Funding Limited, a term-funding vehicle
Basel	Basel Committee on Banking Supervision
Basel II <sup>1</sup>	2006 Basel Capital Accord
Basel III <sup>1</sup>	Basel Committee's reforms to strengthen global capital and liquidity rules
BBA	British Bankers' Association
BEPS	The OECD Base Erosion and Profit Shifting initiative
BoCom	Bank of Communications Co., Limited, one of China's largest banks
BoE	Bank of England
Bps <sup>1</sup>	Basis points. One basis point is equal to one-hundredth of a percentage point
BSA	Bank Secrecy Act (US)
BSM	Balance Sheet Management
BVI	British Virgin Islands

#### C

Capm	Capital asset pricing model
CCAR	Federal Reserve Comprehensive Capital Analysis and Review
CDOs	Collateralised debt obligations
CDS <sup>1</sup>	Credit default swap
CEA	Commodities Exchange Act (US)
CET1 <sup>1</sup>	Common equity tier 1
CGUs	Cash-generating units
CIUs	Collective investment undertakings
CMB	Commercial Banking, a global business
CMC	Capital maintenance charge
CML <sup>1</sup>	Consumer and Mortgage Lending (US)
COSO	2013 Committee of the Sponsors of the Treadway Commission (US)
CP <sup>1</sup>	Commercial paper
CRD <sup>1</sup>	Capital Requirements Directive
CRR <sup>1</sup>	Customer risk rating
CRR/CRD IV	Capital Requirements Regulation and Directive
CSA	Credit Support Annex
CVA <sup>1</sup>	Credit valuation adjustment
CVC	Conduct & Values Committee

#### D

Decision One	Decision One Mortgage Company LLC
Deferred Shares	Awards of deferred shares define the number of HSBC Holdings ordinary shares to which the employee will become entitled, generally between one and three years from the date of the award, and normally subject to the individual remaining in employment

Dodd-Frank	Dodd-Frank Wall Street Reform and Consumer Protection Act (US)
DoJ	Department of Justice (US)
DPA	Deferred Prosecution Agreement (US)
DPF	Discretionary participation feature of insurance and investment contracts
DVA <sup>1</sup>	Debit valuation adjustment
E	
EBA	European Banking Authority
EC	European Commission
ECB	European Central Bank
ECL	Expected credit losses
EL <sup>1</sup>	Expected loss
EU	European Union
Euribor	Euro interbank offered rate
EVE	Economic value of equity
F	
FCA	Financial Conduct Authority (UK)
FCR	Financial Crime Risk function
FFVA	Funding fair value adjustment estimation methodology on derivative contracts
Fintech	Financial technology
FRB	Federal Reserve Board (US)
FSCS	Financial Services Compensation Scheme
FSVC	Financial System Vulnerabilities Committee
FTE	Full-time equivalent staff
FTSE	Financial Times – Stock Exchange index
FuM	Funds under management
FOVCI	Fair value through other comprehensive income
FVPL	Fair value through profit or loss
G	
GAAP	Generally accepted accounting principles
GAC	Group Audit Committee
GB&M	Global Banking and Markets, a global business
GCC	The Group Change Committee
GDP	Gross domestic product
GLCM	Global Liquidity and Cash Management
Global Markets	HSBC's capital markets services in Global Banking and Markets
GMB	Group Management Board
GPB	Global Private Banking, a global business
GPSP	Group Performance Share Plan
GRC	Group Risk Committee
Group	HSBC Holdings together with its subsidiary undertakings
G-SIB <sup>1</sup>	Global systemically important bank
GSM	The Group's Global Standards Manual
GTRF	Global Trade and Receivables Finance
H	
Hang Seng Bank	Hang Seng Bank Limited, one of Hong Kong's largest banks
HKEx	The Stock Exchange of Hong Kong Limited
HKMA	Hong Kong Monetary Authority
HMRC	HM Revenue and Customs
HNAH	HSBC North America Holdings Inc.
Holdings ALCO	HSBC Holdings Asset and Liability Management Committee
Hong Kong	Hong Kong Special Administrative Region of the People's Republic of China
HQLA	High-quality liquid assets
HSBC	HSBC Holdings together with its subsidiary undertakings
HSBC Bank	HSBC Bank plc
HSBC Bank Middle East	HSBC Bank Middle East Limited

