

ANNUAL REPORT

201





Connecting China. Connecting the World.

We are Asia's premier exchange group,
connecting markets, growth and opportunity.

We are the preferred market for international
issuers and investors looking to access China;
and the international market of choice for
Chinese issuers and investors.

We are dedicated to providing strong, stable,
transparent and innovative markets.

We are uniquely placed to offer the world
access to Asia's most vibrant financial markets,
to trade, raise capital and connect.

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(Financial figures in this Annual Report are expressed in HKD unless otherwise stated)

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Highlights of the Year



Corporate News

20 February

HKEX Connect Hall opens

22 March

HKEX inaugural Biotech Summit

4 May

Appointment of Laura M Cha as HKEX Chairman approved by HKSAR Chief Executive, Carrie Lam Cheng Yuet-nger

1 June

Joined UN Partnership Programme for Sustainable Capital Markets

24 August

HKEX Innovation Lab opens

14 September

HKEX joins World Economic Forum as Strategic Partner Associate

19 October

Qianhai Mercantile Exchange officially opens for business

31 December

HKEX named as world's leading IPO market, the sixth time in the last 10 years, based on funds raised

Regulation

9 March

Signed addendum to MOU with SFC governing listing matters

30 April

Introduced new listing rules for companies from emerging and innovative sectors

5 October

LME launches proposals for the responsible sourcing of metal

Products and Services

5 March

Introduced long-dated HSI and HSCEI futures and options

9 April

Introduced Tracker Fund of Hong Kong and HSCEI ETF futures

11 June

Introduced MSCI All Country Asia ex Japan Net Total Return Index futures

5 November

Introduced HSI and HSCEI Gross and Net Total Return Index futures



Market Operations

5 February

Launched Orion Trading Platform – Securities Market

14 May

Added equity index options to after-hours trading

26 September

Launched investor identification model for Northbound Stock Connect trading

3 December

Added Mini-HSCEI options to after-hours trading

Financial Highlights

Commenting on the results, Charles Li, Chief Executive said, “This was an excellent year for HKEX. Record volumes in our Cash Market, record volumes in our Derivatives Market and a world-leading IPO market that welcomed 218 companies, including 7 under our new listing chapters, resulted in a 26% uplift in profit for the year.

The market outlook for 2019 looks set to be more challenging, but we are confident that, as outlined in our 3-year strategic plan, HKEX is very well placed to continue to be the financial gateway to and from China, that our business is strongly positioned to capitalise on growth opportunities and that we will continue to be globally attractive and competitive.”

Key Messages

- 2018 was a record year for HKEX, reporting the highest ever revenue and other income and profit.
- Revenue and other income for 2018 was up **20%** against 2017, driven by:
 - An increase in trading and clearing fees as a result of record highs in Cash Market turnover and Derivatives Market trading volume; and
 - Record listing fees, from both an increase in the number of listed companies, and record highs in newly listed DWs and CBBCs.
- Operating expenses grew by **15%** against the prior year, attributable to increases in staff costs, IT costs and premises expenses.
- EBITDA margin was **74%**, 1% higher than 2017.
- Profit attributable to shareholders rose by **26%**, to a record high of \$9,312 million.

	2018 \$m	2017 \$m	Change
Revenue and other income	15,867	13,180	20%
Operating expenses	4,110	3,566	15%
EBITDA ¹	11,757	9,614	22%
Profit attributable to shareholders	9,312	7,404	26%
Basic earnings per share	\$7.50	\$6.03	24%
First interim dividend per share	\$3.64	\$2.55	43%
Second interim dividend per share	\$3.07	–	N/A
Final dividend per share	–	\$2.85	(100%)
	\$6.71	\$5.40	24%
Dividend payout ratio	90%	90%	–

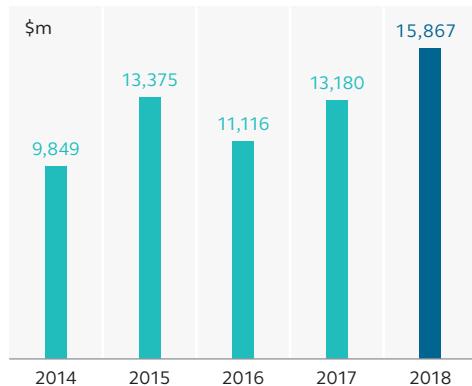
¹ For the purposes of this Annual Report, EBITDA is defined as earnings before interest expenses and other finance costs, taxation, depreciation and amortisation. It excludes the Group's share of results of the joint ventures.

	2018	2017	Change
Key market statistics			
ADT of equity products traded on the Stock Exchange (\$bn)	84.2*	71.2	18%
ADT of DWs, CBBCs and warrants traded on the Stock Exchange (\$bn)	23.2	17.0	36%
ADT traded on the Stock Exchange (Headline ADT) (\$bn)	107.4*	88.2	22%
ADV of derivatives contracts traded on the Futures Exchange	686,602*	441,320	56%
ADV of stock options contracts traded on the Stock Exchange	517,395*	428,499	21%
Chargeable ADV of metals contracts traded on the LME (lots)	629,556	601,067	5%

* New record highs in 2018

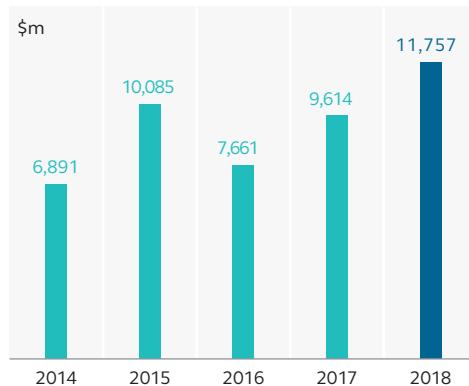
Revenue and Other Income

\$15,867 million
+20%



EBITDA

\$11,757 million
+22%



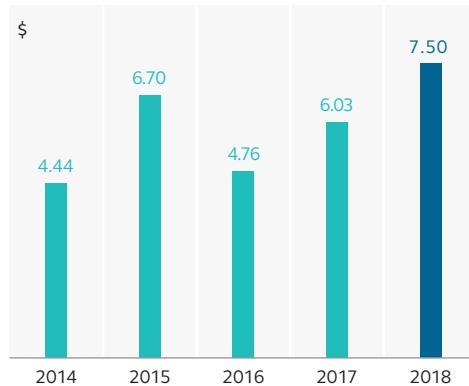
Profit Attributable to Shareholders

\$9,312 million
+26%



Basic Earnings Per Share

\$7.50
+24%



Chairman's Statement



In 2018, the HKEX Group strengthened its momentum and saw tangible results from a number of initiatives under our Strategic Plan 2016-2018. The results of which were a record-breaking reported financial performance and we are pleased to share with our shareholders this year an all-time-high dividend. Our accomplishments in 2018 and the progress that we have made in a number of strategic areas to strengthen our business have not only consolidated HKEX's position as the leading global exchange group connecting China with the world, but also laid a solid foundation to support our future growth ambitions and enhance the Group's global competitiveness.

Our Performance

Global economic uncertainty, particularly the trade tensions between the US and China, has cast a shadow over international financial markets since mid-2018. Gains in the Hong Kong securities and derivatives markets in the first half were diluted in part by reduced trading activity in the latter part of the year, though market performance on average was strong and set a number of new records. Trading activities through Stock Connect gained further momentum following the expansion of the daily quota in May 2018; and the inclusion of A shares in MSCI Indices in June.

Metals trading volumes on the London Metal Exchange (LME) also improved in part due to fee discounts introduced in the fourth quarter of 2017 as well as the impact from macroeconomic and geopolitical factors.

Market Highlights in 2018

- Hong Kong securities market ranked first globally for IPO fundraising, with total IPO funds reaching \$288 billion.
- Securities market turnover set a new record-high at \$26,423 billion with the turnover of securitised derivatives (DWs and CBBCs) remaining the world's highest for the 12th consecutive year.
- The ADT of Northbound and Southbound Trading through Stock Connect increased by 113 per cent and 30 per cent respectively from 2017.
- Derivatives market turnover also booked a new record-high at 296,183,076 futures and options contracts.
- Turnover of RMB Currency Futures - USD/CNH Futures reached another milestone at 1,755,130 contracts.
- Chargeable ADV of contracts traded on the LME increased 5 per cent year-on-year.

Given the robust turnover growth in our securities and derivatives markets, the Group's total revenue and other income for the year ended 31 December 2018 reached \$15.9 billion, up 20 per cent from 2017, resulting in a record-high profit attributable to shareholders of \$9,312 million, up 26 per cent.

Dividend

To expedite the payment of dividends to shareholders, the Board declared payment of a second interim dividend in lieu of the final dividend of \$3.07 per share which, together with the first interim dividend of \$3.64 per share paid in September 2018, set a record-high with a full-year dividend of \$6.71 per share.

\$6.71 per share

Record-high full-year dividend for 2018

Strategic Accomplishments and Plans

We made significant progress in enhancing our market competitiveness and global relevance in 2018. The greatest change to Hong Kong's listing regime in 25 years was implemented in April, launching an exciting new era for our capital markets. The change opened HKEX markets to companies with Weighted Voting Rights (WVR) structures and pre-revenue biotech companies, bringing a new exciting opportunity to Hong Kong's capital markets. We diversified our market further by broadening our derivatives product portfolio, providing more tools and flexibility for investment and risk management. We also implemented enhancements to Stock Connect by expanding the daily quota, rolling out the investor identification model for Northbound Trading, and reaching a consensus with the Shanghai and Shenzhen stock exchanges over the inclusion of companies with WVR structure in Stock Connect.

In London, the LME continued to make good progress on its Strategic Pathway initiatives by introducing implied pricing for base metals on its electronic trading platform which, together with other initiatives, will increase user choice and market participation. In Qianhai, our spot commodities trading platform, the Qianhai Mercantile Exchange, successfully commenced trading with a pilot product launch in October.

Specific details of the Group's performance and achievements in 2018 are set out in the Chief Executive's Review and Business Review sections of this Annual Report.

Technological transformation is a key focus for the Group. We were pleased to launch the HKEX Innovation Lab in August 2018, expanding our IT insight and capabilities and leveraging new technologies to support our business growth. The potential for technology to enhance our global competitiveness is a key theme of our Strategic Plan 2019-2021, which details our plans to invest in technology to drive product and market innovation. In particular, our ability to attract and meet the long-term needs of a diverse range of issuers and investors and enhance our value proposition as a gateway to China by improving our Connect programme, developing our FIC capabilities and increasing our international relevance, will all be supported by driving our technology programme.

Quality Market

Market quality and efficiency are essential to maintaining and enhancing investor confidence and to HKEX achieving robust organic growth. In 2018, we announced important enhancements to the Corporate Governance Code and the Listing Rules in relation to capital raisings and delistings. And post year-end we announced consultation conclusions to further strengthen the governance within the Exchange's structure for reviewing Listing Committee decisions, with plans to introduce setting up a new independent Listing Review Committee to replace the existing Listing (Review) Committee and the Listing (Disciplinary Review) Committee later this year. We also issued market consultations on proposals to address market concerns about backdoor listings, shell activities and issuers publishing financial statements with disclaimer or adverse audit opinion. The conclusions of these consultations will be published after a thorough analysis of market feedback.



A joint market consultation paper with the SFC and Federation of Share Registrars Limited was issued in January 2019 on the proposed operating model for an uncertificated securities market in Hong Kong. The proposed model preserves the settlement efficiency and funding effectiveness of the existing clearing and settlement arrangement while achieving the paperless objective with minimal market impact.

Following the introduction of a new securities trading system in early 2018, HKEX is undertaking a multi-year project, Next Generation Programme, to comprehensively upgrade our post-trade infrastructure across all post-trade business processes and systems.

As part of the LME's Strategic Pathway initiatives, we introduced new technology to improve the quality of pricing on the LME. A new membership category, Registered Intermediating Brokers, was added to facilitate access by a wider group of market participants. Enhancements were also made to warrants as collateral, facilitating market users to maximise their collateral. The LME also published a position paper to seek market feedback on proposed requirements for listed brands regarding the responsible sourcing of metals in alignment with the OECD principles.

HKEX is committed to the long term vibrancy and health of the markets we operate. Stakeholder engagement and support is key to our shared continued success and we look forward to continuing to work with all those involved to further enhance our product offering and markets in the year ahead.

Our market standards and infrastructure remain competitive and progressive, and continue to meet the needs of our broad and varied stakeholder group.

Corporate Responsibility

HKEX plays a unique role in the markets in which it operates and the communities those serve. As one of Asia's premier financial institutions, we have long been a champion of corporate sustainability, prioritising strong corporate governance, community engagement, environmental considerations, transparent ESG reporting and employee programmes to build a better and more successful business. Fundamental to this is our belief that excellence in this field is not a "nice to do" but is business-critical. We continually seek to better our performance in this area, leading by example and ensuring that CSR is central to achieving our future strategic goals.

This year, a comprehensive review of the roles and responsibilities of all our Board Committees was conducted to strengthen their ability to oversee our corporate governance and bring them in line with the best international practices. The Board also conducted an internal Board evaluation in 2018 following an evaluation in 2017, which was led by an external consultant. The 2018 evaluation assessed the effectiveness of improvements made since 2017 and identified other areas that still require attention. Our objective is to ensure that we achieve a world-class standard of governance, leading our markets by example and supporting the evolving business needs of the Group.

To underscore our continuing commitment to diversity, we updated our Board Diversity Policy with the long term aim of bringing the Board to gender parity. To bring fresh perspectives and skills to the Board, we reduced the maximum tenure for Non-executive Directors to be eligible for nomination by the Board to be elected by Shareholders from 12 consecutive years to nine years. Apart from working on the Board's succession, the Nomination and Governance Committee is also mandated to give full consideration to senior management succession planning and leadership training.

In light of the increasingly competitive and complex global environment, we recently announced the establishment of the International Advisory Council, which comprises leading financial and economic experts with global perspectives. The Council acts as an advisory body to the Board, giving recommendations on the Group's development of global markets, strategic direction and major business initiatives.

We also joined as a Partner Exchange of the United Nations Sustainable Stock Exchanges Initiative in June 2018 to further our commitment to promoting sustainable and transparent capital markets. And operationally we created a dedicated CSR team within the organisation, charged with coordinating our sustainability activities across markets and geography.

Details of our efforts to promote sustainability in our marketplace, workplace, community and environment are set out in our 2018 CSR Report, which is available on the HKEX Group website together with this Annual Report.

Outlook

We are entering 2019 with more geopolitical and economic uncertainty than has been the case for many years. Trade tensions between the US and China, uncertainties surrounding Brexit, slowing economic growth in a number of key markets and political fragility in pockets around the world all conspire to impact on our markets. The resulting volatility could potentially lead to a further deterioration in investor sentiment and, ultimately, a global economic slowdown. Despite this, I am confident that we have a strongly positioned robust business with clear strategic goals; an excellent and focused management team; a committed and talented workforce; and many opportunities in the future. We are well placed to remain competitive and relevant, and we are confident that our new Strategic Plan will ensure that HKEX remains increasingly well-positioned as Asia's premier exchange group.



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Acknowledgements

I would like to take this opportunity to express my gratitude to my predecessor, Sir C K Chow under whose leadership a solid foundation was laid for the Group's further development.

My gratitude is also extended to my fellow Board members for their steadfast support during my first year as the Chairman of HKEX. On behalf of the Board, I would like to thank Mrs Margaret Leung, who will retire after the conclusion of the 2019 AGM, for her dedicated support and valuable contributions during her past six years of service. I would also like to welcome members of the International Advisory Council and look forward to their wise counsel and guidance to help develop the Group as a globally important exchange.

Last but not least, my heartfelt thanks are extended to our Shareholders and other stakeholders for their unwavering support, and to all staff for their hard work and dedication in making 2018 another successful year for HKEX Group.

Laura M CHA
Chairman

Hong Kong, 27 February 2019

Chief Executive's Review



This was a record-breaking year for HKEX. A clear set of well-delivered focus priorities, supported by a robust market contributed to exceptional financial performance for the Group. Our achievements were set against a backdrop of increasing geopolitical tensions, a deceleration in global growth, and general market uncertainty that impacted financial markets across the globe. While we faced macro headwinds and weakening sentiment, our changes to the listing regime – the most significant in a quarter century – and our robust fundraising market accelerated HKEX to first place in the global IPO rankings. With our continued focus on Fixed Income, Currency and Commodities (FICC) as well as innovative technologies, we successfully concluded our Strategic Plan 2016–2018 with a set of major achievements, putting us in an excellent position to embark on the next phase of our journey.

Outstanding Market Performance

Considering the challenges in global market sentiment in 2018, particularly in Q4¹, our primary market delivered exceptional performance. HKEX ranked first globally in IPO funds raised with a record high of 218² companies listing, raising \$288 billion in total - a 124 per cent increase on 2017. Seven companies are Weighted Voting Rights (WVR) or biotech companies listed under the New Chapters³, with IPO funds raised of \$94 billion. Our existing listed companies also raised \$256.1 billion, a decrease of 43 per cent over 2017. Total funds raised reached \$544.1 billion.

Our secondary market was also strong in 2018, with record high securities market turnover. The full-year 2018 ADT for the Cash Market reached \$107.4 billion, a 22 per cent increase compared with 2017. Total equity turnover reached a record high of \$19,461 billion, exceeding the previous record of \$17,482.2 billion set in 2015. The market capitalisation of the securities market reached a record high of \$37,715.7 billion on 26 January 2018.

1 Q1 = first quarter, Q2 = second quarter, Q3 = third quarter, Q4 = fourth quarter, 1H = first half, 2H = second half

2 Includes transfers of listing from GEM to the Main Board

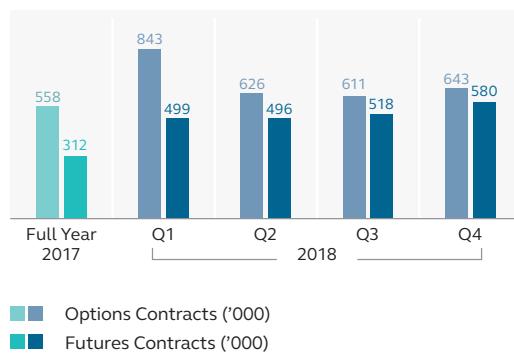
3 Refers to the Main Board Listing Rules Chapters 8A, 18A and 19C

Derivatives turnover saw another record year with total turnover of 296,183,076 contracts, an increase of 38 per cent compared with 2017. A number of new records were set in 2018, including total futures turnover, which reached a record high of 128,847,222 contracts, an increase of 53 per cent over the previous record set in 2016. Total options turnover reached a record high of 167,335,854 contracts, an increase of 21 per cent from previous high in 2017. Our Mini HSI and HSCEI derivatives and stock options set new open interest records during the year. Open interest of total futures and options at year-end was 10,594,737 contracts, down from 11,155,770 at the previous year-end.

Average Daily Turnover on Cash Market



Average Daily Number of Contracts Traded on Derivatives Market



Business Development Review

Enhancing Market Structure and Quality

We have continued to enhance the diversity of companies on our primary market and to raise market quality through a number of key initiatives and programmes. To address feedback we received about prolonged trading suspensions, HKEX amended the Listing Rules and implemented a new delisting framework in August 2018. Listing Rule amendments were also introduced to address concerns regarding capital raising activities and enhance corporate governance practices, which became effective in July 2018 and January 2019 respectively. Two consultations were launched and concluded, namely, the proposal on a new listing regime for companies from emerging and innovative sectors and proposed changes to the review structure in relation to Listing Committee decisions. HKEX is currently reviewing responses to another two consultations launched in 2018, including proposals to tighten the reverse takeover (RTO) Rules and continuing listing criteria to address concerns about backdoor listings and shell activities, as well as a proposal relating to listed issuers with disclaimer or adverse audit opinion on financial statements. We intend to publish the conclusions in the second half of 2019. In addition, following the implementation of Listing Rules that permit companies with WVR structures in April, HKEX has been consulting with stakeholders on the development of a proposal to expand the new regime to include corporate entities as WVR beneficiaries.

In the secondary market, we continued to upgrade our infrastructure and undertake major market microstructure improvements for both the Hong Kong market and Stock Connect. In February 2018, HKEX introduced a new securities trading system for the Hong Kong market, the Orion Trading Platform – Securities Market (OTP-C), replacing the previous Automatic Order Matching and Execution System (AMS/3.8). Development of the OTP-China Stock Connect was completed in Q4 2018 and is expected to replace the legacy proprietary hardware currently supporting Northbound Trading in 1H 2019. An upgrade of derivatives platforms continued throughout 2018, with the Hong Kong Futures Automated Trading System (HKATS) and the Derivatives Clearing and Settlement System (DCASS) scheduled for rollout by Q2 2019.

We continue to actively engage with market participants to ensure that our markets in Hong Kong and London remain internationally attractive and competitive.

Catalyst of Index Inclusion – Mutual Market Access Stock Connect

November 2018 marked the 4th anniversary of Shanghai-Hong Kong Stock Connect. It, along with Shenzhen-Hong Kong Stock Connect, have both played a pivotal role in enabling the inclusion of China's A shares into global indices in 2018. The MSCI Emerging Markets Index was the first to include A shares in June, with the MSCI All Country Index adding them in September. Inclusion momentum will continue in 2019, with FTSE Russell expecting to include A shares into its global benchmark indices in June and S&P Dow Jones to follow in September. Both Northbound and Southbound Trading in Stock Connect demonstrated strong growth in 2018, with A share inclusion a catalyst for Northbound Trading. Total Northbound turnover reached RMB4,674 billion, an increase of 106 per cent and Southbound Turnover reached \$2,834 billion, an increase of 25 per cent from 2017. As of the end of 2018, net capital inflow into the Mainland and into Hong Kong reached RMB641.7 billion and \$808.9 billion respectively since launch.

HKEX was pleased to reach a consensus with the two Mainland exchanges on the arrangements for including WVR companies in Southbound Trading in Stock Connect, with new rules to be implemented in mid-2019.



To enhance cross-border market surveillance and facilitate further development of mutual market access, an investor identification model for Northbound Trading (NB Investor ID Model) was successfully implemented in September 2018. On a reciprocal basis, the investor identification regime for Southbound Trading will be implemented as soon as practicable.

Bond Connect and FIC

As with the inclusion of A shares into international benchmark indices, Bond Connect also facilitated the inclusion of Chinese bonds into global indices in the fixed income space. Post year end, Bloomberg also announced that it would include Chinese onshore government and policy bank bonds into the Bloomberg Barclays Global Aggregate Index beginning April 2019. Market participation in Bond Connect has been growing steadily, with ADT reaching RMB3.6 billion in 2018, while overall foreign holdings in China's interbank bond market reached RMB1,730 billion by 31 December 2018, more than double the size from the launch of Bond Connect in July 2017. To further facilitate international participation in China bond market, HKEX welcomed Bloomberg LP as the second international trading platform to operate on Bond Connect in November 2018, with Bond Connect investors able to trade with this new platform from 17 January 2019. As of the end of December 2018, there were 503 registered institutional investors across 24 jurisdictions. The addition of a new international trading platform was among several measures announced in July 2018 by the People's Bank of China to support the sustainable development of the Bond Connect programme.