HSBC Bank USA	HSBC Bank USA, N.A., HSBC's retail bank in the US	
HSBC Canada	The sub-group, HSBC Bank Canada, HSBC Trust Company Canada, HSBC Mortgage Corporation Canada and HSBC Securities Canada, consolidated for liquidity purposes	
HSBC Colombia	HSBC Bank (Colombia) S.A.	
HSBC Finance	HSBC Finance Corporation, the US consumer finance company (formerly Household International, Inc.)	
HSBC France	HSBC's French banking subsidiary, formerly CCF S.A.	
HSBC Holdings	HSBC Holdings plc, the parent company of HSBC	
HSBC Private Bank (Suisse)	HSBC Private Bank (Suisse) SA, HSBC's private bank in Switzerland	
HSBC USA	The sub-group, HSBC USA Inc (the holding company of HSBC Bank USA) and HSBC Bank USA, consolidated for liquidity purposes	
HSI	HSBC Securities (USA) Inc.	
HSSL	HSBC Securities Services (Luxembourg)	
HTIE	HSBC International Trust Services (Ireland) Limited	
HTM	Held to maturity	
<b>I</b>		
IAS	International Accounting Standards	
IASB	International Accounting Standards Board	
ICAAP	Internal capital adequacy assessment process	
IFRSs	International Financial Reporting Standards	
ILAA	Individual liquidity adequacy assessment	
ILR	Inherent liquidity risk	
Industrial Bank	Industrial Bank Co. Limited, a national joint-stock bank in mainland China in which Hang Seng Bank Limited has a shareholding	
Investor Update	The Investor Update in June 2015	
IRB <sup>1</sup>	Internal ratings-based	
IRRBB	Interest rate risk in the banking book	
ISDA	International Swaps and Derivatives Association	
<b>K</b>		
KPMG	KPMG Audit Plc and its affiliates	
<b>L</b>		
LCR	Liquidity coverage ratio	
LFRF	Liquidity and funding risk management framework	
LGBT+	Lesbian, gay, bisexual and transgender. The plus sign denotes other non-mainstream groups on the spectrums of sexual orientation and gender identity	
LGD <sup>1</sup>	Loss given default	
Libor	London interbank offered rate	
LICs	Loan impairment charges and other credit risk provisions	
LTI	Long-term incentive	
LTV <sup>1</sup>	Loan-to-value ratio	
<b>M</b>		
Madoff	Bernard L. Madoff Investment Securities LLC	
Mainland China	People's Republic of China excluding Hong Kong	
Malachite	Malachite Funding Limited, a term-funding vehicle	
Mazarin	Mazarin Funding Limited, an asset-backed CP conduit	
MBS	US mortgage-backed security	
MENA	Middle East and North Africa	
MOCs	Model Oversight Committees	
Monoline	Monoline insurance company	
MRT	Material risk taker	
<b>N</b>		
NII	Net interest income	
NSFR	Net stable funding ratio	
NYSE	New York Stock Exchange	
<b>O</b>		
OCC	Office of the Comptroller of the Currency (US)	
OCI	Other comprehensive income	
ORMF	Operational risk management framework	
OTC <sup>1</sup>	Over-the-counter	
<b>P</b>		
PD <sup>1</sup>	Probability of default	
Performance shares <sup>1</sup>	Awards of HSBC Holdings ordinary shares under employee share plans that are subject to corporate performance conditions	
Ping An	Ping An Insurance (Group) Company of China, Ltd, the second-largest life insurer in the PRC	
PPI	Payment protection insurance	
PRA	Prudential Regulation Authority (UK)	
PRC	People's Republic of China	
Principal plan	HSBC Bank (UK) Pension Scheme	
PVIF	Present value of in-force long-term insurance business and long-term investment contracts with DPF	
PwC	The member firms of the PwC network, including PricewaterhouseCoopers LLP	
<b>R</b>		
RAS	Risk appetite statement	
RBWM	Retail Banking and Wealth Management, a global business	
RC	The Regulatory Compliance sub-function	
Repo <sup>1</sup>	Sale and repurchase transaction	
Reverse repo	Security purchased under commitments to sell	
RMBS	Residential mortgage-backed securities	
RMM	Risk Management Meeting of the Group Management Board	
RNIV	Risk not in VaR	
RoE	Return on equity	
RoRWA	Return on risk-weighted assets	
RQFII	Renminbi qualified foreign institutional investor	
RRCS	Reputational Risk and Client Selection team	
RWA <sup>1</sup>	Risk-weighted asset	
<b>S</b>		
SE <sup>1</sup>	Structured entity	
SEC	Securities and Exchange Commission (US)	
ServCo group	Separately incorporated group of service companies planned in response to UK ring-fencing proposals	
SIC	Securities investment conduit	
SID	Senior Independent Director	
SME	Small and medium-sized enterprise	
Solitaire	Solitaire Funding Limited, a special purpose entity managed by HSBC	
SPE <sup>1</sup>	Special purpose entity	
<b>T</b>		
T1	Tier 1	
T2	Tier 2	
TLAC <sup>1</sup>	Total loss-absorbing capacity	
TSR	Total shareholder return	
<b>U</b>		
UAE	United Arab Emirates	
UK	United Kingdom	
US	United States of America	
US DPA	Five-year deferred prosecution agreement with the Department of Justice and others (US)	
US run-off portfolio	Includes our CML, vehicle finance and Taxpayer Financial Services businesses and insurance, commercial, corporate and treasury activities in HSBC Finance on an IFRSs management basis	
<b>V</b>		
VaR <sup>1</sup>	Value at risk	
VIU	Value in use	

<sup>1</sup> A full definition is included in the glossary to the Annual Report and Accounts 2016 which is available at [www.hsbc.com/investor-relations](http://www.hsbc.com/investor-relations).

## Other Information

### HSBC HOLDINGS PLC

Incorporated in England on 1 January 1959 with limited liability under the UK Companies Act  
Registered in England: number 617987

### REGISTERED OFFICE AND GROUP HEAD OFFICE

8 Canada Square  
London E14 5HQ  
United Kingdom  
Telephone: 44 020 7991 8888  
Facsimile: 44 020 7992 4880  
Web: [www.hsbc.com](http://www.hsbc.com)

### REGISTRARS

*Principal Register*  
Computershare Investor Services PLC  
The Pavilions  
Bridgwater Road  
Bristol BS99 6ZZ  
United Kingdom  
Telephone: 44 0370 702 0137  
Email: via website  
Web: [www.investorcentre.co.uk/contactus](http://www.investorcentre.co.uk/contactus)

### Hong Kong Overseas Branch Register

Computershare Hong Kong Investor Services Limited  
Rooms 1712-1716, 17th floor  
Hopewell Centre  
183 Queen's Road East  
Hong Kong  
Telephone: 852 2862 8555  
Email: [hsbc.ecom@computershare.com.hk](mailto:hsbc.ecom@computershare.com.hk)  
Web: [www.computershare.com/hk/investors](http://www.computershare.com/hk/investors)

### Bermuda Overseas Branch Register

Investor Relations Team  
HSBC Bank Bermuda Limited  
6 Front Street  
Hamilton HM11  
Bermuda  
Telephone: 1 441 299 6737  
Email: [hbbm.shareholder.services@hsbc.bm](mailto:hbbm.shareholder.services@hsbc.bm)  
Web: [www.computershare.com/investor/bm](http://www.computershare.com/investor/bm)

### ADR Depository

The Bank of New York Mellon  
Depository Receipts  
PO Box 30170  
College Station, TX 77842-3170  
USA  
Telephone (US): 1 877 283 5786  
Telephone (International): 1 201 680 6825  
Email: [shrrelations@bnymellon.com](mailto:shrrelations@bnymellon.com)  
Web: [www.computershare.com/us/contact/Pages/default.aspx](http://www.computershare.com/us/contact/Pages/default.aspx)

### Paying Agent (France)

HSBC France  
103 avenue des Champs Elysées  
75419 Paris Cedex 08  
France  
Telephone: 33 1 40 70 22 56  
Email: [ost-agence-des-titres-hsbc-reims.hbfr-do@hsbc.fr](mailto:ost-agence-des-titres-hsbc-reims.hbfr-do@hsbc.fr)  
Web: [www.hsbc.fr](http://www.hsbc.fr)

### STOCKBROKERS

Goldman Sachs International  
Peterborough Court  
133 Fleet Street  
London EC4A 2BB  
United Kingdom

Credit Suisse Securities (Europe) Limited  
1 Cabot Square  
London E14 4QT  
United Kingdom

HSBC Bank plc  
8 Canada Square  
London E14 5HQ  
United Kingdom



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**HSBC Holdings plc**

**8 Canada Square  
London E14 5HQ  
United Kingdom  
Telephone: 44 020 7991 8888  
[www.hsbc.com](http://www.hsbc.com)**