The RMB experienced an increase in volatility amid the escalation in trade tensions during the year. As demand for RMB risk management grew, HKEX's RMB derivatives products continued to set several records. The trading volume of USD/CNH Futures reached 1,755,130 contracts in 2018, surpassing the previous highest annual trading record in 2017 (732,569 contracts) since their launch in September 2012. USD/CNH Options also set a new record in open interest with 10,827 contracts on 14 September.

Clearing volume of OTC Clear reached US\$120.4 billion, up 210 per cent compared to 2017. Our product scope continued to expand with clearing of USD-HKD Cross Currency Swaps and Deliverable Foreign Exchange (DFX) denominated in USD/CNH and USD/HKD introduced during the year.

A New Chapter in Commodities

Trading volumes of LME metal contracts returned to growth in 2018, due partly to macroeconomic and geopolitical factors. Chargeable ADV of contracts traded on the LME was 629,556 lots⁴, 5 per cent higher than 2017. Key products including LME Aluminium, Copper, Zinc, Nickel and Lead recorded ADV growth of 10 to 25 per cent compared to 2017, while year-end LME futures market open interest was 2 million lots, down 11 per cent year-on-year. Growth in trading volumes was also partly a result of short and medium-dated carry discounts, which were introduced in October 2017 and extended indefinitely in September 2018. The new Financial OTC booking fee was implemented in June 2018 following a market consultation. To further build liquidity, the LME is introducing the new Registered Intermediating Broker (RIB) membership, ready for service launch in Q1 2019. LME also published its Responsible Sourcing position paper in Q4 2018, signalling its commitment to the long term health of the global metals market.

⁴ Excludes non-fee generating administrative trades

After several years of preparation, HKEX's subsidiary, the Qianhai Mercantile Exchange, was officially launched with a pilot product in October 2018 in Shenzhen. The QME is offering spot trading and settlement services for alumina. Since launch, total volumes recorded 77,000 tonnes in 2018, representing a trading value of RMB244.2 million and physical delivery of 75,000 tonnes. We are confident that the QME will help to create a credible price benchmark for alumina in the Mainland market.

Incubating Technology and Business Innovation

Apart from upgrading our core systems in Hong Kong and London, efforts to modernise our technology platforms continued in 2018 with a focus on the multi-year Next Generation Post Trade Programme and blockchain applications for improving efficiency and client experience. HKEX actively explored emerging technologies and its applications for our business through the newly established the HKEX Innovation Lab, which leverages on in-house development capabilities as well as external partnerships. The Lab is off to a good start; one project prototype is a blockchain-powered platform for post-trade allocation and processing for Stock Connect, which was built by the Lab in 2018. HKEX also co-hosted large scale fintech events in Hong Kong to connect innovators, entrepreneurs and investors in the innovation space.

Strategic Outlook

Our previous three 3-year strategic plans set out a bold vision for connecting international investors and our market with that of the Mainland and diversifying into new asset classes. In pursuing this vision, we have transformed HKEX from the premier offshore capital formation centre for China into both a destination and an access market that facilitates inbound and outbound securities investment in equities and fixed income via the Stock Connect and Bond Connect schemes. Further, we have become a leading player in international commodities trading through the acquisition and commercialisation of the LME. We also recently undertook the most significant reforms to our listing regime in 25 years with the launch of three New Chapters of our Listing Rules to better cater to the needs of new economy issuers. This has laid a firm foundation for the next chapter in HKEX's development, where we intend to transform ourselves from being a leading global exchange not only by virtue of our size, but also in terms of our product range, reach, global relevance, regulatory standards, market efficiency and technological innovation.

Building upon the successes of our Strategic Plan 2016-2018, we aim to further increase our international relevance to China and Asia, and our Asia relevance to the global markets, serving as the venue of choice for investors and issuers in the Asian time zone.

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Appreciation

It has been a strong year for HKEX overall, and I would like to express my greatest appreciation to the HKEX Group staff for their dedication and hard work. I would also like to take this opportunity to thank the senior executives who retired in 2018, including Trevor Spanner (Former Group Chief Information Officer and Group Risk Officer), Henry Law (Former Chief Communications Officer)⁵ and Roger Lee (Former Joint-Chief Operating Officer and Head of Markets), for their long service and contributions to HKEX Group. We have welcomed a number of new senior executives to the Group in the year, who collectively bring deep institutional and market knowledge, international and local insight, and together with the existing management team will strengthen the diversity of thought and leadership that we need for the next stage in our growth journey.

I must also thank the Hong Kong SFC, the Hong Kong Monetary Authority, our other regulators, market participants and other stakeholders for their ongoing engagement: we are part of a wider ecosystem and we very much value your partnership, expertise and support. We look forward to continuing to work with you.

Last but not least, I would like to thank my fellow members of the Board for their tremendous support and guidance. It is our great privilege to welcome Mrs Laura Cha's return to HKEX as the first woman to chair our Board in the history of HKEX. Laura's vision, international experience and exceptional background will add significant value to HKEX. I am personally indebted to the Board for its trust in keeping me at the helm of the ship for the next three years and I will continue to do my utmost to serve the Company.

LI Xiaoja, Charles

Director and Chief Executive

Hong Kong, 27 February 2019

⁵ Mr Law is serving as advisor until 28 February 2019.

Strategic Plan 2019-2021

Connecting China. Connecting the World.





Our vision is to be
**the Global Markets Leader
in the Asian Time Zone –
Connecting China,
Connecting the World.**

Building upon the role we already play as the leading venue for investing into and out of Mainland China, we aim to further increase our international relevance to China and Asia, and our Asia relevance to the global markets, serving as the venue of choice for investors and issuers in the Asian time zone.

Overview

Organisation

MD & A

Governance

Financials

Others

Overview

Our previous three 3-year strategic plans set out a bold vision for connecting international investors and our market with that of the Mainland and diversifying into new asset classes. In pursuing this vision, we have transformed HKEX from the premier offshore equity capital formation centre for China into both a destination and an access market that facilitates inbound and outbound securities investment in equities and fixed income via the Stock Connect and Bond Connect schemes. Further, we have become a leading player in international commodities trading through the acquisition and commercialisation of the London Metal Exchange.

Responding to the need to offer our enlarged investor base a greater diversity of investment exposures and to improve Hong Kong's market competitiveness, we also recently undertook the most significant reforms to our listing regime in 25 years with the launch of three New Chapters of our Listing Rules to better cater to the needs of new economy issuers.

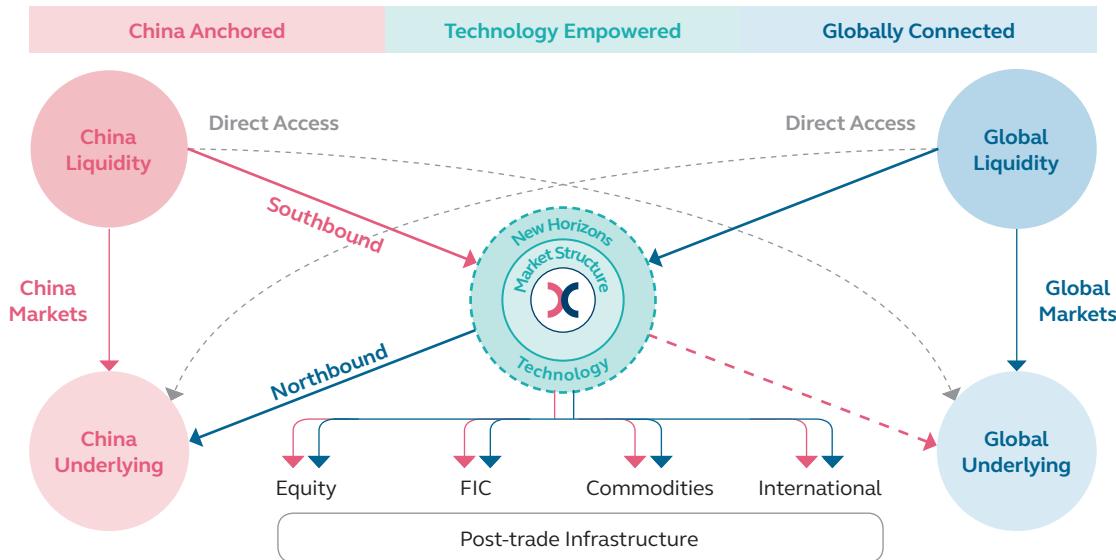
Through the Connect schemes, we have helped open the door for the inclusion of Mainland Chinese securities into major global benchmark indices, thereby heralding a new phase of internationalisation of China's capital markets and catapulting Hong Kong to greater international relevance for investors and issuers around the world. While our international stakeholders have mostly focused on the improved ease of access to onshore Chinese markets offered by these schemes, the Connect model has also helped China address its need to provide its citizens with a secure and transparent channel for investment diversification.

The continuing growth of international portfolio investment in Mainland China and the still nascent stage of Chinese outbound securities investment should provide the basis for significant growth for Hong Kong's financial markets and for HKEX for many years to come. As we continue to improve the ease of access and gradually extend the scale and scope of the Connect programmes, enhance our commodity and offshore RMB product offerings, and develop risk management tools across asset classes, these efforts will facilitate China's continuing financial markets liberalisation: they will help bridge the standards of the Mainland markets with international standards, and also serve to support the Guangdong-Hong Kong-Macao Greater Bay Area initiatives to promote mutual market access. In turn, they will cement Hong Kong's status as the premier global offshore RMB and risk management centre. These developments have laid a firm foundation for the next chapter in HKEX's growth, where we intend to transform ourselves from being a leading global exchange, not only by virtue of our size, but also in terms of our asset class and product range, reach, global relevance, regulatory standards, market efficiency, culture and technological innovation.

Our Vision

Our vision is to be **the Global Markets Leader in the Asian Time Zone – Connecting China, Connecting the World**. Building upon the role we already play as the leading venue for investing into and out of Mainland China, we aim to further increase our international relevance to China and Asia, and our Asia relevance to the global markets, serving as the venue of choice for investors and issuers in the Asian time zone.

Key Themes Underlying Our Strategic Plan 2019-2021



The major themes underlying our Strategic Plan 2019-2021 build upon the successes achieved under our previous Strategic Plans and centre on the following three focus areas:



China Anchored through two-way capital flows: (i) enhancing the internationalisation of China's domestic capital markets through the Northbound Connect programmes; and (ii) facilitating the international investment diversification of China's national wealth through the Southbound Connect programmes.

To achieve these aims, we need to provide international investors with better access to China underlying, both onshore and offshore, broaden our product suite to include more global underlying for Mainland investors, and enhance our market infrastructure to address the risk and capital management needs stemming from the expected growth in cross-border capital flows, particularly in Fixed Income and Currency (FIC).



Globally Connected on two fronts: (i) further increasing the relevance of Hong Kong's markets to global liquidity; and (ii) offering more Asia Pacific investment exposures in Hong Kong.

To meet the needs of our changing investor mix, we need to attract and service an expanding global customer base by adding Asia Pacific products across asset classes to our existing strong China product suite, improving our global competitiveness through market microstructure enhancements to deepen market liquidity, and expanding our global presence.



Technology Empowered to meet two objectives: (i) modernisation and growth of our core business; and (ii) exploration of new frontiers.

To capture the benefits of the accelerating pace of technological change in our industry, we need to modernise our core systems to improve market efficiency; embrace the application of new technologies across, and beyond, our value chain to deliver a better market experience and cost-effective outcomes; and explore potential strategic partnerships to venture into new horizons in Fintech and data markets.

Our Mission

Our mission is to:

- Build on our leading position in Hong Kong and be a globally respected organisation.
- Add value to our core franchises:
 - **Hong Kong:** promote and reinforce Hong Kong as a leading International financial centre, globally and particularly in Asia;
 - **China:** contribute to China's ongoing opening up and modernisation, offer attractive capital markets for its enterprises and investors, and facilitate interactions with the rest of the world; and
 - **Globally:** act as the go-to market for diversification into China and the rest of Asia, and as a major capital raising centre.
- Engage within our communities and promote broader social responsibility, providing strong career development for our people; and continual technological and financial innovation.
- Provide attractive long-term value to our shareholders.

Strategic Initiatives

Underlying these key themes of our Strategic Plan 2019-2021 is a deep analysis of the macroeconomic, geopolitical, competitive, technological and regulatory backdrops in which we operate today, and which we foresee over the coming three years and beyond.

China Anchored:

Facilitating China's Internationalisation and Investment Diversification

As the Mainland continues to pursue structural reforms, further internationalisation of China's capital markets will drive increasing flows of global liquidity into China underlying both onshore and offshore, supported by international index inclusions, demand for greater international portfolio diversification by Mainland investors, and the growing international role of the RMB.

To facilitate capital flows into the Mainland, we will need to provide international investors with the most comprehensive range of Chinese securities investments – whether they be listed on our market or via access to onshore trading venues – in the most efficient manner, and deliver cross-border FX solutions to meet the needs arising from surging inbound liquidity.

We continue to believe that it is in China's national interest to enable its citizens to seek long-term investment diversification on a global basis and that the Connect programmes provide the most mutually beneficial, secure, transparent and cost effective way of doing so. To support greater outbound investment, we will need to work with Mainland regulators and exchanges to leverage and expand these secure, transparent and controlled channels for Mainland citizens to invest in the growing portfolio of underlying products that we plan to bring to Hong Kong from global and Asia Pacific markets.

Increasing two-way cross-border investment in cash securities markets will also drive greater demand from investors for derivatives for risk and portfolio management purposes. These developments in turn will require HKEX to invest further in critical areas of risk management and post-trade infrastructure to provide for the cross-border custody and settlement needs of both Mainland and international investors. In this connection, we need to further extend our connectivity in FIC and commodities (QME and LME) to fully capture the potential upside in China's internationalisation.

Key Strategies

- **Expand Northbound capital inflows** by broadening the availability of onshore products and underlying, and through delivering more risk management tools offshore.
- **Expand Southbound capital allocation** to facilitate Mainland investors' investment diversification by offering more global underlying.
- **Expand post-trade infrastructure** to position Hong Kong as the trusted and secure cross-border trading, settlement, clearing and custody centre, particularly in FICC, and address the capital efficiency needs of both Northbound and Southbound capital.

Key Initiatives

- **Enhance Stock Connect** by gradually expanding product coverage across more stocks (including international companies), ETFs, listed bonds (including convertible bonds) and primary issuance (Primary Connect), introducing market microstructure improvements, and working with onshore regulators to introduce stock borrowing and lending for Southbound holdings and to allow short-selling by Northbound capital under existing mechanism on the onshore markets. In doing this, we will seek to work with the onshore exchanges on a win-win basis.
- **Launch A-share futures products** to support hedging of China A-shares by international investors, thereby enabling an increase in China A-shares' weighting in international benchmark indices.
- **Enhance Bond Connect** through structural improvements, the addition of a wider range of access platforms, and preparations to launch Southbound trading.
- **Develop connectivity to support cross-border execution in the RMB FIC derivatives market** for both exchange-traded and OTC hedging and capital management tools, including by working with onshore regulators and partners to expand eligible cross-border products to repos and derivatives, supported by cross-border clearing functionality.
- **Support improved access to the CNY market** through developing infrastructure to enable close regulatory monitoring and transparency.
- **Leverage Bond Connect to expand our FIC value chain and explore the development of Hong Kong as an international custody hub** to enhance cross-border trading and support Mainland investors' increased outbound investment in Hong Kong and beyond.
- **Offer an expanded commodities product suite** in LMEprecious (gold, silver, platinum), ferrous (hot-rolled coil, iron ore options, molybdenum), alumina and battery metals (lithium and cobalt).
- **Extend LME trading into the Asian time zone and expand our commodity spot price discovery capabilities** by leveraging our London, Hong Kong and onshore (QME) platforms; this will be done through acquisitions, partnerships and/or organic build-outs of spot trading platforms (utilising QME and LMEbullion) and developing Price Reporting Agency capabilities, thereby creating reliable global and China spot prices that can be used as reference prices for derivatives.
- **Extend our onshore commodities capabilities in the Mainland**, by exploring with onshore regulators the possibility of establishing LME licensed warehouses onshore to enhance the global competitiveness of Chinese commodities enterprises, developing QME to discover a reliable China spot price and eventually enabling international investors to get access to QME trading by extending our Commodities Connect programme and potentially launching futures on QME spot prices in Hong Kong and London.

Globally Connected:

Bringing Global Liquidity to China and Asia Pacific Underlying

Our strategic initiatives in recent years, particularly the Connect programmes, have significantly increased our relevance to international investors. As Mainland financial assets are included in international benchmark indices and their weighting in those increases, our relevance to international investors will continue to grow.

However, the changing investor mix in global markets and structural shifts in the investment management sector, including the rise in passive investment, algorithmic trading and pressures on traditional asset managers, are driving increasing geographic and asset class agnosticism. Against the backdrop of intensified industry competition to attract trading volumes, we must enhance the competitiveness of our core business by lowering our barriers to entry and reducing the costs and frictions of doing business with us through a range of market microstructure improvements and by adopting a more global approach.

Further, in light of rising levels of wealth, AUM and development in the Asia Pacific region, we see growing global demand for regional investment and exposures that today are either unmet entirely or which are relatively inefficient to access. To capture these opportunities, we must develop a larger ecosystem of products.

In particular, ETFs have increasingly become the preferred passive investment vehicles for both institutional and retail investors globally. As global investors are demanding more regional themes and products and Mainland investors are demanding more global themes and products over time, based on our attractive core market and close connection with Mainland's capital markets, Hong Kong is well positioned to be the hub for ETFs in the Asia Pacific.

To support us in pursuing these objectives, we must also strengthen our engagement with our clients, regulators and other stakeholders on a global basis.

Key Strategies

- **Enhance our product ecosystem across asset classes**, providing global liquidity with more comprehensive access to Hong Kong-listed or traded Asia Pacific underlying in addition to our existing offering, and onshore Chinese products through the Connect programmes.
- **Improve our market microstructure** to make our markets more globally competitive, cost effective and accessible, in order to enhance overall market liquidity.
- **Expand our international footprint further** to broaden and deepen our global operations beyond LME.

Key Initiatives

- **Build upon our 2018 Listing Reforms by further enhancing the structure of our IPO regime**, including pursuing measures to streamline our IPO process, shortening the IPO settlement cycle, and addressing microstructural frictions.
- **Develop a listing and capital raising hub for major global and regional companies** on either a primary or secondary basis, thereby attracting global investment seeking exposure to Asia Pacific companies and Mainland investors seeking international exposure. To better attract Asia Pacific companies to list in Hong Kong, we will work with relevant regulators on introducing changes to our listing regime as well as Remote Participantship arrangements. We will also work with Mainland regulators on facilitating the gradual inclusion of these listings in the Connect programmes on both a primary and secondary basis.
- **Become the ETF issuance and trading hub for the Asia Pacific time zone** through broadening our offering of both global and Asia Pacific exposure ETFs, working with our Mainland regulators and partners to include suitable ETFs in Southbound Connect, lowering barriers to issuance, implementing market microstructure improvements, orchestrating investor education programmes, and proactively supporting regional ETF product development with the development of corresponding derivatives and structured products.
- **Accelerate the pace of development of new products across derivatives and structured products** and adopt a holistic product development approach across our entire product ecosystem, by shortening our product development cycle, filling the remaining product gaps in our time zone, coordinating our equity product development efforts across single shares, ETFs, structured products, and futures and options, and supporting those efforts with targeted marketing.
- **Increase market liquidity in both cash and derivatives** by undertaking a series of market microstructure enhancements for both the Hong Kong market and Stock Connect, including further extending trading hours for equity derivatives, expanding the list of short-sellable stocks, and exploring initiatives to reduce the overall cost of trading.
- **Improve the ease of access to the Hong Kong markets** by streamlining our client on-boarding process, allowing Remote Participantship, and pursuing measures to offset the costs of initial on-boarding and new product support.
- **Expand our international footprint and customer engagement** to improve client coverage and promote the Hong Kong markets, our products and our offering, by launching new marketing and client coverage hubs in North America and Europe, dedicating more group resources to monitoring and assessing the opportunities presented by international market developments, and building upon our increased level of participation in international bodies in recent years.

Technology Empowered: Leveraging New Technology for Modernisation and Growth

Against the backdrop of an accelerating pace of technological innovation in our industry, we must focus on applying new technologies to modernise our core functions in order to enable greater efficiency in our operations and deliver new services to our market. As data becomes ever more important not only to us but to our clients, we are instituting a more data-oriented management culture throughout HKEX and will drive the adoption of integrated management information systems.

Beyond our core market competencies, we will continue investing in further enhancing our development capabilities and pursuing value-additive business solutions that may substantially alter our markets, by both leveraging our Innovation Lab and collaborating with specialist technology and solutions vendors.

Finally, in order to fully utilise technologies as enablers to drive further growth, we need to increase our focus on innovations that may offer new business opportunities and avenues of revenue generation, including through establishing potential partnerships with leading new economy companies.

Key Strategies

- **Modernise our core systems** to enhance product and service offerings and improve market and operational efficiency.
- **Leverage new technology**, including artificial intelligence, Blockchain, cloud infrastructure, and data analytics, in an agile manner to optimise processes, strengthen client engagement, and engage different parts of our value chain to deliver cost-effective outcomes.
- **Expand our horizons** by leveraging our regulatory and market trust and partnering with China's technology leaders to explore and pioneer in completely new frontiers, particularly with respect to data as a new asset class for the financial markets.

Key Initiatives

- **Roll out the Next Generation Post-Trade platform** and consolidate our Hong Kong clearing houses, thereby upgrading our clearing, settlement and depository infrastructure across cash and derivatives trading and facilitating dramatic improvements in capital and operational efficiencies in the Hong Kong market.
- **Introduce a series of core system enhancements** including the upgrading of the Genium derivatives trading platform and the integration of the LME's metals market and our Hong Kong derivatives market onto the Orion Trading Platform.
- **Expand our technology resources** through acquisitions or alliances with technology partners, including a majority investment in Shenzhen Ronghui Tongjin Technology Co. Ltd. (a subsidiary of Shenzhen Kingdom Sci-Tech Co. Ltd.), a leading financial markets technology company with an established presence in the fields of securities, data application, and regulation technologies, which will enhance our overall technological capabilities to accelerate many of our future IT projects and initiatives.
- **Leverage our Innovation Lab** to stay abreast of emerging new technologies and, where relevant, take a flexible approach to introducing them into our business via partnerships and/or pilot schemes, such as the application of Blockchain in Stock Connect trade allocations.
- **Launch Client Connect**, a unified single platform for our Exchange Participants, Clearing Participants and issuer clients to securely access an expanded range of HKEX services, enabling product cross-selling, digitised client workflows and straight-through processing.
- **Execute on an enterprise data strategy** by integrating our data architecture, digitising and automating processes group-wide, and establishing central data governance and ownership, thereby establishing a strong foundation for our ongoing technology innovation, reducing operational costs and time to market, and improving market insight and engagement.
- **Explore an opportunity to create a scalable Data Marketplace platform** for sharing data and analytics via a commercial pricing mechanism to better mobilise and monetise the large amount of data being produced.
- **Unlock new growth opportunities** by leveraging our network and trust among regulators and market participants, establishing potential strategic partnerships with China's technology leaders in areas beyond our current core competencies, and via investments in new technologies and talent that can bring in new capabilities.

Building the Right Organisation and Culture for a Market Leader

To support our strategic objectives, we will need to take a further leap forward in our talent development, capabilities and corporate culture, driving a more commercial, innovative and customer-centric approach in all aspects of what we do. We will seek to automate and optimise internal processes to free up resources that could otherwise be deployed towards development and growth. We are also committed to strengthening our engagement with external stakeholders, aligning our interests to the future prosperity of Hong Kong as a whole. HKEX's ambition to be a globally trusted and innovative organisation is matched by our commitment to deliver the highest standards of integrity and transparency in all that we do.

Driving the Right Culture

As part of our commitment to building a common and progressive culture across HKEX, we will launch our new “Vision, Purpose and Values” to employees, with values that we can share and a common vision for success. This will support a more collaborative approach and reflect the key role that we play in society and in the future prosperity of our communities as a whole.

Optimisation of Internal Processes

Through investment in our technology platforms and greater levels of automation, we will liberate our employees from many of the mundane and repetitive tasks that are carried out across the organisation. We expect to increase employee engagement and be able to reorient more of our resources towards customer engagement and business development.

Talent Development and Succession Planning

We will further invest in greater training and development throughout the organisation, to ensure that employees are continually improving their skills and knowledge, are best able to balance the alignment of business and risk objectives, and to provide specific leadership training to high potential employees.

As a part of our training and development, we will encourage greater employee mobility between our business divisions, improve collaboration and foster the development of “all-rounders” with experience in multiple areas of our business, which will support our long-term succession planning. We will instil a top-down focus and support to facilitate such comprehensive programme of talent development.

Engagement with External Stakeholders and Elevating CSR and ESG Standards

We will step up our level of engagement with the Government and our regulators not only for product and policy approvals, but also on the latest market developments, in order to foster greater alignment for the long-term health of the Hong Kong market. We will also continue to invest in our relationships with international regulators and associations, so that we can align with latest market best practices and shape future regulation and policies.

Through establishing a new Board level CSR Committee, we will take a more strategic approach in our CSR activities and focus on areas where our skills as a business can benefit the community and our own business. We aim to be the best-in-class among the Hong Kong community, through leading by example, continuing to enhance requirements for CSR and ESG reporting and disclosure by our listed companies, and providing guidance on meeting disclosure and operational standards. We will also seek to develop a green finance regime to facilitate sustainable financing for environmentally-aligned issuers seeking lower costs of funding.

Conclusion

In our previous 3-year strategic plan, we set out a bold vision: **Connecting China with the World, we are Reshaping the Global Market Landscape**. We believe we have, to a great extent, realised our strategy of building the most effective platform for cross-border access with Mainland China, and developed a unique destination market for products with both Chinese and international relevance.

Building on the successes of our Strategic Plan 2016-2018, we are now ready to declare an even bolder vision to bring Hong Kong and HKEX forward into a new sphere: to be **the Global Markets Leader in the Asian Time Zone – Connecting China, Connecting the World**. In support of this vision, as part of our Strategic Plan 2019-2021, we intend to focus our efforts in the following areas:



Mainland investors' diversification: Support international portfolio diversification by Mainland investors and facilitate further internationalisation of the domestic capital markets through secure, effective and transparent channels across asset classes;



Global access to Asia underlying: Attract global liquidity to Hong Kong by providing broader and more effective access to Asia Pacific underlying, creating a comprehensive and competitive one-stop shop for China and Asian exposures; and



Technology and innovation: Leverage technology to modernise our core business and explore new frontiers through strategic partnerships with technology leaders.

Our vision and strategic objectives represent the most ambitious and challenging in our recent history. However, when realised, these initiatives will position HKEX for continued leadership among the global exchange groups and drive Hong Kong to pre-eminence among the world's financial centres.

Board and Committees



From left: Hugo Leung, Fred Hu, Margaret Leung, John Williamson, Anita Fung, Rafael Gil-Tienda and Charles Li

Board

INEDs

Laura May-Lung CHA * ¹ GBM, GBS, JP (Chairman)
CHOW Chung Kong * ² GBS, JP (ex-Chairman)
Apurv BAGRI
CHAN Tze Ching, Ignatius ³ BBS, JP
CHEAH Cheng Hye
Timothy George FRESHWATER * ²
FUNG Yuen Mei, Anita * BBS, JP
Rafael GIL-TIENDA *
HU Zuliu, Fred ³
HUNG Pi Cheng, Benjamin * ⁴ BBS, JP
LEUNG KO May Yee, Margaret * SBS, JP
LEUNG Pak Hon, Hugo
John Mackay McCulloch WILLIAMSON ³
YIU Kin Wah, Stephen *

Executive Director

LI Xiaoja, Charles ⁵ (Chief Executive)

Group Company Secretary

MAU Kam Shing, Joseph

Committees

Audit Committee

YIU Kin Wah, Stephen (Chairman)
CHAN Tze Ching, Ignatius ⁶
FUNG Yuen Mei, Anita
LEUNG Pak Hon, Hugo
John Mackay McCulloch WILLIAMSON ⁶

Corporate Social Responsibility Committee

(formerly known as Environmental, Social and Governance Committee)
Laura May-Lung CHA ⁸ (Chairman)
CHOW Chung Kong ² (ex-Chairman)
Rafael GIL-TIENDA ⁹
LEUNG Pak Hon, Hugo
LI Xiaoja, Charles
John Mackay McCulloch WILLIAMSON ⁶
YIU Kin Wah, Stephen ¹⁰

Executive Committee

Laura May-Lung CHA ⁸ (Chairman)
CHOW Chung Kong ² (ex-Chairman)
CHEAH Cheng Hye
LEUNG KO May Yee, Margaret
LEUNG Pak Hon, Hugo
LI Xiaoja, Charles

- * Government Appointed Director
- ** Appointed by the Financial Secretary
- Δ Established under Section 65 of the SFO
- 1 Appointed as Director effective 25 April 2018 and as Chairman effective 4 May 2018 until the conclusion of the AGM to be held in 2020
- 2 Retired on 25 April 2018
- 3 Re-elected as Director from 25 April 2018 until the conclusion of the AGM to be held in 2021
- 4 Appointed as Director effective 25 April 2018 until the conclusion of the AGM to be held in 2020
- 5 Re-appointed as HKEX's Chief Executive (Ex-officio Director) for a further three-year term until 15 October 2021
- 6 Re-appointment effective 26 April 2018
- 7 Change of name effective 8 August 2018
- 8 Appointment by virtue of being HKEX's Chairman effective 4 May 2018
- 9 Appointment ceased on 26 April 2018



Investment Advisory Committee

CHEAH Cheng Hye¹¹ (Chairman)
 Timothy George FRESHWATER²
 (ex-Chairman)
 FUNG Yuen Mei, Anita
 HU Ziliu, Fred⁶
 HUNG Pi Cheng, Benjamin¹⁰

Nomination and Governance Committee¹²

(formerly known as Nomination Committee)
 Laura May-Lung CHA¹⁰ (Chairman)
 CHOW Chung Kong² (ex-Chairman)
 Apurv BAGRI
 CHAN Tze Ching, Ignatius⁶
 CHEAH Cheng Hye
 Timothy George FRESHWATER²
 LEUNG KO May Yee, Margaret¹⁰

Panel Member Selection Committee¹³

(formerly known as Panel Member Nomination Committee)
 CHAN Tze Ching, Ignatius⁶ (Chairman)
 CHEAH Cheng Hye
 FUNG Yuen Mei, Anita
 Rafael GIL-TIENDA
 LEUNG Pak Hon, Hugo

Project Oversight Committee¹⁴

FUNG Yuen Mei, Anita¹⁵ (Chairman)
 Apurv BAGRI¹⁵
 Rafael GIL-TIENDA¹⁵
 HU Ziliu, Fred^{6, 15}
 John Mackay McCulloch WILLIAMSON^{6, 15}

10 Appointment effective 26 April 2018
 11 Appointment as chairman effective 26 April 2018
 12 Change of name effective 9 May 2018
 13 Change of name effective 27 February 2019
 14 Dissolved on 19 October 2018
 15 Appointment ceased on 19 October 2018
 16 Appointment by virtue of being Executive Director (Monetary Management) of the Hong Kong Monetary Authority ceased on 27 June 2018

Remuneration Committee

Rafael GIL-TIENDA¹⁰ (Chairman)
 CHOW Chung Kong² (ex-Chairman)
 Laura May-Lung CHA¹⁰
 CHEAH Cheng Hye
 Timothy George FRESHWATER²
 HU Ziliu, Fred⁶
 John Mackay McCulloch WILLIAMSON⁶

Risk Committee

Laura May-Lung CHA⁸ (Chairman)
 CHOW Chung Kong² (ex-Chairman)
 CHAN Tze Ching, Ignatius⁶
 Rafael GIL-TIENDA
 LEUNG KO May Yee, Margaret
 YIU Kin Wah, Stephen

Risk Management Committee (statutory)[△]

Laura May-Lung CHA⁸ (Chairman)
 CHOW Chung Kong² (ex-Chairman)
 CHAN Tze Ching, Ignatius⁶
 CHENG Fat, Henry **¹⁶
 CHENG Siu Hong, Raymond **¹⁷
 GAO Yingxin **¹⁸
 LAM Yuk Kun, Lawrence **
 LAU Chung Kin, Clement **¹⁹
 LEUNG KO May Yee, Margaret
 LUI Kei Kwong, Keith **²⁰
 Barbara SHIU **

17 Appointment by virtue of being the Chairman of Hong Kong Interbank Clearing Limited ceased on 1 January 2018
 18 Appointment by virtue of being the Chairman of Hong Kong Interbank Clearing Limited effective 1 January 2018
 19 Appointment by virtue of being Executive Director (Monetary Management) of the Hong Kong Monetary Authority effective 27 June 2018
 20 Member by virtue of being Executive Director (Supervision of Markets) of the SFC

Board of Directors and Senior Management

Board of Directors



Laura May-Lung CHA

GBM, GBS, JP

Chairman, INED
Aged 69

Director since 25 April 2018
Chairman since 4 May 2018
Term of office: 25 April 2018 (appointed)
to 2020 AGM

Other positions held with the Group

HKEX – chairman of Corporate Social Responsibility Committee, Executive Committee, Nomination and Governance Committee, Risk Committee, Risk Management Committee (statutory) and International Advisory Council¹, and member of Remuneration Committee

SEHK – chairman of Listing Appeals Committee and member of Listing Nominating Committee

LME – independent non-executive director and member of Nomination Committee

LMEH – independent non-executive director

Other major offices

World Federation of Exchanges – director (2018~)

Unilever NV (listed on the Euronext Amsterdam) – non-executive director (2013~)

Unilever PLC (listed on the London Stock Exchange) – non-executive director (2013~)

HSBC Holdings plc * – independent non-executive director (2011~)

The Hongkong and Shanghai Banking Corporation Limited

– independent non-executive director (2004~) and deputy chairman (2007~)

Past offices

China Telecom Corporation Limited * – independent non-executive director (2008-2018)

HKEX – independent non-executive director (2006-2012)

China Securities Regulatory Commission – vice-chairman (2001-2004)

SFC – deputy chairman (1998-2001), executive director (1994-2001), senior director (1993-1994) and assistant director (1991-1993)

Coudert Brothers – lawyer (1985-1990)

Pillsbury, Madison & Sutro – lawyer (1982-1985)

Public service

Listing Policy Panel – member (2018~)

Financial Leaders Forum – member (2017~)

Executive Council of the HKSAR – non-official member (2004~)

China Securities Regulatory Commission – vice-chairman of International Advisory Council (2004~)

Qualifications

Bachelor of Arts (University of Wisconsin, US)

Juris Doctor (Santa Clara University, US)

State Bar of California (US)

Honorary Fellow (Hong Kong Securities and Investment Institute)

* Listed on the Stock Exchange

¹ Appointment effective 20 February 2019

**LI Xiaojia, Charles**

Executive Director, Chief Executive
Aged 57

Joined on 16 October 2009

Chief Executive since 16 January 2010
Ex-officio member of the Board
Term of office: renewed up to
15 October 2021

Other positions held with the Group

HKEX – member of Corporate Social Responsibility Committee and Executive Committee

HKFE, SEHK, HKCC, HKSCC and SEOCH – chairman

SEHK – member of Listing Committee of the Main Board and GEM

LME – member of Nomination Committee

HKEX's certain subsidiaries – director

Other major offices

China Entrepreneurs Forum – director (2005~)

Past offices

JP Morgan China – chairman (2003-2009)

Merrill Lynch China (1994-2003) : president (1999-2003)

Brown & Wood, New York – associate (1993-1994)

Davis Polk & Wardwell, New York – associate (1991-1993)

Public service

Listing Policy Panel – member (2018~)

The National Committee of the Chinese People's Political Consultative Conference – member (2018~)

Financial Experts Advisory Committee for Guangdong – advisory member (2017~)

Hong Kong Trade Development Council – member of Belt and Road Committee (2017~)

Consulting Committee of Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone of Shenzhen – member (2012~)

Qualifications

Bachelor of Arts (English Literature) (Xiamen University, China)

Master of Arts (Journalism) (University of Alabama, US)

Juris Doctor (Columbia University, US)

**Apurv BAGRI**

INED
Aged 59

Director since 28 April 2016
Term of office: 28 April 2016 (elected)
to 2019 AGM

Other positions held with the Group

HKEX – member of Nomination and Governance Committee

Other major offices

International Wrought Copper Council – director (2013~)

Metdist Group of Companies, London – president and chief executive officer (1980~)

Public service

Higher Education Funding Council for England – board member (2014~)

London Business School – chairman of governing body (2014~)

Royal Parks Board, England – chairman (2008~)

Dubai Financial Services Authority – director (2004~)

Crown Estate Paving Commission, England – commissioner (1996~)

Qualifications

Bachelor of Science in Business Administration

(Cass Business School, City University London, UK)

Doctor of Science (Honoris Causa) (City University London, UK)



Other positions held with the Group

HKEX – chairman of Panel Member Selection Committee, member of Audit Committee, Nomination and Governance Committee, Risk Committee and Risk Management Committee (statutory), and chairman of Clearing Consultative Panel
HKCC and SEOCH – chairman of Participant Admission Appeals Committee
HKSCC – chairman of Disciplinary Appeals Committee and Participant Admission Appeals Committee

Other major offices

AFFIN Bank Berhad (listed on Bursa Malaysia) – non-executive director (2017~)
Rizal Commercial Banking Corporation (listed on the Philippine Stock Exchange) – non-executive director (2011~)
CVC Capital Partners Limited – senior adviser (2010~)
Mongolian Mining Corporation * – independent non-executive director (2010~)
The Bank of East Asia Limited * – senior adviser (2009~)

Past offices

AFFIN Holdings Berhad (formerly listed on Bursa Malaysia) – non-executive director (2013-2018)
Bank of China (Hong Kong) Limited – deputy chief executive (2008)
Citigroup (1980-2007): Citigroup country officer for Hong Kong and head of corporate and investment banking business for Greater China (2005-2007), chief operating officer for Greater China (2004-2005), and Citigroup country officer for Taiwan (2003-2005)

Public service^{1,2}

Standing Committee on Judicial Salaries and Conditions of Service – member (2017~)
Financial Reporting Council – member (2014~)
Standing Commission on Civil Service Salaries and Conditions of Service – member (2014~)
Hong Kong Tourism Board – member (2013~)

Qualifications

Bachelor of Business Administration and **Master of Business Administration** (University of Hawaii, US)
Certified Public Accountant (American Institute of Certified Public Accountants)

- * Listed on the Stock Exchange
- 1 Ceased to be a member of the Executive Committee of the Investor Education Centre (established by the SFC) effective 19 October 2018
- 2 Ceased to be the chairman of council of The Hong Kong Polytechnic University effective 1 January 2019

**CHEAH Cheng Hye**

Darjah Gemilang Pangkuhan Negeri

INED
Aged 64Director since 26 April 2017
Term of office: 26 April 2017(elected)
to 2020 AGM**Other positions held with the Group**

HKEX – chairman of Investment Advisory Committee, member of Executive Committee, Nomination and Governance Committee, Panel Member Selection Committee and Remuneration Committee, and chairman of Cash Market Consultative Panel

SEHK – chairman of Disciplinary Appeals Committee and Exchange Participant Admission Appeals Committee

Other major offices

Value Partners Group * – chairman (2000~), executive director (1993~), and co-chief investment officer (2010~)

Past offices

Value Partners Group * – chief investment officer (1993-2010)

Morgan Grenfell Group, Hong Kong – executive director, head of research and proprietary trader (1989-1993)

The Asian Wall Street Journal, Far Eastern Economic Review, Asiaweek, Hong Kong Standard and The Star (Malaysia) – editor and financial journalist (1971-1989)

Public service

Listing Policy Panel – member (2018~)

Financial Services Development Council – member (2015~) and member of New Business Committee (2013~)

Qualifications

Honorary Fellow (The Hong Kong University of Science and Technology)

* The holding company of the group, namely Value Partners Group Limited, has been listed on the Stock Exchange since 2007.

**FUNG Yuen Mei, Anita**

BBS, JP

INED
Aged 58Director since 29 April 2015
Term of office: 26 April 2017 (re-appointed)
to 2019 AGM**Other positions held with the Group**

HKEX – member of Audit Committee, Investment Advisory Committee and Panel Member Selection Committee, and chairman of Derivatives Market Consultative Panel

HKFE – chairman of Disciplinary Appeals Committee and Exchange Participant Admission Appeals Committee

Other major offices

Westpac Banking Corporation (listed on the Australian Securities Exchange) – independent non-executive director (2018~)¹

China Construction Bank Corporation * – independent non-executive director (2016~)

Hang Lung Properties Limited * – independent non-executive director (2015~)

Past offices

HSBC Holdings plc * – group general manager (2008-2015)

The Hongkong and Shanghai Banking Corporation Limited (1996-2015):

chief executive officer Hong Kong (2011-2015), head of global banking and markets, Asia Pacific (2010-2011), and treasurer and head of global markets, Asia Pacific (2005-2010)

Bank of Communications Co Ltd * – non-executive director (2010-2015)

Public service²

Judicial Officers Recommendation Commission – member (2017~)

Museum Advisory Committee – member (2016~)

The Hong Kong Mortgage Corporation Limited – director (2016~)

Airport Authority Hong Kong – independent non-executive member of the board (2010~)

Qualifications

Bachelor of Social Science (The University of Hong Kong)

Master of Applied Finance (Macquarie University, Australia)

* Listed on the Stock Exchange

1 Appointment effective 1 October 2018

2 Ceased to be a board member of the West Kowloon Cultural District Authority effective 23 October 2018



Rafael GIL-TIENDA

INED
Aged 66

Director since 29 April 2015
Term of office: 26 April 2017 (re-appointed)
to 2019 AGM

Other positions held with the Group

HKEX – chairman of Remuneration Committee, member of Panel Member Selection Committee and Risk Committee, and deputy chairman of Cash Market Consultative Panel and Clearing Consultative Panel

SEHK and HKSCC – member of Disciplinary Appeals Committee

OTC Clear – chairman, independent non-executive director and chairman of Risk Management Committee

Other major offices

JPMorgan Chase Bank (China) Company Limited – independent non-executive director (2018~)

JP Morgan Securities (Asia Pacific) Limited – independent non-executive director (2017~)

Past offices

Oliver Wyman – chairman of Asia Pacific region (2012-2017)

Marsh & McLennan Companies – chairman of Asia Pacific region (2003-2011)

Standard Chartered Bank – head of Asian wholesale banking business (2001-2003), and head of corporate and institutional banking business, Greater China (1998-2001)

Citibank (1977-1998):

country manager of Citibank for Spain (1992-1998), for Malaysia (1988-1992) and for China (1984-1988)

Qualifications

Bachelor of Arts (Philosophy, Politics and Economics) (University of Oxford, UK)

Master of Business Administration (University of California, Berkeley, US)



HU Ziliu, Fred

INED
Aged 55

Director since 10 November 2014
Term of office: 25 April 2018 (re-elected)
to 2021 AGM

Other positions held with the Group

HKEX – member of Investment Advisory Committee and Remuneration Committee

Other major offices

UBS Group AG (listed on the SIX Swiss Exchange and the New York Stock Exchange) – director (2018~)

Yum China Holdings, Inc (listed on the New York Stock Exchange) – non-executive chairman (2016~)

Dalian Wanda Commercial Management Group Co Ltd (formerly listed on the Stock Exchange) – independent non-executive director (2014~)

Primavera Capital Limited – founder and chairman (2011~)

Tsinghua University – professor and co-director of National Center for Economic Research (1996~)

Past offices

Hang Seng Bank Limited * – independent non-executive director (2011-2018)

Great Wall Pan Asia Holdings Limited * – independent non-executive director (2010-2016)

Goldman Sachs Group Inc (1997-2010):

chairman of Greater China (2008-2010) and managing director (2000-2010)

International Monetary Fund, Washington DC – economist (1991-1996)

Qualifications

Master and Doctor of Philosophy (Economics) (Harvard University, US)

Master of Science (Engineering Science) (Tsinghua University, China)

* Listed on the Stock Exchange



HUNG Pi Cheng, Benjamin
BBS, JP

INED
Aged 54

Director since 25 April 2018
Term of office: 25 April 2018 (appointed)
to 2020 AGM

Other positions held with the Group

HKEX – member of Investment Advisory Committee
SEHK – member of Listing Nominating Committee

Other major offices

Standard Chartered Bank – regional chief executive officer, Greater China & North Asia (2015~) and chief executive officer of retail banking (2017~) and wealth management (2018~)

Standard Chartered Bank (China) Limited – chairman (2015~)

Standard Chartered Bank (Hong Kong) Limited – chairman (2014~)

Past offices

Standard Chartered Bank (Hong Kong) Limited (1992-2015):
chief executive officer, Greater China (2014-2015) and chief executive officer and executive director, Hong Kong (2008-2014)

HKEX – member of Risk Management Committee (statutory) (2008-2010 and 2014)

Public service¹

Chief Executive's Council of Advisers on Innovation and Strategic Development
– non-official member (2018~)

Hong Kong Trade Development Council – member of the Belt and Road Committee (2017~)

Hong Kong-United States Business Council – member (2016~)

Hong Kong Institute for Monetary Research – director (2011~)

Exchange Fund Advisory Committee – member (2009~)

Qualifications

Bachelor of Arts (Business Administration) (University of Washington, US)

Master of Business Administration (University of Toronto, Canada)

1 Ceased to be a member of the Financial Services Development Council effective 17 January 2019



LEUNG KO May Yee, Margaret
SBS, JP

INED
Aged 66

Director since 24 April 2013
Term of office: 26 April 2017 (re-appointed)
to 2019 AGM

Other positions held with the Group

HKEX – member of Executive Committee, Nomination and Governance Committee, Risk Committee and Risk Management Committee (statutory)

SEHK – member of Listing Nominating Committee

Other major offices

The Hong Kong Jockey Club – steward (2014~)

Li & Fung Limited * – independent non-executive director (2013~)

Sun Hung Kai Properties Limited * – independent non-executive director (2013~)

First Pacific Company Limited * – independent non-executive director (2012~)

Past offices

Chong Hing Bank Limited * – deputy chairman, executive director and managing director (2014-2018) and chief executive (2016-2017)

Yuexiu Financial Holdings Limited – vice-chairman, executive director and chief executive (2014-2018)

QBE Insurance Group Limited (listed on the Australian Securities Exchange) – independent non-executive director (2013-2017)

China Construction Bank Corporation * – independent non-executive director (2013-2016)

Hang Seng Bank Limited * – vice-chairman and chief executive (2009-2012)

HSBC Holdings plc * – group general manager (2005-2012)

Wells Fargo HSBC Trade Bank, NA – director (2007-2010)

HSBC Group – global co-head, commercial banking (2003-2009)

Public service¹

Advisory Committee on Arts Development – member (2018~)²

Public Service Commission – member (2018~)³

The National Committee of the Chinese People's Political Consultative Conference – member (2013~)

Qualifications

Bachelor in Economics, Accounting and Business Administration
(The University of Hong Kong)

* Listed on the Stock Exchange

1 Ceased to be a member of the Chinese People's Political Consultative Conference Guangzhou Committee in January 2019

2 Appointment effective 1 November 2018

3 Appointment effective 1 July 2018



LEUNG Pak Hon, Hugo
INED
Aged 50

Director since 26 April 2017
Term of office: 26 April 2017 (elected)
to 2020 AGM

Other positions held with the Group

HKEX – member of Audit Committee, Corporate Social Responsibility Committee, Executive Committee and Panel Member Selection Committee, and deputy chairman of Derivatives Market Consultative Panel

HKFE – member of Disciplinary Appeals Committee

Other major offices

BNP Paribas – head of global markets, Hong Kong (2015~)

BNP Paribas Securities (Asia) Limited – chief executive officer (2015~)

Past offices

BNP Paribas – head of global equities and commodity derivatives, Greater China (2013-2015)

BNP Paribas Securities (Asia) Limited – deputy chief executive officer (2012-2015), head of equity syndicate and corporate equity (2010-2012), head of equity brokerage (2007-2010), head of Asia (ex-Greater China) product (2004-2007), product sales head for Taiwan (2003-2004) and deputy managing director (2000-2003)

Qualifications

Bachelor of Arts (Economics) (Simon Fraser University, Canada)



John Mackay McCulloch WILLIAMSON

INED
Aged 60

Director since 18 June 2008
Term of office: 25 April 2018 (re-elected)
to 2021 AGM

Other positions held with the Group

HKEX – member of Audit Committee, Corporate Social Responsibility Committee and Remuneration Committee

SEHK – deputy chairman of Listing Appeals Committee

Past offices

Search Investment Group Limited – senior managing director (2012-2018), chief financial officer (2007-2018), and managing director (2007-2011)

SAIL Advisors Limited – chief executive officer (2011-2018)

HKEX – member of Clearing Consultative Panel (2000-2007)

Morgan Stanley Dean Witter Asia Limited – managing director, and head of infrastructure and operational risk (1998-2007)

NatWest Securities Asia Holdings Limited – chief operating officer (1994-1998)

NatWest Investment Services, London – managing director (1992-1994)

Qualifications

Bachelor of Arts (Accountancy & Computer Science) (Heriot-Watt University, UK)

Chartered Accountant (The Institute of Chartered Accountants of Scotland)

Fellow (Chartered Institute for Securities and Investment, UK)

Senior Fellow (Hong Kong Securities and Investment Institute)



YIU Kin Wah, Stephen

INED
Aged 58

Director since 26 April 2017
Term of office: 26 April 2017 (appointed)
to 2019 AGM

Other positions held with the Group

HKEX – chairman of Audit Committee, and member of Corporate Social Responsibility Committee and Risk Committee

LME – independent non-executive director, and chairman of Audit and Risk Committee

LME Clear – independent non-executive director, chairman of Audit Committee, and member of Nomination Committee and Remuneration Committee

Other major offices

ANTA Sports Products Limited * – independent non-executive director (2018~)

China Mobile Limited * – independent non-executive director (2017~)

Past offices

KPMG International – member of executive committee and board (2011-2015)

KPMG Asia Pacific – member of board (2011-2015) and executive committee (2009-2015)

KPMG China (including Hong Kong) (1983-2015):
chairman and chief executive officer (2011-2015), deputy chairman (2010-2011), audit partner-in-charge (2007-2010), and partner (1994-2015)

Public service

Independent Commission Against Corruption Complaints Committee

– member (2019~)¹

Exchange Fund Advisory Committee – member (2018~)²

Insurance Authority – non-executive director (2015~)

Qualifications

Professional Diploma in Accountancy (The Hong Kong Polytechnic University)

Master in Business Administration (Warwick University, UK)

Fellow (Association of Chartered Certified Accountants and HKICPA)

Associate (The Institute of Chartered Accountants in England & Wales)

* Listed on the Stock Exchange

¹ Appointment effective 1 January 2019

² Appointment effective 1 November 2018

Group Company Secretary



MAU Kam Shing, Joseph

Group Company Secretary and
Head of Secretarial Services
Aged 60

Joined in June 2000

Past offices

Hysan Development Company Limited – company secretary (1988-2000)

Qualifications

Master of Science (Business Administration) (The University of Bath, UK)

Master of Laws in Corporate and Financial Laws (The University of Hong Kong)

Associate (HKICPA)

Fellow (The Hong Kong Institute of Chartered Secretaries,
The Institute of Chartered Secretaries and Administrators,
Association of Chartered Certified Accountants, and
The Institute of Chartered Accountants in England & Wales)

Senior Management



Roland Paul CHAI

Group Risk Officer
(effective 1 June 2018)
Aged 46

Joined in June 2017

Other positions held with the Group

LME Clear – member of Audit Committee

Past offices

HKEX – Chief Operating Officer and Head of Clearing Risk Solutions, Clearing (2017-2018)

LCH. Clearnet Ltd – executive director, head of equities, EquityClear (2009-2017)

ASX Limited – product development manager (2006-2008)

Skandia Australia – IT development manager (2004-2006)

Qualifications

Bachelor of Arts and **Bachelor of Law** (The University of Sydney, Australia)



Matthew James CHAMBERLAIN

Chief Executive, LME
Aged 37

Joined in November 2012

Other positions held with the Group

LME – chairman of Executive Committee, vice chairman of Aluminium Committee, and member of Charity Committee, Enforcement Committee and User Committee

LME Clear – member of Executive Committee

Past offices

LME – chief operating officer (2016-2017), head of business development (2013-2016) and head of strategy and implementation (2012-2013)

UBS – head of European financial technology coverage (2010-2012)

Perella Weinberg Partners – founding member of the financial institutions coverage team (2006-2010)

Citibank – analyst of financial institutions group (2004-2006)

Qualifications

Master of Arts (Computer Sciences) (Trinity College, University of Cambridge, UK)



Past offices

Goldman Sachs (Asia) LLC (1996-2015 and 1993-1994): co-head of human capital management, Asia Pacific (2014-2015) and managing director (2007-2015), and executive director, investment banking (1993-1994)
JP Morgan – vice president, investment banking (1994-1996)

Qualifications

Diploma in Business Studies (The Hong Kong Polytechnic University)

CHAU Yee Wah, Eva

Group Head of Human Resources
Aged 56

Joined in August 2016



Past offices

Mitie plc – group director, corporate affairs and investor relations (2017-2018)
Mitie Foundation – trustee (2017-2018)
London Stock Exchange Group plc – group communications director (2010-2017)
London Stock Exchange Group Foundation – trustee (2010-2017)
Thomson Reuters – head of communications (Europe, Middle East and Africa) (2007-2010)

Qualifications

Bachelor of Science (Economics) (Loughborough University, UK)
Associate (The Institute of Chartered Accountants in England & Wales)

Victoria Robyn COWLEY

Group Chief Communications Officer
Aged 45

Joined in September 2018



Other positions held with the Group

LME – member of Charity Committee and Executive Committee
LME Clear – chairman of Executive Committee

Past offices

LME Clear – chief operating officer (2013-2015)
Turquoise Global Holdings Limited – chief executive officer (2010-2012) and chief operating officer (2008-2009)
Morgan Stanley – executive director of operations and several senior positions in audit, finance and operations (1994-2007)

Qualifications

Bachelor of Science (Management Sciences) (London School of Economics, UK)
Associate (The Institute of Chartered Accountants in England & Wales)

Adrian John Winston FARNHAM

Chief Executive, LME Clear
Aged 54

Joined in January 2013



David GRAHAM

Head of Listing
Aged 60

Joined in January 2013

Other positions held with the Group

LME – chairman of Enforcement Committee, and member of Arbitration Panel Committee, Audit and Risk Committee, and Special Committee

Past offices

HKEX – Chief Regulatory Officer (2013-2018)

Nomura – global head of legal and general counsel, wholesale division (2011-2013)

UBS – global/co-global general counsel (UBS Investment Bank) (2008-2011), group general counsel (Europe, Middle East and Africa) (2009-2011), and general counsel (Asia Pacific) (2004-2008)

Morgan Stanley – general counsel, Asia ex-Japan (2001-2004)

Freshfields Bruckhaus Deringer LLP (1982-2001): partner (1991-2001)

Public service

SFC – member of Advisory Committee (2013~)

Standing Committee on Company Law Reform – member (2013~)

Qualifications

Master of Arts (Jurisprudence) (University of Oxford, UK)

Solicitor (Hong Kong, and England & Wales)



John Patrick KILLIAN

Group Chief Financial Officer
Aged 51

Joined in December 2017

Past offices

Goldman Sachs (Hong Kong) – controller, Asia Pacific (2010-2017)

Deutsche Bank AG/Bankers Trust Co (1995-2010):

several senior positions including head of finance, Asia and Asia Pacific global banking (2009-2010), and chief financial officer of North Asia (2008-2009) and of Japan (2005-2008)

Banco Santander – assistant controller (1993-1995)

Qualifications

Bachelor of Science (Accounting) (Marist College, US)

Executive Master of Business Administration (Columbia University, US)



Romnesh LAMBA

Co-head of Market Development
Aged 55

Joined in February 2010

Other positions held with the Group

LME – member of Audit and Risk Committee

LME Clear – member of Audit Committee and Nomination Committee

Past offices

HKFE – chief executive (2013-2016)

SEHK – chief executive (2013-2016)

HKEX – Co-head of Global Markets (2013-2015) and Head of Market Development (2010-2013)

JP Morgan (Hong Kong) – senior adviser, Asia ex-Japan corporate finance and capital markets business (2008-2010)

Merrill Lynch (Asia Pacific) (2000-2008):

managing director, investment banking, and chief operating officer of China origination business (2006-2008), and head of Asia energy and power team (2003-2006)

Indosuez WI Carr Securities (Hong Kong) – head of equity capital markets and director, investment banking (1997-2000)

Qualifications

Bachelor of Science in Economics (Magna Cum Laude) and

Master of Business Administration (Distinction)

(The Wharton School, University of Pennsylvania, US)

**LEUNG Chung Kwong, Richard**

Deputy Group Chief Information Officer and
Chief Technology Officer Hong Kong
Aged 55

Joined in October 2011

Past offices

HKEX – Co-head of IT (2011-2017)
Chi-X Global – chief technology officer (2008-2011)
Cicada Corporation – chief technology officer (1999-2008)
Telerate Inc – regional technical development manager, Asia Pacific (1985-1999)

Public service

Hospital Authority – co-opted member of Information Technology Technical Advisory Sub-Committee (2018~)

Qualifications

Master of Science (E-Commerce) (The Hong Kong Polytechnic University)

**LI Gang**

Co-head of Market Development
Aged 53

Joined in March 2013

Other major offices

BCCL – director (2017~)

Past offices

HKEX – Co-head of Mainland (2015) and Senior Adviser (2013-2015)
Shanghai Billington Metal – chief executive officer (2004-2012)

Qualifications

Bachelor of Science (Earth and Space Sciences)
(University of Science and Technology of China, China)

**Ferheen MAHOMED**

Group General Counsel
Aged 53

Joined in February 2017

Other major offices

Aseana Properties Limited (listed on the London Stock Exchange)
– non-executive director (2015~)

Past offices

Pacific Century Group – executive vice president of business development (2014-2017)
CLSA Limited – group general counsel (2010-2014)
Societe Generale – general counsel for Asia Pacific (1997-2010)

Qualifications

Bachelor of Laws (The University of Hong Kong)
Bachelor of Civil Law (St John's College, The University of Oxford, UK)
Solicitor (Hong Kong, and England & Wales)



MAO Zhirong

Head of Mainland Development
Aged 55

Joined in March 2013

Other major offices

BCCL – director (2017~)

China Exchanges Services Company Limited – chief executive (2014~) and director (2013~)

Past offices

HKEX – Head of Mainland Affairs (2016), Co-head of Mainland (2015) and Head of Mainland Development (2013-2015)

Shenzhen Stock Exchange – several senior positions including director of strategy and international affairs, director of financial innovation lab and head of derivative product task force, and deputy director at member supervision department (2001-2013)

WellPoint Inc – various professional and managerial positions across functions including IT, product development and risk management (1993-2001)

Qualifications

Bachelor of Arts (Economics) (Fudan University, China)

Master of Arts (Economics) and Doctor of Philosophy (International Affairs) (University of California, San Diego, US)



TAI Chi Kin, Calvin

Chief Operating Officer,
Head of Markets (Interim)
(both effective 1 January 2019)
and Head of Clearing
Aged 56

Joined in July 1998

Other positions held with the Group

HKFE – chief executive

SEHK – chief executive, and chairman of Compensation Committee and Disciplinary Committee

HKSCC – chief executive and member of Risk Management Committee

OTC Clear – chief executive and chairman of User Committee

Other major offices

China Exchanges Services Company Limited – director (2012~)

Past offices

HKEX – Joint Chief Operating Officer (2017-2018), Head of Global Clearing (Asia) (2014-2015), Co-head of Equities and FIC Business (2013-2014), Head of Trading Division (2010-2013), and Head of Derivatives Market Development and Operations (2003-2010)

HKFE – head of products (1998-2000)

ABN-Amro Bank NV – senior vice president of treasury division (1995-1998)

Royal Bank of Canada – head of treasury department (1994-1995)

HSBC – various positions in general banking and treasury (1984-1994)

Public service

SFC – member of Securities Compensation Fund Committee and Investor Compensation Fund Committee (2019~)

Qualifications

Bachelor of Social Sciences (The University of Hong Kong)

Roland Chai, Matthew Chamberlain, Eva Chau, Adrian Farnham, David Graham, John Killian, Romnesh Lamba, Richard Leung, Li Gang, Ferheen Mahomed, Mao Zhirong and Calvin Tai also act as directors in certain HKEX's subsidiaries.

Management Committee



Front Row (from left)

Back Row (from left)

Richard Leung

David Graham

Calvin Tai

Charles Li

Romnesh Lamba

Li Gang

Matthew Chamberlain

Roland Chai

Mao Zhirong

Ferheen Mahomed

John Killian

Eva Chau

Adrian Farnham

Tori Cowley

Business Review

Overview

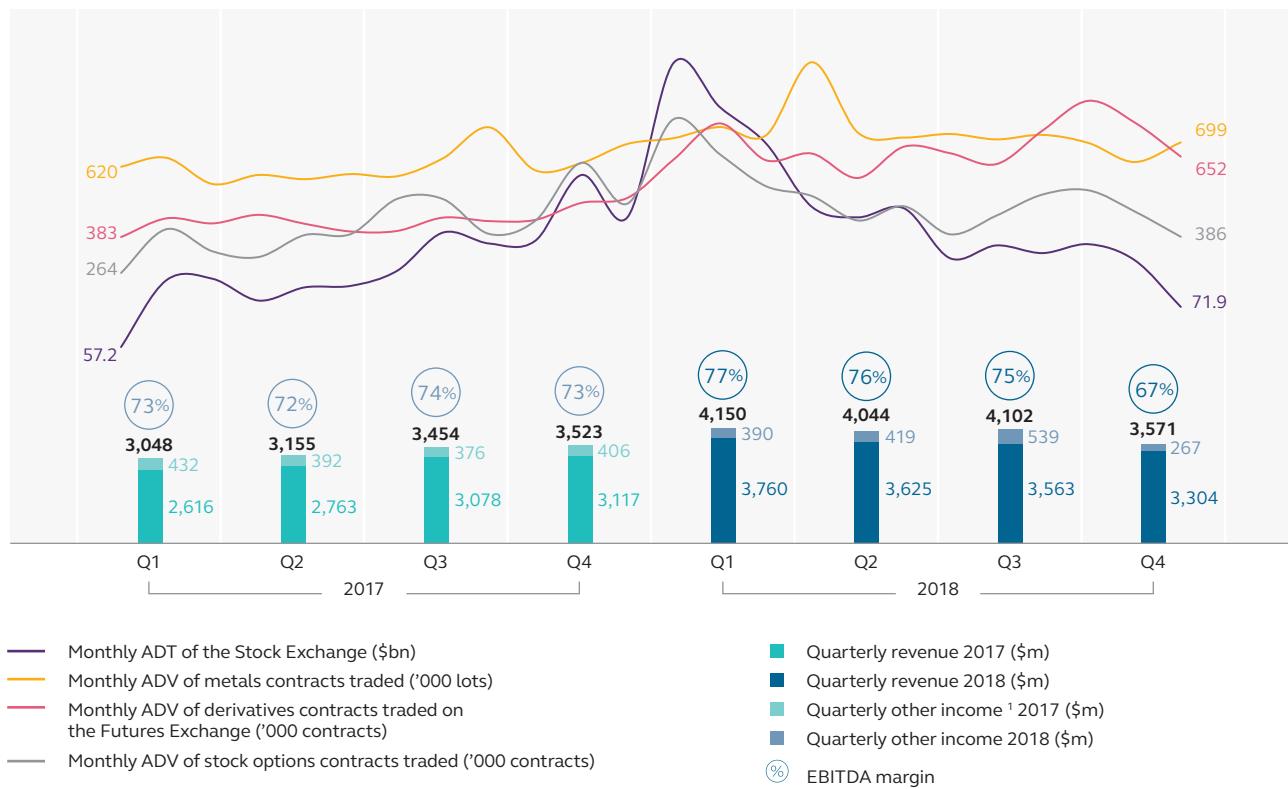


Fig. 1 – Market activity and Group's revenue and other income

2018 was a great year for both trading volumes and IPOs. The market started strongly in Q1 2018², with the benchmark HSI achieving a historic intraday high of 33,484 points in January. However, market sentiment started to weaken in 2H 2018 due to increased concerns over the US/China trade tensions and a weakening economic outlook in China. Notwithstanding this, benefiting from a strong 1H 2018, Cash Market trading achieved a record high headline ADT³ of \$107.4 billion in 2018, 22 per cent above 2017.

Stock Connect trading volumes also reached record highs with Northbound and Southbound ADT being 113 per cent and 30 per cent higher respectively than in 2017. Increased volatility in our Derivatives Market helps deliver record high trading volumes, with increases in ADV of HKFE contracts and stock options traded of 56 per cent and 21 per cent respectively against 2017. The IPO market saw a record 218 listings⁴ in 2018, including seven companies that listed under New Chapters⁵, and the number of newly listed DWs and CBBCs also reached record highs. As a result, revenue and other income reached a record of \$15,867 million in 2018.

Operating expenses in 2018 increased by 15 per cent compared with 2017. This primarily reflects higher staff costs due to increased headcount, annual payroll adjustments and higher variable pay, higher premises and relocation expenses for consolidation of offices, and increased maintenance expenses for new IT systems and upgraded networks.

In view of the current macroeconomic backdrop, the Group continues to maintain a prudent approach to cost management whilst pursuing key strategic initiatives for future growth.

¹ Includes net investment income and sundry income

² Q1 = first quarter, Q2 = second quarter, Q3 = third quarter, Q4 = fourth quarter, 1H = first half, 2H = second half

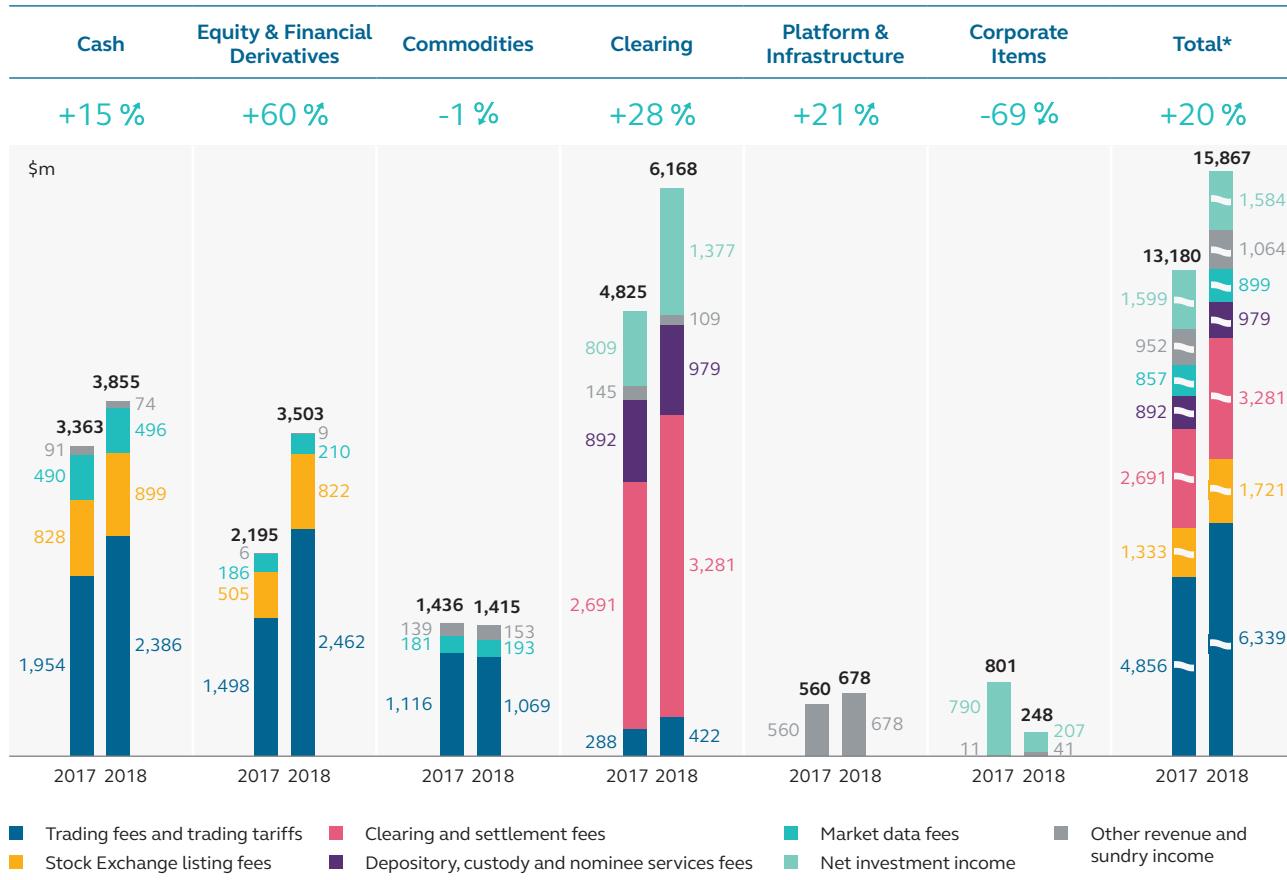
³ ADT of equity products, DWs, CBBCs and warrants traded on the Stock Exchange

⁴ Includes transfers of listing from GEM to the Main Board

⁵ Refers to the Main Board Listing Rules Chapters 8A, 18A and 19C

Business Update and Analysis of Results by Operating Segment

Analysis of Revenue and Other Income by Segment



* Total revenue and other income is not presented in full scale, but is proportionately resized.

Analysis of EBITDA and EBITDA Margin by Segment*



(%) EBITDA margin = EBITDA divided by Revenue and Other Income

* Further details of the results by segment are set out in note 4 to the Consolidated Financial Statements of this Annual Report.

Cash Segment

Key Market Indicators

	2018	2017	Change
ADT of equity products traded on the Stock Exchange ^{1,2} (\$bn)	84.2⁴	71.2	18%
ADT of Northbound Trading – Shanghai-Hong Kong Stock Connect ² (RMBbn)	11.6⁴	5.6	107%
ADT of Northbound Trading – Shenzhen-Hong Kong Stock Connect ² (RMBbn)	8.8⁴	4.0	120%
ADT of Bond Connect (RMBbn)	3.6⁴	2.2	64%
Average daily number of trades of equity products traded on the Stock Exchange ^{1,2}	1,224,697⁴	1,034,651	18%
Number of newly listed companies on Main Board ³	143⁴	94	52%
Number of newly listed companies on GEM	75	80	(6%)
Number of companies listed on Main Board at 31 Dec	1,926	1,794	7%
Number of companies listed on GEM at 31 Dec	389	324	20%
Total	2,315	2,118	9%
Market capitalisation of companies listed on Main Board at 31 Dec (\$bn)	29,723	33,718	(12%)
Market capitalisation of companies listed on GEM at 31 Dec (\$bn)	186	281	(34%)

1 Excludes DWs, CBBCs and warrants (which are included under the Equity and Financial Derivatives segment) and includes \$8.2 billion⁴ (2017: \$ 7.5 billion) of ADT of Southbound Trading under Shanghai-Hong Kong Stock Connect and \$4.5 billion⁴ (2017: \$2.3 billion) under Shenzhen-Hong Kong Stock Connect

2 Includes buy and sell trades under Stock Connect

3 Includes 10 transfers from GEM (2017: 13)

4 New record highs in 2018

	2018 \$bn	2017 \$bn	Change
Total equity funds raised on Main Board			
– IPOs	282.9	122.6	131%
– Post-IPO	250.3	444.8	(44%)
Total equity funds raised on GEM			
– IPOs	5.1	5.9	(14%)
– Post-IPO	5.8	8.1	(28%)
Total	544.1	581.4	(6%)

Stock Connect – New Record Highs in 2018

	2018	2017	Change
Northbound Trading value (RMBbn)	4,674	2,266	106%
Southbound Trading value (\$bn)	2,834	2,259	25%
Total revenue and other income ¹ (\$m)	678	412	65%

1 \$418 million of which arose from trading and clearing activities (2017: \$238 million)

Analysis of Results

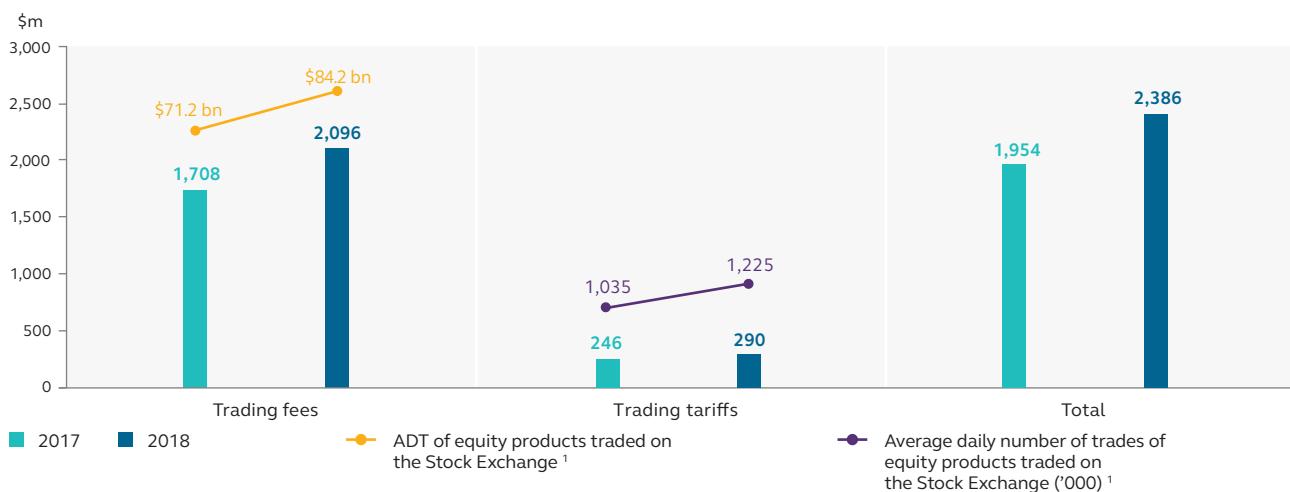
Summary

	2018 \$m	2017 \$m	Change
Trading fees and trading tariffs ¹	2,386	1,954	22%
Stock Exchange listing fees ¹	899	828	9%
Market data fees ¹	496	490	1%
Other revenue	74	91	(19%)
Total revenue	3,855	3,363	15%
Operating expenses ²	(584)	(581)	1%
EBITDA	3,271	2,782	18%
EBITDA margin	85%	83%	2%

1 Excludes DWs, CBBCs and warrants (which are included under the Equity and Financial Derivatives segment)

2 Includes Listing Division costs relating to equity products traded on the Stock Exchange

Trading Fees and Trading Tariffs



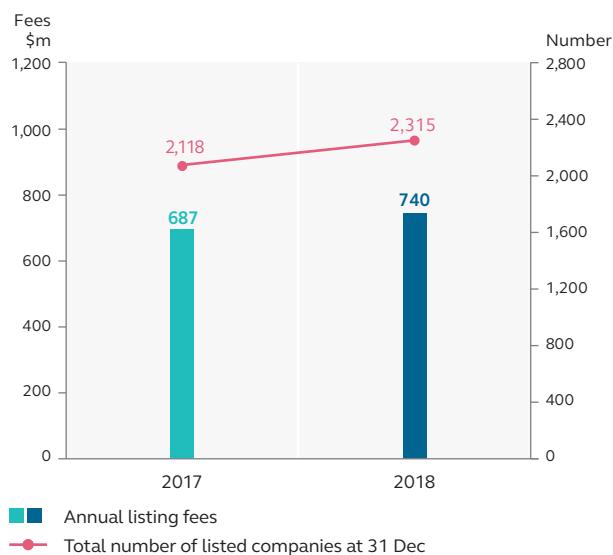
1 Excludes DWs, CBBCs and warrants (which are included under the Equity and Financial Derivatives segment)

Trading fees increased by \$388 million (23 per cent), outpacing the 18 per cent rise in equity products ADT. This was primarily due to higher Stock Connect trading, higher fees from new equities funds raised, and an improvement in product mix – with a drop in the proportion of ETF trades (of which approximately 50 per cent were conducted by market makers who are exempted for trading fees). Trading tariffs rose by 18 per cent, in line with the increase in number of trades of equity products.

Stock Exchange Listing Fees

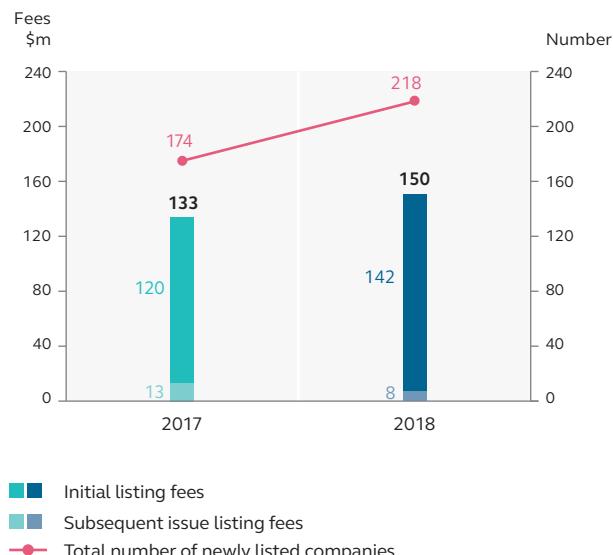
	2018 \$m	2017 \$m	Change
Annual listing fees	740	687	8%
Initial and subsequent issue listing fees	150	133	13%
Others	9	8	13%
Total	899	828	9%

Annual Listing Fees



Annual listing fees increased in line with the rise in the total number of listed companies.

Initial and Subsequent Issue Listing Fees



Initial and subsequent issue listing fees increased by 13 per cent due to the higher number of newly listed companies and an increase in forfeitures and withdrawals. As a result of the adoption of new accounting standard HKFRS15, initial listing fees are recognised over the years when the services are provided.

EBITDA

Operating expenses increased by \$3 million, or 1 per cent, due to higher staff costs from increased headcount and higher variable pay, and increased IT maintenance expenses for Stock Connect, partly offset by cost savings associated with the conversion of the former HKEX trading hall into a multi-purpose function space – the HKEX Connect Hall, operating costs of which are now recorded under Corporate Items. The increase in EBITDA margin from 83 per cent to 85 per cent reflects the increase in revenue.

Business Update

2018 was a record year for HKEX. The year started strongly and Q1 saw a record level of trading activities, stock market performance and market capitalisation. The benchmark HSI achieved a historic intraday high of 33,484 points on 29 January 2018. Market capitalisation also reached a record high of \$37,715.7 billion on 26 January 2018. Market sentiment and level of trading activities nonetheless moderated since Q2, reflecting investors' concerns about US/China trade tensions and the weakening macroeconomic environment, but headline ADT reached a record yearly high of \$107.4 billion.

Stock Connect

Stock Connect achieved record turnover in a second consecutive year. The doubling of Northbound Trading volume can be partly attributed to the A shares inclusion in MSCI Emerging Markets Index and All Country Index (MSCI Indices) effective in June and September 2018.

Key Highlights of Stock Connect during 2018

- Over 4,500 new Special Segregated Accounts (SPSA) were opened in 2018, with total SPSA now reported at over 7,000 accounts as at 31 December 2018
- Expansion of daily quota under Stock Connect to RMB52 billion for each of Shanghai Connect and Shenzhen Connect in Northbound Trading and to RMB42 billion for Southbound Trading came into effect on 1 May 2018
- Real-time delivery-versus-payment settlement facility, which was introduced in late 2017, saw an average of 14 per cent usage in 2018 compared with less than 1 per cent for the Hong Kong Market
- China Connect Clearing Participants (CCEPs) are allowed to use USD or HKD as collateral on trading days for the early release of China Connect Securities that are securities-on-hold from May 2018
- Successful inclusion of A shares into MSCI Indices effective in June and September 2018, which partly contributed to the growth of Northbound Trading volume. An investor identification regime for Northbound Trading, aiming at facilitating market surveillance and monitoring, was launched on 26 September 2018
- HKEX, together with Digital Asset Holdings, LLC and key market participants, completed a Distributed Ledger Technology (DLT) prototype platform for Northbound Trading of Stock Connect post-trade allocation processing to enable real time synchronisation of post-trade status among multiple market players and HKEX

Key Initiatives of Stock Connect to be Effective in 2019

- In July 2018, HKEX, the Shanghai Stock Exchange and the Shenzhen Stock Exchange agreed on adjusting the inclusion arrangements for eligible securities under Stock Connect's Southbound Trading. An initial Special Stability Trading Period (SSTP) will be required for Hong Kong listed weighted voting rights (WVR) companies. A consensus was reached in December 2018, and it is expected that the new rules will be implemented in mid-2019
- The SFC and the China Securities Regulatory Commission (CSRC) jointly announced the implementation of an investor identification regime for Southbound Trading, targeting the end of Q1 2019. Meanwhile, HKEX has enhanced its SMARTS trade surveillance system to prepare for the launch
- In September 2018, MSCI announced the launch of a consultation on the further addition of A shares in its Emerging Markets Index with inclusion factor of up to 20 per cent in 2019; and FTSE Russell also announced first time inclusion of A shares in its global indices starting June 2019, up to a 15 per cent inclusion factor by September 2019
- In December 2018, S&P Dow Jones Indices LLC announced its plan to debut A shares (specifically eligible A shares under Stock Connect's Northbound Trading) in its indices on 23 September 2019 with a 25 per cent inclusion factor
- HKEX is planning to take the DLT prototype forward by engaging a wider base of market participants to gather requirements for a possible production deployment

Issuer Business

Hong Kong was again No. 1 market worldwide for IPOs in 2018, welcoming 218⁶ new companies to this market, raising a total of \$288 billion. With the recent transformative changes to the listing regime, seven companies are WVR or biotech companies listed under the New Chapters⁷ of the Main Board Listing Rules, with IPO funds raised of \$94 billion.

During the year, HKEX sought to proactively engage the market about our new listing regime in the Mainland, Hong Kong, and overseas. HKEX's flagship event, HKEX Biotech Summit, gathered around 600 delegates, connecting senior biotech industry leaders with sell-side advisors and research analysts in the biotech community to share industry insights and trends.

Apart from establishing a biotech ecosystem in Hong Kong public market, HKEX this year has focused on expanding its reach and engagement overseas. We participated in "Venture", an inaugural conference that brought venture capitalists together with entrepreneurs to discuss the latest developments and investment opportunities in technology. The event was well attended by more than 350 guests and 250 tech entrepreneurs.

Looking forward, HKEX will continue to focus on promoting Hong Kong as the premier listing platform for high growth and innovative companies across the globe.

ETF Market Development

HKEX continues to expand its regional marketing presence through a number of events including Inside ETF Asia 2018, ETF Global Markets Roundtable and Asia ETF Forum, a series of roadshows in Hong Kong, South Korea, Taiwan, Japan, Singapore and Thailand, targeting institutions and intermediaries.

As of 31 December 2018, HKEX's Exchange Traded Products (ETP) (which comprises ETF and Leveraged and Inverse Products (L&I Products)) accounted for total market capitalisation of \$557 billion (31 December 2017: \$636 billion), and ADT for 2018 of \$4.5 billion (2017: \$4.7 billion).

Closing Auction Session

The quarterly MSCI rebalancing on 31 May 2018 increased on a net basis index weightings of Hong Kong-listed stocks. \$96.2 billion, or 47 per cent of HKEX's total securities market turnover of \$205.7 billion on that day, was transacted in the Closing Auction Session (CAS), the highest CAS turnover since its launch in 2016. Such a high level of CAS activities demonstrates investors' increasing confidence in using this relatively new mechanism for meeting their needs to execute at closing price.

Bond Connect

Market participation in Bond Connect grew steadily throughout the year, with ADT reaching RMB3.6 billion in 2018, an increase of 64 per cent compared with 2017. In addition, the number of approved overseas institutional investors participating in Bond Connect continued to increase. As at 31 December 2018, there were 503 approved investors across 24 jurisdictions, compared with 247 as of 31 December 2017. Meanwhile, overall foreign holdings in China's interbank bond market reached RMB1,730 billion at the end of December 2018, more than double the size since the launch of Bond Connect.

In addition, China's bonds will be, for the first time, included in the Bloomberg Barclays Global Aggregate Index from April 2019 by phases. We expect this move to drive global allocation to China's bond market and demand for the Bond Connect scheme.

6 Includes transfers of listing from GEM to the Main Board

7 Refers to the Main Board Listing Rules Chapters 8A, 18A and 19C

In August 2018, Bond Connect upgraded its settlement system to fully implement real-time delivery-versus-payment, which will further enhance the efficiency and security of Bond Connect's settlement services. In the same month, Bond Connect also launched a block trade allocation service, which allows asset managers to allocate block trades to multiple client accounts prior to trading. These developments are expected to accelerate the participation in Bond Connect by global asset managers and investors.

Market Data Business

The Mainland market data business continues to grow, with more than 70 real-time Mainland information vendors as at 31 December 2018, compared with 22 at the launch of Stock Connect. To further promote market transparency of Stock Connect trading, HKEX extended its existing market data programmes until the end of 2020 to continue to increase the visibility and penetration of securities market data in the Mainland. In conjunction with future development, the Mainland Market Data Hub (MMDH) in Shanghai will be upgraded with lower latency datafeed and premium content. MMDH is HKEX's first market data infrastructure footprint in Mainland China, strengthening connectivity by enabling Mainland investors to access HKEX's market data through reliable and cost-effective infrastructure. This upgrade aims to further enhance the services for brokers to receive higher quality data for Southbound Trading. HKEX will also continue to enhance the scope and service level of its reference data products to promote more interaction between the two markets.

Listing Regulation

In 2018, the Stock Exchange issued various proposals and conclusions on Listing Rules amendments as set out in the following table. Details of the consultations and other main policy issues arising in 2018 as well as the proposals under review in 2019 are set out in the 2018 Listing Committee Report.

Proposals and Conclusions in 2018

	Consultation paper ¹	Consultation conclusions ¹	Effective date of changes (if any)
• Delisting and Other Rule Amendments	Sep 2017	May 2018	1 Aug 2018
• Capital Raisings by Listed Issuers	Sep 2017	May 2018	3 Jul 2018
• Proposed Changes to Documentary Requirements relating to Listed Issuers and Other Minor Rule Amendments	Nov 2017	Feb 2019	1 Mar 2019
• Review of the Corporate Governance Code and Related Listing Rules	Nov 2017	Jul 2018	1 Jan 2019
• Proposed Exemption for Aircraft Leasing Activities	Nov 2017	Aug 2018	15 Oct 2018
• A Listing Regime for Companies from Emerging and Innovative Sectors	Feb 2018	Apr 2018	30 Apr 2018
• Backdoor Listing, Continuing Listing Criteria and Other Rule Amendments	Jun 2018	2H 2019 (tentative)	-
• Review Structure in relation to Listing Committee Decisions	Aug 2018	Jan 2019	Mid-2019 ²
• Proposal relating to Listed Issuers with Disclaimer or Adverse Audit Opinion on Financial Statements	Sep 2018	2H 2019 (tentative)	-

¹ All the consultation papers and conclusions are available under the News (Market Consultations) section of the HKEX Market website.

² The revised Rules will take effect around mid-2019 (subject to the establishment of the Listing Review Committee). The effective date will be announced later.

Key Initiatives by the Stock Exchange to Promote Issuers' Self-compliance with the Listing Rules

- Issued series of listing decisions on interpretation of the Listing Rules, including reasons for rejection and return of new applications and sufficiency of operations or assets
- Published new/updated guidance materials on (i) implementing a new regime for companies from emerging and innovative sectors; (ii) the Stock Exchange's approach to listing applicants in the internet technology sector or that have internet-based business models; (iii) IPO vetting and suitability for listing; (iv) pricing flexibility for IPOs; (v) reallocation of shares from placing tranche to the public subscription tranche in an IPO; (vi) suitability for continued listing; (vii) rule changes regarding delisting and capital raising; (viii) streamlining of listing guidance materials; (ix) Guidance for Boards and Directors; and (x) How to prepare an ESG report?
- Published reports on review of listed issuers' (i) disclosure in annual reports; (ii) financial statements; (iii) corporate governance practices; and (iv) Environmental, Social and Governance reports
- Introduced the first e-training for directors of companies listed on the Stock Exchange to understand the new corporate governance requirements that took effect on 1 January 2019
- Published a guide on listing new structured products to structured products issuers to facilitate a more efficient introduction of new products to give investors more product choices

IPO Processing, Compliance and Monitoring

The following tables illustrate the work of the Stock Exchange in processing new listings and monitoring issuers' compliance for the purposes of maintaining an orderly, informed, and fair market under Section 21 of the SFO.

Stock Exchange's IPO Work

	2018	2017
• Number of listing applications vetted ¹	511	412
• Number of applications brought to the Listing Committee (or their delegates) for decisions ²	250	194
– within 120 calendar days	85	60
– between 121 to 180 calendar days	71	66
– after more than 180 calendar days	94	68
• Number of applications for which approval was granted in principle ³	245	216
• Number of requests for guidance from listing applicants or their advisers seeking clarifications of listing matters	238	158
– Average response time (in business days)	10	9
• Number of listing applications for transfer of listing from GEM to Main Board accepted	21	22
• Applications listed ⁴	234	197
• New listing applications rejected ⁵	25	8
• New listing applications withdrawn	14	14
• New listing applications returned	–	5
• Application in process at year-end	167	139

1 Comprises 372 (2017: 310) new applications and 139 (2017: 102) existing applications brought forward from previous year

2 Refers to listing applications heard by the Listing Committee (or their delegates) for the first time and excludes Chapter 20 listing applications

3 At the end of 2018, 35 (2017: 33) approved applications had not yet been listed, and 7 (2017: 6) approved applications had lapsed during the year.

4 Includes 16 investment vehicles listed on Main Board and deemed new listings (2017: 23)

5 In 2018, no rejection decisions (2017: 2) were subsequently reversed by the Listing (Review) Committee/Listing Appeals Committee upon review.

Number of Compliance and Monitoring Actions

	2018	2017
• Announcements of issuers vetted	59,861	57,498
• Circulars of issuers vetted	2,083	1,841
• Share price and trading volume monitoring actions undertaken ¹	7,945	6,461
• Complaints handled	404	568
• Cases (including complaints) referred to Listing Enforcement Team for investigation ²	81	40

1 In 2018, monitoring actions undertaken included 794 enquiries (2017: 603) on unusual share price and trading volume movements, and the actions undertaken led to 24 resumption announcements (2017: 32) on trading suspensions.

2 The increase in the number of case referrals is mainly due to refinements of referral thresholds for consideration of investigation.

Long Suspension

Status of Long Suspended Companies (at year-end)	Main Board		GEM	
	2018	2017	2018	2017
Resumption of trading of securities during the year	10	14	2	1
Cancellation/withdrawal of listing during the year	4	3	–	2
Companies in the third stage of delisting	16	14	N/A	N/A
Companies notified of the Stock Exchange's intention to cancel their listing ¹	–	1	3	2
Companies suspended for 3 months or more	71	53	11	3

1 For GEM, the figures represent companies that had failed to maintain sufficient operations or assets to warrant their continued listing. In these cases, the Stock Exchange had notified the companies of its intention to cancel the companies' listing and place them in a one-stage delisting procedure (as compared to three stages for Main Board).

Listing Enforcement

The enforcement statistics set out below represent a high-level overview of the enforcement work undertaken in 2018 by the Stock Exchange.

Further details and information relating to enforcement work (including the Stock Exchange's general approach, disciplinary procedures and recent cases) can be found at the HKEX Market website, the bi-annual "Enforcement Newsletter" and are set out in the 2018 Listing Committee Report.

Enforcement Statistics

	2018	2017
Investigations ^{1,2,3}	111	86
Public sanctions ⁴	21	9
Warning/caution letters ⁵	14	9

1 Figures cover all cases which were investigated in 2018 (both concluded cases and ongoing investigations at year-end).

2 At the end of 2018, there were 35 ongoing investigations as compared to 28 ongoing investigations at the end of 2017.

3 In 2018, 3 enforcement cases (2017: 4) originating from complaints were subject to enforcement investigation, and might give rise to disciplinary proceedings.

4 The number of investigation cases that resulted in a public sanction. Actions taken at a lower level in the same case, eg, private reprimand, are not included.

5 The warning and caution letters were issued in circumstances where disciplinary proceedings before the Listing Committee were not considered appropriate. These are recorded as part of the compliance history for the relevant party.

Costs of Listing Function

The costs of the front line regulation of listed issuers, performed by the Listing Committee and the Listing Division, are absorbed by the Cash and Equity and Financial Derivatives segments in proportion to the listing fee income of the two segments.

Equity and Financial Derivatives Segment

Key Market Indicators

	2018	2017	Change
ADT of DWs, CBBCs and warrants traded on the Stock Exchange (\$bn)	23.2	17.0	36%
Average daily number of trades of DWs, CBBCs and warrants traded on the Stock Exchange	372,095 ²	205,518	81%
ADV of derivatives contracts traded on the Futures Exchange ¹	685,126 ²	440,563	56%
ADV of stock options contracts traded on the Stock Exchange	517,395 ²	428,499	21%
Number of newly listed DWs	11,794 ²	7,989	48%
Number of newly listed CBBCs	26,678 ²	13,235	102%
ADV of contracts traded during After-Hours Trading ¹	89,338 ²	30,148	196%

	At 31 Dec 2018	At 31 Dec 2017	Change
Open interest of futures and options ¹	10,593,376	11,154,897	(5%)

1 Excludes London Metal Mini Futures, Gold Futures and Iron Ore Futures contracts (which are included under the Commodities segment)

2 New record highs in 2018

Analysis of Results

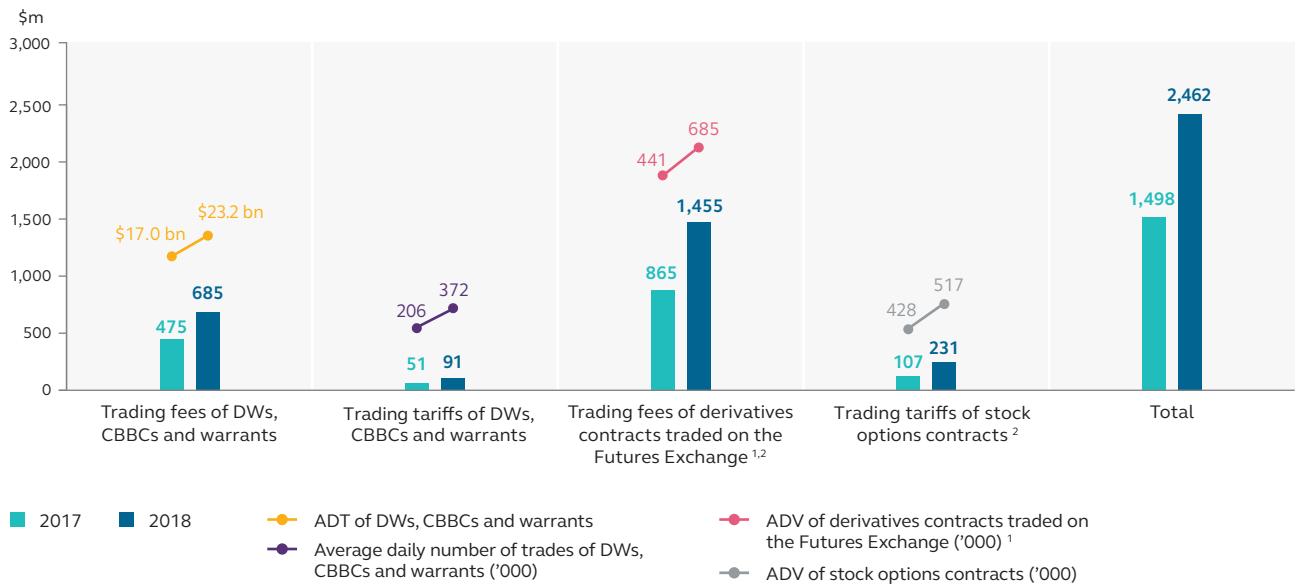
Summary

	2018 \$m	2017 \$m	Change
Trading fees and trading tariffs ¹	2,462	1,498	64%
Stock Exchange listing fees	822	505	63%
Market data fees ¹	210	186	13%
Other revenue	9	6	50%
Total revenue	3,503	2,195	60%
Operating expenses ²	(573)	(477)	20%
EBITDA	2,930	1,718	71%
EBITDA margin	84%	78%	6%

1 Excludes cash equities (which are included under the Cash segment)

2 Includes Listing Division costs apportioned to DWs, CBBCs and warrants traded on the Stock Exchange

Trading Fees and Trading Tariffs



¹ Excludes London Metal Mini Futures, Gold Futures and Iron Ore Futures contracts (which are included under the Commodities segment)

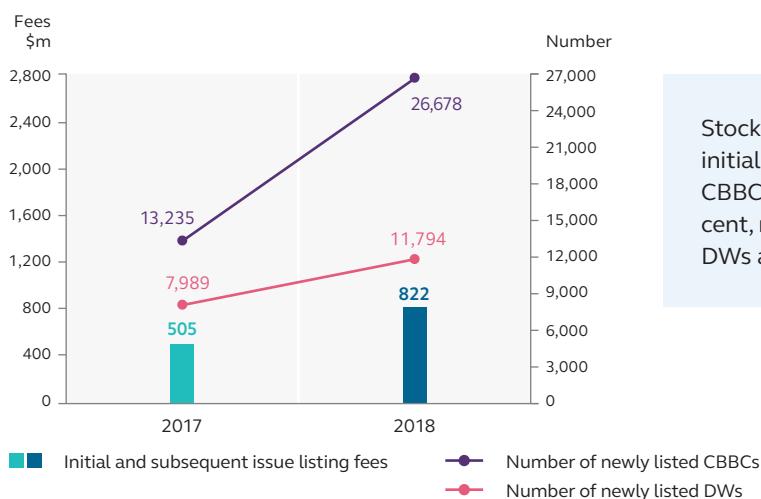
² Excludes trading fees and trading tariffs allocated to the Clearing segment (Derivatives contracts traded on the Futures Exchange – 2018: \$338 million; 2017: \$218 million; stock options contracts – 2018: \$84 million; 2017: \$70 million)

Trading fees and trading tariffs for the segment are generated from the trading of derivatives on the Stock Exchange (ie, DWs, CBBCs, warrants, and stock options) and trading of futures and options on the Futures Exchange. A portion of the trading fees and trading tariffs for futures and options contracts is allocated to the Clearing segment (see Clearing segment below) as the trading and clearing fees of these products are bundled together in the form of trading fees and tariffs.

Trading fees and trading tariffs from trading of DWs, CBBCs and warrants rose by \$250 million or 48 per cent, reflecting the 36 per cent increase in ADT, higher fees from new issues of DWs and CBBCs, and a decrease in average transaction size which led to a higher increase in trading tariff income.

Driven by increased volatility in 2018, ADV of derivatives contracts traded on the Futures Exchange and stock options contracts both reached record highs. As a result, derivatives trading fees of the Futures Exchange and trading tariffs for stock options contracts rose by 68 per cent and 116 per cent respectively compared with 2017. Average fee per derivatives contract traded on the Futures Exchange increased, due to a higher proportion of derivatives contracts being higher fee contracts (including HSI products), compared with 2017; and average fee per stock option contract rose as various stock options traded moved to a higher fee tier in 2018.

Stock Exchange Listing Fees



Stock Exchange listing fees are mainly derived from initial and subsequent issue listing fees for DWs and CBBCs. The fees increased by \$317 million or 63 per cent, reflecting the record number of newly listed DWs and CBBCs during 2018.

EBITDA

Operating expenses increased by 20 per cent due to higher allocated costs of the Listing Division, arising from the proportionately higher increase in listing fees from DWs and CBBCs compared with equities, and higher index licence fees attributable to increased volume of derivatives contracts traded. As the percentage increase in revenue is more than the percentage increase in operating expenses, the EBITDA margin rose from 78 per cent to 84 per cent.

Business Update

The turbulent and more uncertain macroeconomic environment has seen investors increasingly utilise derivatives contracts on HKEX to manage risks, resulting in the following records being achieved in 2018:

New Record Highs – Full Year Trading Volume

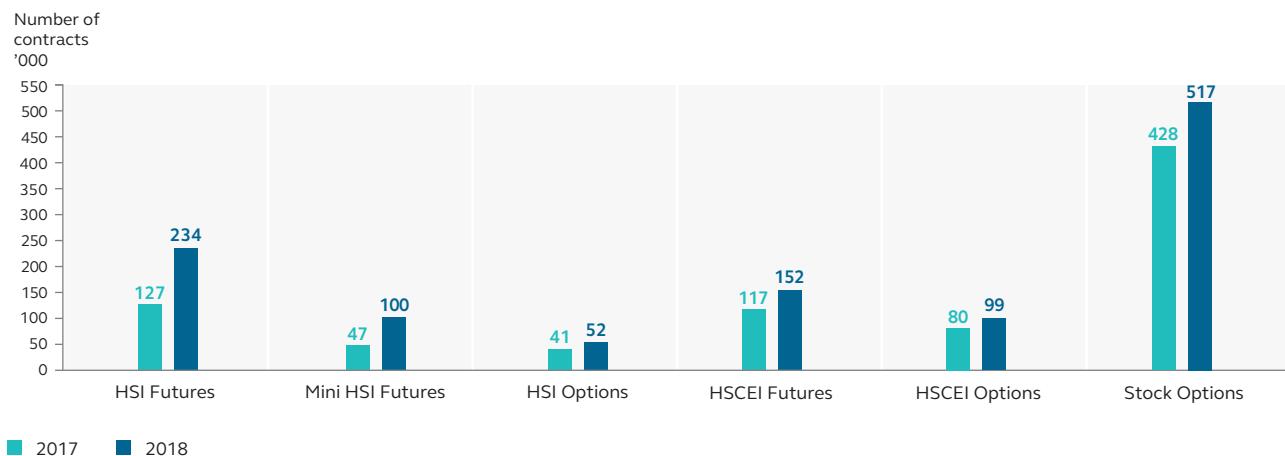
	2018 Number of contracts	Pre-2018 record Number of contracts
Total Futures and Options ¹	295,820,120	214,658,273 (2017)
HSI Futures	57,668,346	32,313,994 (2016)
Mini HSI Futures	24,664,381	12,477,552 (2016)
HSCEI Futures	37,451,281	33,379,310 (2015)
HSI Options	12,716,495	10,667,426 (2011)
Mini HSI Options	2,461,296	1,640,881 (2017)
HSCEI Options	24,258,084	19,777,920 (2017)
Mini HSCEI Options	583,549	377,243 (2017)
Stock Futures	863,027	729,013 (2015)
Stock Options	127,279,101	105,839,179 (2017)
RMB Currency Futures – USD/CNH Futures	1,755,130	732,569 (2017)

¹ Excludes London Metal Mini Futures, Gold Futures and Iron Ore Futures contracts (which are included under the Commodities segment)

New Record Highs – Single-day Trading Volume and Open Interest

	Single-day Trading Volume		Open Interest	
	Date (2018)	Number of contracts	Date (2018)	Number of contracts
HSI Futures	26 Oct	422,450	N/A	N/A
Mini HSI Futures	7 Feb	215,927	26 Oct	22,321
HSCEI Futures	N/A	N/A	27 Dec	635,051
Mini HSCEI Futures	6 Feb	76,471	N/A	N/A
HSI Options	23 Jan	130,998	N/A	N/A
Mini HSI Options	2 Nov	25,534	28 Nov	48,450
HSCEI Options	9 Feb	232,994	28 Nov	3,749,790
Mini HSCEI Options	9 Feb	11,728	29 Oct	29,525
Stock Options	N/A	N/A	27 Mar	13,725,731
RMB Currency Futures – USD/CNH Futures	6 Aug	22,105	N/A	N/A
RMB Currency Options – USD/CNH Options	28 Aug	1,529	14 Sep	10,827

Average Daily Volume of Major Futures and Options Contracts



After-Hours Trading Enhancements

With positive market feedback after the implementation of the first phase of the After-Hours Trading enhancements to 1 am in November 2017, HKEX implemented its second phase (the inclusion of equity index options) on 14 May 2018. In response to initial market feedback on liquidity provision, HKEX actively recruited new market makers and implemented new initiatives, including providing additional incentives to market makers, to maintain market quality in the After-Hours Trading (T+1) Session. Trading volume of equity index derivatives in the T+1 Session grew significantly, and ADV reached 87,200 contracts in 2018, a 196 per cent increase as compared to 2017. Equity index options ADV in the T+1 Session also increased to 10,536 in Q4 2018 from 1,753 in Q2 2018 and the volume reached a historic high of 22,924 contracts on 11 October 2018. Subject to regulatory approval and market readiness, the third phase of the enhancements (extension of trading hours to 3 am) is targeted for implementation in mid-2019.

Equity Futures and Options Market Development

Record high trading volume was achieved in the equity derivatives market with strong volume growth in index futures and options products, driven by active trading and hedging activities amid uncertain market conditions in 2018. The total trading volume of all equity derivatives was 294 million contracts in 2018, a 37 per cent increase compared to 2017. HKEX pursued further extensions in flagship product suites and expansion of new product offering as follows:

Key Products Introduced and Product Initiatives during 2018

- Narrowed strike intervals for stock index options on 22 January 2018
- Extended contract month for HSI/HSCEI Futures and Options up to 5.5 years on 5 March 2018
- Introduced MSCI All Country Asia ex Japan Net Total Return Index Futures on 11 June 2018
- Introduced stock futures market enhancements including implementation of a three-tier trading fee model, a liquidity provider programme, and revision of the final settlement price determination method on 3 July 2018
- Introduced HSI/HSCEI Total Return Index Futures on 5 November 2018
- Introduced 16 new stock futures and 13 new stock options (including stock futures and stock options on two listed WVR companies (Meituan Dianping and Xiaomi Corporation))
- Enhanced existing Futures and Options Mobile app to improve user experience

Fixed Income and Currency (FIC) Development

New full-year and single-day records for trading volume and open interest were set for HKEX currency products in 2018 (see tables under New Record Highs sections). The total trading volume of USD/CNH Futures was 1.76 million contracts in 2018, 140 per cent increase against the previous record set in 2017. Such strong trading results during the highly volatile periods seen during summer in 2018 demonstrated strong market demand for capital efficient RMB risk management tools.

HKEX continues to work on further enhancements to existing products to meet market demand. On 19 June 2018, additional contract month and additional calendar spreads of the USD/CNH Futures were introduced to facilitate long-term RMB hedging and calendar rolling activities of market participants.

On 12 June 2018, HKEX hosted its fifth annual RMB FIC Conference, attracting over 700 industry experts and business leaders, discussing key regulatory and business issues with a special focus on the current phase of RMB internationalisation and the progress of Bond Connect.

Stock Option Position Limits

In 2018, HKEX enhanced its Large Open Position (LOP) surveillance systems to support the introduction of new products including new stock futures on Tracker Fund of Hong Kong and Hang Seng China Enterprises Index ETF, MSCI All Country Asia ex Japan Net Total Return Index Futures (MSCI AC Asia ex Japan NTR Index Futures), HSI Total Return Index Futures and HSCEI Total Return Index Futures.

Risk Management

As part of HKEX's continuous effort to engage market participants and to promote a strong compliance culture, HKEX launched quarterly compliance roundtables with different groups of market participants in 2018. HKEX also completed the 2018 Annual Attestation and Inspection Programme and announced the findings to the market on 25 February 2019.

With the rapidly changing trading landscape and increasing participation of algorithmic trading in its Derivatives Market, HKEX is mindful that there could be self-execution risk for EPs to trade against themselves, especially for market makers, liquidity providers and proprietary desks. This in turn could lead to potential regulatory and compliance risk management considerations. To assist EPs in avoiding self-trade, HKEX plans to introduce a self-trade prevention function, after a stabilisation period following the upgrade of the derivatives platforms (see details in the Platform and Infrastructure segment). The self-trade prevention mechanism would help to cater for further market growth while aiding in maintaining a fair and orderly market.

Commodities Segment

Key Market Indicators

	2018	2017	Change
ADV of metals contracts traded on the LME (lots)			
Aluminium	272,016	217,412	25%
Copper	159,386	141,602	13%
Zinc	135,743	123,037	10%
Nickel	97,332	87,279	12%
Lead	53,949	44,136	22%
Ferrous	2,131	1,476	44%
Precious	3,481	2,917	19%
Others	6,460	6,621	(2%)
Total	730,498	624,480	17%
Less: Admin Trades	(100,942)	(23,413)	331%
Total chargeable ADV	629,556	601,067	5%

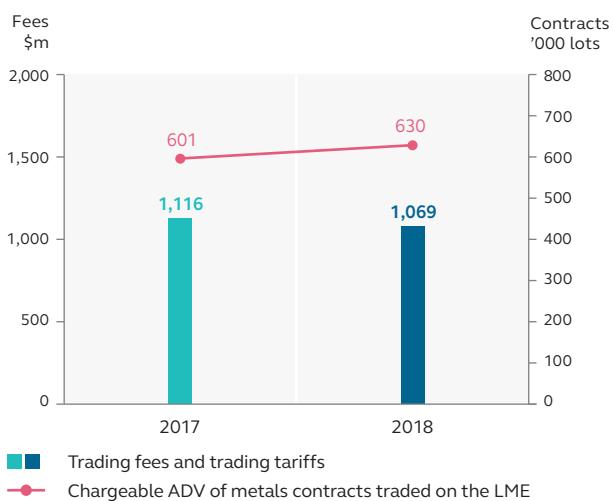
	At 31 Dec 2018	At 31 Dec 2017	Change
Total futures Market Open Interest (lots)	1,997,911	2,253,477	(11%)

Analysis of Results

Summary

	2018 \$m	2017 \$m	Change
Trading fees and trading tariffs	1,069	1,116	(4%)
Market data fees	193	181	7%
Other revenue:			
Commodities stock levies and warehouse listing fees	66	77	(14%)
Financial OTC booking fees	27	-	N/A
Others	60	62	(3%)
Total revenue	1,415	1,436	(1%)
Operating expenses	(717)	(659)	9%
EBITDA	698	777	(10%)
EBITDA margin	49%	54%	(5%)

Trading Fees and Trading Tariffs



Excluding non-fee generating administrative trades introduced in June 2017 to meet new requirements resulting from MiFID II (Admin Trades), ADV of metals contracts traded was 5 per cent higher compared with 2017. However, trading fees fell by \$47 million (4 per cent) due to the fee reductions for short- and medium-dated carry trades introduced as a result of LME's Strategic Pathway.

EBITDA

Operating expenses rose by \$58 million (9 per cent). Excluding the one-off insurance recovery of \$23 million in 2017 (relating to the costs of warehouse litigation in the US incurred in prior years), operating expenses rose by 5 per cent. The increase was mainly attributable to higher staff costs from increased headcount and annual payroll adjustments, and higher legal and professional fees for strategic initiatives, partly offset by a drop in operating expenses of QME from reduced staff costs. As a result of the lower revenue and the increase in operating expenses, EBITDA margin dropped from 54 per cent in 2017 to 49 per cent in 2018.

Business Update

LME

The LME has continued to deliver its Strategic Pathway initiatives, as outlined in 2017. The short- and medium-dated carry fee reductions originally introduced in Q4 2017 were made indefinite in September 2018. Since the introduction of the medium-dated carry discount on 1 November 2017, volumes for medium-dated carries have continued to grow and the ADV in 2018 was up 20 per cent against the first ten months of 2017.

Other Strategic Pathway deliveries include the Financial OTC booking fee, introduced in June 2018, which delivered \$27 million in 2018. The Registered Intermediating Broker (RIB) membership category, designed to give greater market access to less liquid LME contracts, is ready for service launch in Q1 2019, and implied pricing was piloted and launched in July 2018. Further, enhancements to the warrants-as-collateral service, which allows members to pledge LME warrants against their margin requirements, were successfully launched in November 2018.

LME Gold recorded a record trading day on 21 February 2018, with 14,801 lots of gold traded. In total, 148,566 lots (23,105 tonnes) of silver and 732,188 lots (2,277 tonnes) of gold were traded in 2018. Contract liquidity remains strong and has increased since the successful foundation laid in 2017. Following demand from market participants, the LME also launched an Asian hours' liquidity provision programme on 1 June 2018.

The LME continues to work on all the initiatives outlined in the Strategic Pathway and deliveries will continue throughout 2019, starting with the launch of seven new cash settled products (comprising two regional ferrous, two regional aluminium premiums, alumina, molybdenum, and cobalt contracts), likely in Q1 2019.

In October 2018 the LME published its position paper on responsible sourcing of brands listed for good delivery on the LME, which laid out the LME's proposed pathway for ensuring that its listed brands appropriately embody the responsible sourcing standards expected by downstream consumers. The feedback period ended on 30 November 2018 and the LME aims to publish its response to such feedback, as well as its next steps, in 1H 2019.

In light of the continuing uncertainty concerning the terms on which the UK will leave the European Union (EU), Brexit⁸ contingency planning has been a central priority for both the LME and LME Clear throughout 2018. The LME and LME Clear have been putting in place a broad set of contingency plans based on a number of potential outcomes, with a view to such plans being operationally ready at the currently expected date of Brexit (29 March 2019). The contingency planning comprises three key priorities including continued access to LME trading systems, continued provision of clearing services through LME Clear, and operational readiness that may be required in order to manage the additional regulatory obligations that would arise were there to be an interim period without the UK being granted trading venue equivalence.

Other Commodities Product Development

In August 2018, HKEX's USD Gold Futures became the first HKEX commodities contract to receive regulatory approval to be traded by investors in Taiwan. In 2018, a total of 25,006 contracts of CNH Gold Futures, and 326,700 contracts of USD Gold Futures were traded, with 205 kilograms of gold bars physically delivered against futures contracts.

Research and market consultations are in progress for the enhancement of the existing London Metal Mini Futures and Iron Ore Futures and for the potential launch of other metal derivatives products and metals indices.

LME Week

The annual LME Asia Week 2018 event, held in Hong Kong from 15 to 18 May 2018, attracted over 1,900 metals professionals, as well as local and international media. Six additional events were hosted throughout the week as well as the traditional Chairman's Cocktails, LME Asia Metals Seminar and LME Asia Dinner, in order to provide more opportunities for the industry to share information and exchange ideas.

The annual LME Week was held during the week of 8 October 2018. The LME seminar on Monday, 8 October saw record attendance with over 1,000 delegates debating key issues affecting the global metals markets, including ongoing geopolitical tensions and innovations in the metals industry. The LME dinner, held on the evening of 9 October, also saw a record 1,950 attendees. HKEX also hosted a China Reception on 8 October in London, welcoming over 300 metal market participants.

QME

QME officially launched on 19 October 2018 as scheduled and received positive attention from the industry in the Mainland. The first product traded on QME was Alumina. As of 31 December 2018, the number of participants and Alumina trading volumes had achieved stable growth, and the price of Alumina traded on QME has attracted increasing recognition from the key industry players. QME will continue to expand its network of client coverage and product portfolio, and enhance services provided to participants.

Clearing Segment

Key Market Indicators

	2018	2017	Change
ADT on the Stock Exchange (\$bn)	107.4	88.2	22%
Average daily number of Stock Exchange trades	1,596,792	1,240,169	29%
Average value per trade (\$)	67,266	71,159	(5%)
Average daily value of Settlement Instructions (SIs) settled by CCASS (\$bn)	266.2	220.5	21%
Average daily number of SIs	103,033	92,459	11%
Average value per SI (\$)	2,584,067	2,385,005	8%
Chargeable ADV of metals contracts traded on the LME (lots)	629,556	601,067	5%

8 In a referendum held on 23 June 2016, the UK voted to exit the EU.

Analysis of Results

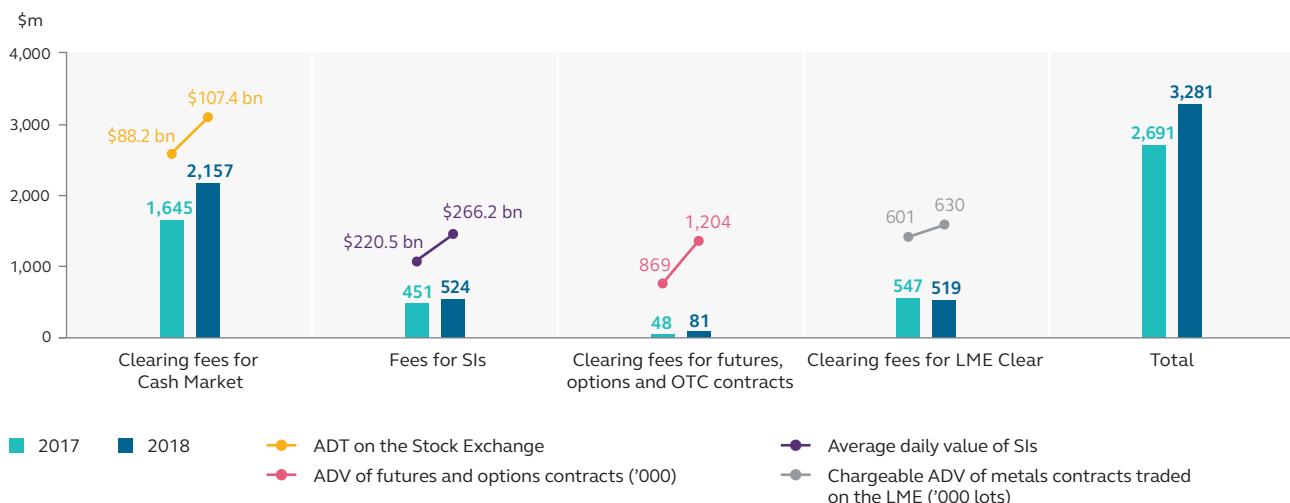
Summary

	2018 \$m	2017 \$m	Change
Trading fees and trading tariffs – allocated from Equity and Financial Derivatives segment	422	288	47%
Clearing and settlement fees	3,281	2,691	22%
Depository, custody and nominee services fees	979	892	10%
Other revenue and sundry income	109	145	(25%)
	4,791	4,016	19%
Net investment income	1,377	809	70%
Total revenue and other income	6,168	4,825	28%
Operating expenses	(812)	(752)	8%
EBITDA	5,356	4,073	32%
EBITDA margin	87%	84%	3%

Trading Fees and Trading Tariffs

Trading fees and trading tariffs allocated from the Equity and Financial Derivatives segment for clearing derivatives products rose by 47 per cent, due to a 56 per cent increase in ADV of derivatives contracts traded on the Futures Exchange and 21 per cent increase in ADV of stock options traded (see commentary in the Equity and Financial Derivatives segment).

Clearing and Settlement Fees



Clearing and settlement fees for Cash Market and SIs increased by 31 per cent and 16 per cent respectively compared with 2017. The increase was primarily driven by a higher number of transactions, and a 2 per cent and a 4 per cent higher average fee per Cash Market trade, and per SI transaction, respectively.

Despite a 5 per cent increase in chargeable ADV of metals contracts traded, clearing fees for LME Clear dropped by \$28 million or 5 per cent due to fee reductions for short- and medium-dated carry trades.

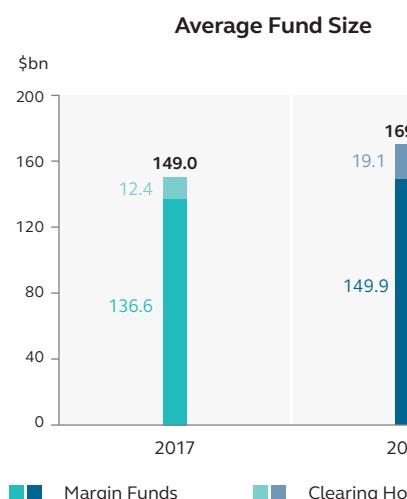
Depository, Custody and Nominee Services Fees

Depository, custody and nominee services fees are not directly impacted by changes in market activity. They rose by \$87 million or 10 per cent due to higher portfolio fees from an increase in the overall portfolio value held under Stock Connect, and higher electronic IPO service fees and corporate action fees, from increased numbers of stocks and structured products listed.

Other Revenue and Sundry Income

Other revenue dropped by \$36 million due to a one-off post-liquidation interest payment of \$55 million received from Lehman's liquidators in March 2017, partly offset by an increase in accommodation income⁹.

Net Investment Income



The increase in the average size of Margin Funds during the year arose from higher margin requirements per contract cleared through HKCC and SEOCH due to increased volatility and higher open interest, but partly offset by lower average Margin Fund size of LME Clear attributable to lower open interest and market prices compared to 2017.

The analysis of net investment income is as follows:

	2018			2017		
	Margin Funds \$m	Clearing House Funds \$m	Total \$m	Margin Funds \$m	Clearing House Funds \$m	Total \$m
Net investment income from:						
Cash and bank deposits	1,257	58	1,315	746	24	770
Debt securities	60	–	60	36	–	36
Exchange gains	2	–	2	3	–	3
Total net investment income	1,319	58	1,377	785	24	809
Net investment return	0.88%	0.31%	0.81%	0.57%	0.19%	0.54%

The higher net investment income on Margin Funds in 2018 arose from higher interest income on cash and bank deposits, attributable to both higher average fund size and higher bank deposit rates in Hong Kong.

⁹ Accommodation income mainly comprises income from CPs on depositing securities as alternatives to cash deposits of Margin Funds, or depositing currencies if the relevant bank deposit rates are negative, and interest shortfall collected from LME Clear CPs on cash collateral where the investment return on the collateral is below the benchmarked interest rates stipulated in the clearing rules of LME Clear.

EBITDA

Operating expenses rose by \$60 million (8 per cent) over 2017, as a result of higher staff costs including annual payroll adjustments and higher variable pay, increased premises costs, higher IT support and maintenance costs and new regulatory fees imposed on LME Clear, partly offset by savings in legal and professional fees. As the percentage increase in revenue and other income was higher than the percentage increase in operating expenses, EBITDA margin increased from 84 per cent in 2017 to 87 per cent in 2018.

Business Update

Cash and Derivatives Clearing

Northbound portfolio value of A shares reached a record high of RMB719 billion in September 2018 and stood at RMB668 billion at 31 December 2018 (31 December 2017: RMB530 billion). The increase reflects the continuous interest in accessing the A share market through Stock Connect.

In 2018, HKEX continued to improve market quality and to achieve a higher level of compliance with international regulatory requirements, including:

- (i) HKSCC, HKCC, SEOCH and OTC Clear introduced a number of enhancements to the recovery plan. Notably, HKSCC, HKCC and SEOCH introduced close-out netting provisions in their respective rules, which substantially reduce the capital costs of bank-based participants clearing through our clearing houses;
- (ii) HKEX increased its risk capital support in HKSCC, HKCC and SEOCH by increasing the clearing houses' contribution to their respective default funds to 10 per cent of the default fund size instead of using a fixed amount;
- (iii) HKCC's Contingent Advance Capital facility (previously provided by HKCC to relieve 50 per cent of CPs' default fund contribution requirements) was removed and each HKCC CP is granted a \$1 million dynamic default fund credit; and
- (iv) HKSCC, HKCC and SEOCH increased the Tier 1 capital requirement of settlement banks and General CPs (that are Registered Institutions) to a minimum of \$390 million.

OTC Clear

Total notional amount cleared in 2018 was US\$120.4 billion, up 210 per cent compared with 2017. Clearing volume of both Cross Currency Swaps (CCS) and Interest Rate Swaps from Mainland banks increased substantially following the addition of seven new clearing members in 2017, and a further two in 2018. The OTC clearing service continues to expand with the addition of CCS denominated in USD/HKD and Deliverable Foreign Exchange (DFX) denominated in USD/CNH and USD/HKD.

LME Clear

LME Clear is considering changing the initial margining approach for its contracts and is working closely with the market and regulators to define and develop a model that ensures a conservative measure of risk and which also reflects the inherent characteristics of the LME products. This market engagement will continue through 2019 to the intended implementation in 2020.

Platform and Infrastructure Segment

Analysis of Results

Summary

	2018 \$m	2017 \$m	Change
Network, terminal user, dataline and software sub-license fees	515	413	25%
Hosting services fees	162	143	13%
Others	1	4	(75%)
Total revenue	678	560	21%
Operating expenses	(170)	(151)	13%
EBITDA	508	409	24%
EBITDA margin	75%	73%	2%

Network, Terminal User, Dataline and Software Sub-license Fees

Network fees rose by \$102 million (25 per cent) due to increased sales of throttles, driven in turn by the MSCI inclusion, as well as new EPs and CCEPs migrating from Open Gateway to the new China Connect Central Gateway (CCCG).

Hosting Services Fees

Hosting services fees increased due to organic growth from both new customer subscriptions and increased usage by existing customers. At the end of December 2018, 116 EPs were using HKEX's Hosting Services. These EPs generated, in aggregate, approximately 49 per cent of the Cash Market turnover and 63 per cent of the trading volume of the Derivatives Market.

EBITDA

Operating expenses increased mainly due to higher IT costs directly consumed by participants. As the percentage increase in revenue was higher than the percentage increase in operating expenses, EBITDA margin improved from 73 per cent in 2017 to 75 per cent in 2018.

Business Update

During 2018, all major trading, clearing, settlement, and market data dissemination systems for the Cash, Derivatives and Commodities Markets continued to perform reliably.

The new securities trading system for Hong Kong Cash Market, the Orion Trading Platform – Securities Market (OTP-C), was launched successfully on 5 February 2018 and has been running smoothly despite its launch coinciding with a period of record turnover during 1H 2018. It is a scalable high performance system based on open technology architecture that gives it flexibility to support a variety of new functionalities. The system is designed to initially support up to 60,000 orders per second, double the previous AMS/3.8 system, with scope for further increases. The OTP-C is expected to meet capacity requirements in the next decade.

Software development for the Orion Trading Platform – China Stock Connect (OTP-CSC) was completed in Q4 2018. Market readiness activities will be carried out in 1H 2019. The OTP-CSC will replace the legacy proprietary hardware currently supporting Northbound Trading of Stock Connect.

Development work continues on the upgrade of the derivatives platforms, the Hong Kong Futures Automated Trading System (HKATS) and the Derivatives Clearing and Settlement System (DCASS), are tentatively scheduled for rollout by Q2 2019. The upgrade will enhance stability and reliability of the Derivatives Market infrastructure, facilitate swift adaptation to future market developments, with a reduction of the hardware footprint required at participants' premises. Along with the upgrade, a new web-based front-end will be provided to EPs for emergency purposes and reporting of block trades.

The first phase of the Next Generation Post Trade Programme is set to roll out in Q1 2019 beginning with Client Connect. Client Connect is a single platform to unify all client access to HKEX services to improve customer experience. The majority of the current paper-based services will be digitised to enhance operational efficiency on Client Connect, and the platform will integrate with other Next Generation Post Trade applications.

Since it was established in Q3 2018, HKEX's Innovation Lab has launched several projects to enhance the efficiency and effectiveness of HKEX's business operations by applying emerging technologies, including knowledge graph, secure computation, machine learning, natural language processing, robotic process automation and distributed ledger technology. It also continues to explore, incubate and invest in innovative opportunities that support the growth of HKEX's business and maintain its leadership in the global capital markets.

Corporate Items

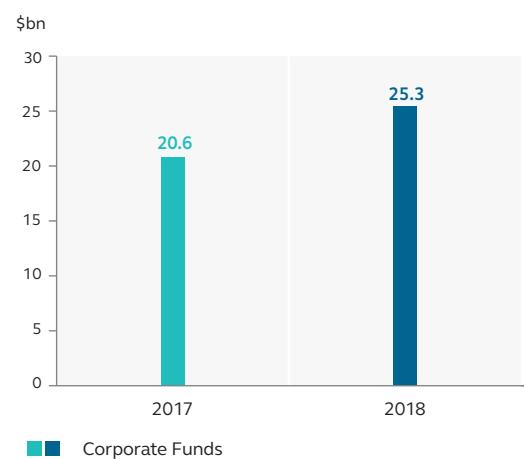
“Corporate Items” is not a business segment but comprises central income (including net investment income of the Corporate Funds), the costs of central support functions that provide services to all operating segments and other costs not directly related to any operating segments.

Summary

	2018 \$m	2017 \$m	Change
Net investment income	207	790	(74%)
Others	41	11	273%
Total revenue and other income	248	801	(69%)
Operating expenses	1,254	946	33%

Net Investment Income

Average Fund Size



Average fund size increased principally due to cash generated and retained by the business after payment of cash dividends.

The analysis of net investment income is as follows:

	2018 \$m	2017 \$m
Net investment income/(loss) from:		
Cash and bank deposits	328	142
Collective investment schemes	(106)	632
Equity securities	-	14
Debt securities	1	-
Exchange (losses)/gains	(16)	2
Total net investment income	207	790
Net investment return	0.82%	3.83%

Net investment income of Corporate Funds decreased by \$583 million compared with 2017 principally due to fair value losses on collective investment schemes held under the external portfolio, as opposed to the fair value gains in 2017, partly offset by higher interest income earned on cash and bank deposits from increased fund size and higher deposit rates.

As the valuation of investments reflect movements in market prices, fair value gains or losses may fluctuate or reverse until the investments are sold or redeemed.

Operating Expenses

Operating expenses increased by 33 per cent over 2017 mainly due to increased staff costs from annual payroll adjustments and higher variable pay, and higher premises costs and relocation expenses for new offices and the new HKEX Connect Hall.

Expenses, Other Costs and Taxation

Operating Expenses



Staff costs and related expenses increased by \$267 million or 12 per cent mainly due to annual payroll adjustments, increase in performance-related variable pay, and increased headcount for strategic initiatives.

IT and computer maintenance expenses consumed by the Group, excluding costs of services and goods directly consumed by participants of \$88 million (2017: \$73 million), were \$420 million (2017: \$360 million). The increase in maintenance expenses was mainly attributable to new IT systems and upgraded networks.

Premises expenses increased by \$83 million or 23 per cent due to the new offices taken up at Exchange Square in Hong Kong and overlap from the prior location.

Legal and professional fees increased by \$53 million (67 per cent). Excluding the one-off insurance recovery of \$23 million relating to the warehouse litigation in the US in 2017, legal and professional fees increased by \$30 million due to higher professional fees incurred for strategic initiatives.

Other operating expenses increased by \$61 million or 16 per cent due to higher relocation expenses for consolidation of offices, and higher index licence fees attributable to increased volumes of derivatives contracts traded.

Depreciation and Amortisation

	2018 \$m	2017 \$m	Change
Depreciation and amortisation	762	858	(11%)

Depreciation and amortisation dropped by \$96 million or 11 per cent, as certain IT systems were fully amortised in Q4 2017 and 2018.

Finance Costs

	2018 \$m	2017 \$m	Change
Finance costs	114	134	(15%)

The decrease in finance costs was due to the repayment of all bank borrowings in 2017.

Taxation

	2018 \$m	2017 \$m	Change
Taxation	1,592	1,255	27%

Taxation increased due to higher profit before taxation in 2018.

Financial Review

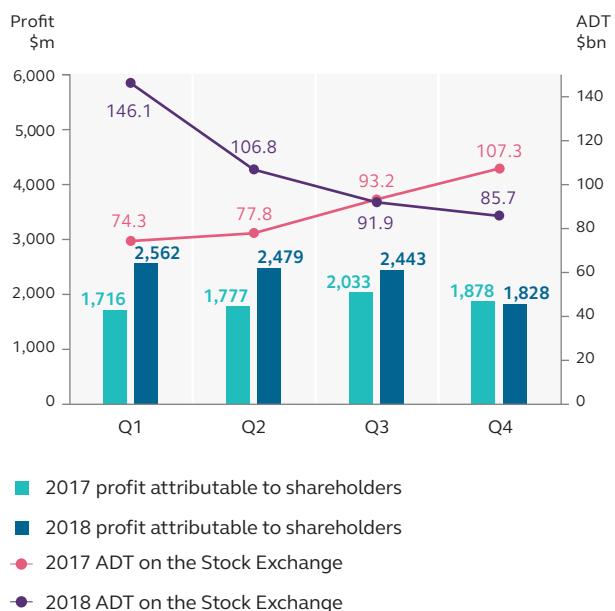
Analysis of Results by Quarter

Quarterly Results

	Q1 2018 \$m	Q2 2018 \$m	Q3 2018 \$m	Q4 2018 \$m	Total 2018 \$m
Revenue and other income	4,150	4,044	4,102	3,571	15,867
Operating expenses	(935)	(983)	(1,025)	(1,167)	(4,110)
EBITDA	3,215	3,061	3,077	2,404	11,757
Depreciation and amortisation	(180)	(198)	(198)	(186)	(762)
Operating profit	3,035	2,863	2,879	2,218	10,995
Finance costs	(27)	(28)	(31)	(28)	(114)
Share of profits less losses of joint ventures	2	2	(1)	(1)	2
Profit before taxation	3,010	2,837	2,847	2,189	10,883
Taxation	(456)	(366)	(409)	(361)	(1,592)
Profit for period/year	2,554	2,471	2,438	1,828	9,291
Loss attributable to non-controlling interests	8	8	5	–	21
Profit attributable to shareholders	2,562	2,479	2,443	1,828	9,312
	Q1 2017 \$m	Q2 2017 \$m	Q3 2017 \$m	Q4 2017 \$m	Total 2017 \$m
Profit attributable to shareholders	1,716	1,777	2,033	1,878	7,404

1 As a result of adopting the final agenda decision published by the IFRS Interpretations Committee of the International Accounting Standards Board in January 2019 (note 2(c)(ii) to the Consolidated Financial Statements refers), initial listing fees dropped by \$34 million. Since the amount is not material, its impact and the related tax impact (tax credit of \$5 million) are included in 2018 Q4 results and the results of first three quarters of 2018 are not restated.

Analysis of Quarterly Results



Market started strong in Q1 2018 with headline ADT reaching the second highest quarterly ADT after the previous record in Q2 2015. However, market sentiment started to weaken in Q3 2018 due to increased concerns over the US/China trade war and the weakening economic outlook in China, and headline ADT declined to \$85.7 billion in Q4 2018.

As profit generally follows the level of ADT, Q1 was the most profitable quarter during the year. Q4 was the least profitable quarter in 2018 due to the low ADT and seasonal increase in operating costs towards the end of the year.

Overview

Organisation

MD&A

Governance

Financials

Others

Changes to Key Items in Consolidated Statement of Financial Position

(A) Financial Assets and Financial Liabilities

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m	Change
Financial assets			
Cash and cash equivalents	121,196	155,660	(22%)
Financial assets measured at fair value through profit or loss	61,004	95,037	(36%)
Financial assets measured at fair value through other comprehensive income	3,755	–	N/A
Financial assets measured at amortised cost	31,885	30,817	3%
Total	217,840	281,514	(23%)

The Group's financial assets comprised financial assets of Corporate Funds, Margin Funds, Clearing House Funds, base and precious metals derivatives contracts, and cash prepayments and collateral for A shares traded under Stock Connect, as follows:

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m	Change
Financial assets			
Corporate Funds ^{1,2}	24,833	21,464	16%
Margin Funds ³	120,573	155,384	(22%)
Clearing House Funds	15,505	17,642	(12%)
Base and precious metals derivatives contracts cleared through LME Clear	53,915	85,335	(37%)
Cash prepayments and collateral for A shares	3,014	1,689	78%
Total	217,840	281,514	(23%)

1 Includes \$724 million (31 December 2017: \$Nil) solely used for supporting contributions to default funds and default fund credits for HKSCC Guarantee Fund, SEOCH Reserve Fund and HKCC Reserve Fund

2 Excludes prepayments for and receivables from collective investment schemes of \$384 million (31 December 2017: \$Nil)

3 Excludes Settlement Reserve Fund and Settlement Guarantee Fund paid to ChinaClear and margin receivable from CPs of \$3,155 million (31 December 2017: \$2,430 million), which are included in accounts receivable, prepayments and other deposits

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m	Change
Financial liabilities			
Base and precious metals derivatives contracts cleared through LME Clear	53,915	85,335	(37%)
Margin deposits, Mainland security and settlement deposits, and cash collateral from CPs	123,728	157,814	(22%)
CPs' contributions to Clearing House Funds	14,787	16,626	(11%)
Total	192,430	259,775	(26%)

The 22 per cent decrease in financial assets and financial liabilities of Margin Funds at 31 December 2018 against those at 31 December 2017 was mainly attributable to decreased contributions from members of LME Clear in response to a drop in open positions on metals contracts and lower metals contracts prices.

The decrease in financial assets and financial liabilities of Clearing House Funds was mainly attributable to lower contributions required from members of LME Clear and CPs of SEOCH in response to changes in risk exposures.

After adjusting the prepayments for and receivables from collective investment schemes (footnote 2 above), Corporate Funds at 31 December 2018 increased by \$3,753 million as compared to those at 31 December 2017 due to the retention of cash generated by the business over the past year partly offset by the cash paid for the 2017 final dividend and 2018 first interim dividend.

A portion of the Corporate Funds is invested in collective investment schemes which are designed to enhance returns and mitigate portfolio volatility and asset class concentration risk. Further details of investment in collective investment schemes are included in note 50(a)(iv) to the Consolidated Financial Statements of this Annual Report.

(B) Fixed Assets, Intangible Assets and Capital Commitments

The total net book value of the Group's fixed assets and intangible assets rose by \$250 million from \$19,394 million at 31 December 2017 to \$19,644 million at 31 December 2018. The increase was mainly due to additions of \$988 million, but was partly offset by depreciation and amortisation of \$762 million. Additions during the year mainly related to the development and upgrade of various trading and clearing systems and Stock Connect technology infrastructure, and renovation of new offices and the HKEX Connect Hall.

The Group's capital expenditure commitments at 31 December 2018, including those authorised by the Board but not yet contracted for, amounted to \$935 million (31 December 2017: \$1,433 million). These related mainly to the development and upgrade of various IT systems including the cash, derivatives and commodities trading and clearing systems, and Stock Connect technology infrastructure.

(C) Significant Investments Held, Material Acquisitions and Disposals of Subsidiaries, and Future Plans for Material Investments or Capital Assets

During the year, the Company subscribed for 6,327 ordinary shares in OTC Clear, a non wholly-owned subsidiary, at a total consideration of \$307 million, and the non-controlling interests have subscribed for 1,921 non-voting ordinary shares at a total consideration of \$93 million. As a result, the shareholding in OTC Clear held by the Company increased from 75 per cent to 76 per cent.

On 20 February 2019, the Group signed a letter of intent to acquire a 51 per cent stake in Shenzhen Ronghui Tongjin Technology Co. Ltd., a subsidiary of Shenzhen Kingdom Sci-Tech Co. Ltd., which is a technology services provider that specialises in financial exchanges, regulation technologies and data applications. The transaction is subject to the signing of binding agreements and is expected to complete in the second quarter of 2019.

Save for those disclosed in this Annual Report, there were no other significant investments held, nor were there material acquisitions or disposals of subsidiaries during the year under review. Apart from those disclosed in this Annual Report, there was no plan authorised by the Board for other material investments or additions of capital assets at the date of this Annual Report.

(D) Equity attributable to Shareholders and Return on Equity

Equity attributable to shareholders increased by \$3,456 million to \$40,729 million at 31 December 2018 from \$37,273 million at 31 December 2017. This arose principally from the \$2,587 million shares issued in lieu of cash dividends and an increase in retained earnings (excluding transfer from designated reserves) of \$990 million mainly attributable to profit for the year less dividends declared or paid.



Liquidity, Financial Resources and Gearing

Working capital rose by \$2,750 million to \$22,202 million at 31 December 2018 (31 December 2017: \$19,452 million) mainly due to profit attributable to shareholders of \$9,312 million and reclassification of deferred revenue of \$418 million as non-current liabilities following the adoption of the new accounting standard, HKFRS 15. The increase was partly offset by the 2017 final dividend and 2018 first interim dividend (net of scrip dividends) of \$5,465 million, reclassification of borrowings of \$743 million from non-current liabilities to current liabilities as they became repayable within twelve months, the net payments for non-current financial assets of \$338 million and net increase in fixed assets and intangible assets of \$250 million.

At 31 December 2018, the Group had the following outstanding borrowings:

	At 31 Dec 2018		At 31 Dec 2017	
	Carrying value \$m	Maturity	Carrying value \$m	Maturity
USD fixed rate notes with coupon of 2.85 per cent (2017: average coupon of 2.8 per cent)	753	Jan 2019	1,533	Dec 2018 & Jan 2019
Written put options to non-controlling interests	413	N/A	327	N/A
	1,166		1,860	

At 31 December 2018, the Group had a gross gearing ratio (ie, gross debt divided by adjusted capital) of 3 per cent (31 December 2017: 5 per cent), and a net gearing ratio (ie, net debt divided by adjusted capital) of zero per cent (31 December 2017: zero per cent). For this purpose, gross debt is defined as total borrowings and net debt¹⁰ is defined as total borrowings less cash and cash equivalents of Corporate Funds (excluding those reserved for supporting contributions to default funds and default fund credits for Clearing House Funds), and adjusted capital as all components of equity attributable to shareholders other than designated reserves.

¹⁰ Net debt will be zero when the amount of cash and cash equivalents of Corporate Funds (excluding those reserved for supporting contributions to default funds and default fund credits for Clearing House Funds) is greater than total borrowings.

Apart from the borrowings used to fund the acquisition of the LME Group, banking facilities have been put in place for contingency purposes. At 31 December 2018, the Group's total available banking facilities for its daily operations amounted to \$20,024 million (31 December 2017: \$18,963 million), which included \$13,523 million (31 December 2017: \$11,954 million) of committed banking facilities and \$6,500 million (31 December 2017: \$7,000 million) of repurchase facilities.

The Group has also put in place foreign exchange facilities for its daily clearing operations and for the RMB Trading Support Facility to support the trading of RMB stocks listed on the Stock Exchange. At 31 December 2018, the total amount of the facilities was RMB21,500 million (31 December 2017: RMB21,500 million).

In addition, the Group has arranged contingency banking facilities amounting to RMB13,000 million (31 December 2017: RMB13,000 million) for settling payment obligations to ChinaClear should there be events that disrupt normal settlement arrangements for Stock Connect, eg, natural disasters or extreme weather conditions in Hong Kong.

At 31 December 2018, 83 per cent (31 December 2017: 88 per cent) of the Group's cash and cash equivalents were denominated in HKD or USD.

Pledges of Assets

Details of pledges of assets are included in note 48 to the Consolidated Financial Statements of this Annual Report.

Exposure to Fluctuations in Exchange Rates and Related Hedges

Details of the Group's exposure to fluctuations in exchange rates and related hedges are included in note 50(a)(i) – Foreign exchange risk to the Consolidated Financial Statements of this Annual Report.

Contingent Liabilities

Details of contingent liabilities are included in note 45 to the Consolidated Financial Statements of this Annual Report.

10-Year Financial Statistics

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Key Market Statistics										
ADT traded on the Stock Exchange (\$bn)	107.4	88.2	66.9	105.6	69.5	62.6	53.9	69.7	69.1	62.3
ADV of derivatives contracts traded on the Futures Exchange ('000 contracts)	687	441	464	394	275	284	260	269	222	206
ADV of stock options contracts traded on the Stock Exchange ('000 contracts)	517	428	298	374	302	249	228	303	246	192
ADV of metals contracts traded on LME * ('000 lots)	730	624	619	670	700	676	634	N/A	N/A	N/A
* HKEX completed the acquisition of the LME Group on 6 December 2012.										
Consolidated Income Statement										
(\$m)										
Revenue and other income	15,867	13,180	11,116	13,375	9,849	8,723	7,211	7,855	7,566	7,035
Operating expenses	(4,110)	(3,566)	(3,455)	(3,290)	(2,958)	(2,777)	(1,957)	(1,733)	(1,505)	(1,392)
EBITDA	11,757	9,614	7,661	10,085	6,891	5,946	5,254	6,122	6,061	5,643
Depreciation and amortisation	(762)	(858)	(771)	(684)	(647)	(507)	(158)	(90)	(107)	(101)
Costs relating to acquisition of LME Group	-	-	-	-	-	-	(138)	-	-	-
Finance costs	(114)	(134)	(82)	(114)	(196)	(183)	(55)	-	-	-
Fair value loss on derivative component of convertible bonds	-	-	-	-	-	-	(55)	-	-	-
Share of profits/(losses) of joint ventures	2	(12)	(9)	(9)	(10)	(10)	(3)	-	-	-
Profit before taxation	10,883	8,610	6,799	9,278	6,038	5,246	4,845	6,032	5,954	5,542
Taxation	(1,592)	(1,255)	(1,058)	(1,347)	(900)	(700)	(761)	(939)	(917)	(838)
Profit for the year	9,291	7,355	5,741	7,931	5,138	4,546	4,084	5,093	5,037	4,704
Loss attributable to non-controlling interests	21	49	28	25	27	6	-	-	-	-
Profit attributable to shareholders	9,312	7,404	5,769	7,956	5,165	4,552	4,084	5,093	5,037	4,704
Dividend per share (\$)	6.71	5.40	4.25	5.95	3.98	3.54	3.31	4.25	4.20	3.93
Basic earnings per share (\$)	7.50	6.03	4.76	6.70	4.44	3.95	3.75	4.71	4.66	4.36
Consolidated Statement of Financial Position										
(\$m)										
Non-current assets	20,165	19,586	19,508	19,622	19,672	20,797	20,260	1,580	2,350	2,637
Current assets	235,783	298,018	227,810	218,571	232,188	65,146	60,577	52,448	45,534	42,695
Current liabilities	(213,581)	(278,566)	(210,688)	(203,976)	(222,564)	(57,538)	(55,337)	(44,809)	(39,160)	(36,985)
Net current assets	22,202	19,452	17,122	14,595	9,624	7,608	5,240	7,639	6,374	5,710
Total assets less current liabilities	42,367	39,038	36,630	34,217	29,296	28,405	25,500	9,219	8,724	8,347
Non-current liabilities	(1,464)	(1,663)	(4,246)	(4,255)	(7,937)	(7,887)	(7,736)	(60)	(47)	(320)
Total equity	40,903	37,375	32,384	29,962	21,359	20,518	17,764	9,159	8,677	8,027
Non-controlling interests	(174)	(102)	(118)	(146)	(86)	(113)	-	-	-	-
Equity attributable to HKEX's shareholders	40,729	37,273	32,266	29,816	21,273	20,405	17,764	9,159	8,677	8,027
Equity per share ¹ (\$)	32.65	30.14	26.42	24.74	18.26	17.59	15.48	8.50	8.06	7.46
Financial Ratios										
Dividend payout ratio	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Cost to income ratio ²	26%	27%	31%	25%	30%	32%	27%	22%	20%	20%
Pre-tax profit margin ²	69%	65%	61%	69%	61%	60%	67%	77%	79%	79%
Return on equity ³	23%	20%	18%	27%	24%	22%	23%	56%	58%	59%
Current ratio	1.1	1.1	1.1	1.1	1.0	1.1	1.1	1.2	1.2	1.2

Notes:

1 Based on number of shares issued and fully paid less number of shares held for the Share Award Scheme at 31 December

2 For the purpose of computing cost (ie, operating expenses) to income ratio and pre-tax profit margin, income includes share of profits/losses of joint ventures.

3 Based on equity attributable to HKEX's shareholders at year end

Corporate Governance Report

The Board is committed to high standards of corporate governance and recognises that good governance is vital for the long-term success and sustainability of HKEX businesses.

HKEX's key corporate governance practices and activities during the year ended 31 December 2018 are highlighted in this report and the Committee Reports, as well as in the 2018 CSR Report which will be published on the HKEX Group website together with this Annual Report. All the Committee Reports form part of this report.

More details about HKEX's corporate governance structure, principles and practices are available on the HKEX Group website [CG](#).

Committee Reports

Nomination and Governance Committee Report: pages 93 to 95

Audit Committee Report: pages 96 to 98

Risk Committee Report: pages 99 to 101

Remuneration Committee Report: pages 102 to 108

CSR Committee Report: pages 109 and 110

HKEX Group Website (www.hkexgroup.com)

About HKEX (Organisation) section [ORG](#)

Investor Relations section [IR](#)

Corporate Governance section [CG](#)

Corporate Social Responsibility section [CSR](#)

Governance Highlights

Board Structure	Board and Governance Process
<ul style="list-style-type: none">12 of the 13 Directors are independentMembers of all governance related committees * are INEDs23 per cent of Directors are femaleSet goal to achieve gender parity on the BoardDiverse range of expertise and experiencePeriodic Board refreshment	<ul style="list-style-type: none">Establishment of International Advisory Council to provide the Board with expert insight and perspective46 Board and committee meetings in total in 2018Regular knowledge sessions for DirectorsPeriodic evaluation of Board performanceAnnual review of succession plansAnnual review of compensation policiesRobust risk management and internal controls frameworkEmbedded compliance cultureProactive and ongoing stakeholder engagement

* Refer to the Nomination and Governance Committee, Audit Committee, Risk Committee, and Remuneration Committee

Compliance with Corporate Governance Code

Throughout the year 2018, HKEX complied with all code provisions and, where appropriate, adopted the recommended best practices set out in the Corporate Governance Code, with the following exceptions:

Code Provision A.4.1 (Re-election of non-executive directors)

The Government Appointed Directors, all being Non-executive Directors, are not subject to election or re-election by Shareholders as their appointments are governed by the SFO.

Code Provision A.4.2 (Retirement by rotation of directors)

HKEX Chief Executive in his capacity as a Director is not subject to retirement by rotation, as his term on the Board is coterminous with his employment with HKEX under HKEX's Articles.

HKEX has applied the principles of the Corporate Governance Code to its corporate governance structure and practices as described in this report and on the HKEX Group website [CG](#) / [IR](#) / [ORG](#). A checklist detailing HKEX's compliance with the Corporate Governance Code is available on the HKEX Group website [CG](#). The Board has delegated its corporate governance functions to the Nomination and Governance Committee under its revised terms of reference adopted in August 2018 (see more information in the Board Delegation section below). A summary of the work done by the Nomination and Governance Committee in 2018/2019 is set out in the Nomination and Governance Committee Report.

Strategic Planning

HKEX has a rigorous and continuing strategic planning process, which includes a full-day offsite strategy meeting each year, to identify and assess the opportunities and challenges that the Group might face and to develop a planned course of action for the Group to generate sustainable long-term value for Shareholders.

2018 was the final year of our previous strategic plan announced in 2016. The accomplishments achieved during the year are reported in the Chief Executive's Review and Business Review sections of this Annual Report.

HKEX has formulated a new 3-year strategic plan for 2019-2021, which is outlined in the Strategic Plan 2019-2021 section of this Annual Report.

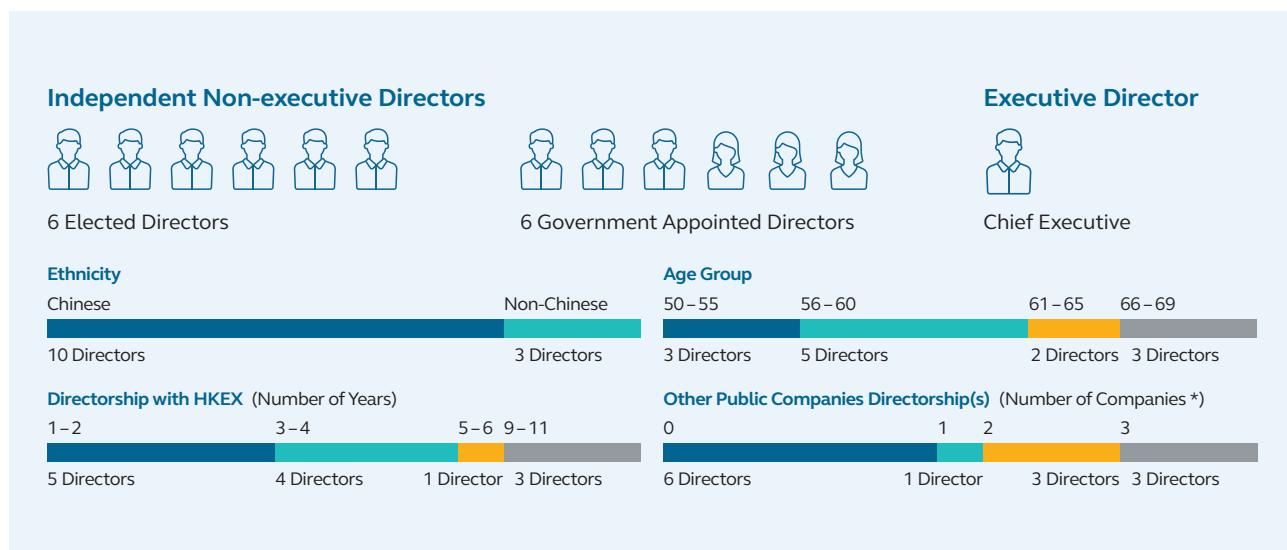
Development of Strategic Plan 2019-2021



The Board

Board Composition

The Board's structure is governed by HKEX's Articles and the SFO. The Board has an appropriate mix of skills, experience and diversity that are relevant to HKEX's strategy, governance and business and underpin its effectiveness and efficiency. The Board sets out its approach to achieving diversity in the Board Diversity Policy which is available on the HKEX Group website [CG](#).



* Directorships held at companies within the same group are considered to be one single directorship.

Directors' Skills and Experience

	Executive leadership & strategy/ directorship or senior executive experience with other listed company(ies)	Capital market expertise	International business	Mainland China exposure	Accounting professionals/ financial management expertise	Legal professionals/ regulatory & compliance/ risk management	IT
INEDs							
Laura M Cha (Chairman)	●	●	●	●		●	
Apurv Bagri	●	●	●		●	●	
T C Chan	●	●	●	●	●	●	
C H Cheah	●	●	●	●			
Anita Fung	●	●	●	●		●	
Rafael Gil-Tienda	●	●	●	●		●	
Fred Hu	●	●		●	●		●
Benjamin Hung	●	●	●	●			
Margaret Leung	●	●	●	●		●	●
Hugo Leung	●	●	●	●		●	
John Williamson	●	●	●		●	●	●
Stephen Yiu	●		●	●	●	●	●
Executive Director							
Charles Li	●	●	●	●	●	●	
Coverage (% of entire Board)	100%	92%	92%	85%	46%	77%	31%

The names of the Directors in office during 2018 and brief biographies of the current Directors are included, respectively, in the Board and Committees section and the Board of Directors and Senior Management section of this Annual Report.

Under HKEX's Articles, the term of office of Non-executive Directors is not more than three years (subject to re-appointment or re-election), although each Government Appointed Director is normally appointed for a term of approximately two years. Staggered terms of service enable the Board to have a good balance of experienced and new Directors. The average tenure of the current Directors as of the date of this report is 4.4 years. The service term of Anita Fung, Rafael Gil-Tienda, Margaret Leung and Stephen Yiu (Government Appointed Directors), and Apurv Bagri (Elected Director) will expire at the conclusion of the 2019 AGM. An announcement will be published upon the appointment of Directors by the Government. On 27 February 2019, the Board accepted the nomination by the Nomination and Governance Committee and recommended Apurv Bagri to stand for re-election at the 2019 AGM.

Information about the Board Diversity Policy and Nomination Policy along with the results of the review of the Board's composition, the nomination of Board candidate and the assessment of INEDs' independence during 2018/2019 are set out in the Nomination and Governance Committee Report.

Roles and Responsibilities

Good governance emanates from an effective and accountable board. At HKEX, the Board directly, and indirectly through its committees, leads and provides direction to management by laying down strategies and overseeing their implementation by management. The Board monitors the Group's operating and financial performance, reviews the Group's compensation policies and succession planning, and ensures that effective governance and CSR policies and sound internal control and risk management systems are in place. The Board operates under defined terms of reference which set out matters specifically reserved for its decision. The terms of reference are available on the HKEX Group website [ORG](#).

For effective oversight and leadership, the Board regularly reviews reports from HKEX Chief Executive and senior management on the progress of the approved strategies, plans and budgets, and receives updates/advice from the Board committees, external market/industry experts and management on the governance, business performance and development of the Group. In light of the increasingly competitive and complex global environment, the Board has approved the establishment of an International Advisory Council to provide the Board with expert insight and perspective. Further details relating to the Board committees, the International Advisory Council, Consultative Panels and HKEX's management functions are set out in the Board Delegation section below.

Board Effectiveness

The Board recognises that regular evaluations of its performance are essential to good corporate governance and Board effectiveness. Following the evaluation of the Board's performance by an independent external consultant in 2017, various actions were taken during 2018 to further enhance the overall effectiveness of the Board. These included revising the terms of reference of various Board committees to strengthen their role in corporate governance oversight, enhancing the quality and efficiency of Board discussions, and providing more regular training to Directors.

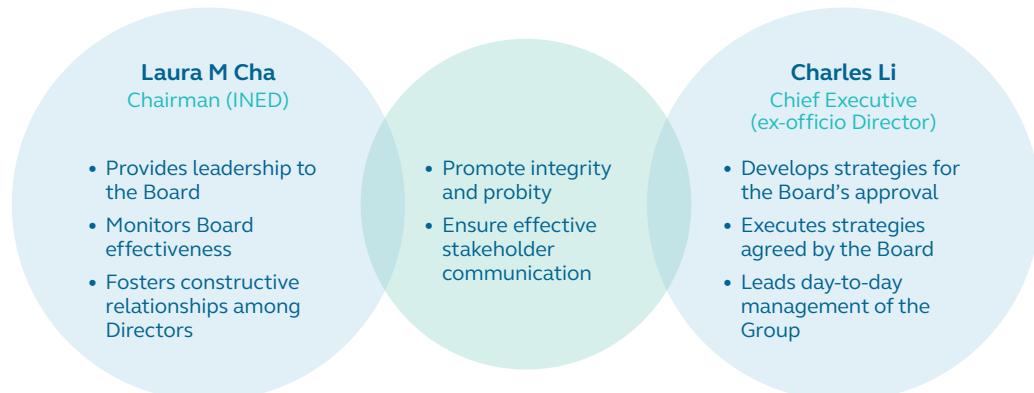
In 2018, there was an internal evaluation of the performance of the Board and its governance committees led by HKEX Chairman with the support of the Group Company Secretary. As part of the evaluation process, each Director completed a questionnaire to assess the performance of the Board, the Audit Committee, the Nomination and Governance Committee, the Remuneration Committee and the Risk Committee, and also the HKEX 2018 Strategic Offsite Meeting. In addition, HKEX Chairman interviewed other Directors individually to solicit their views, and her views were collected by the chairman of the Remuneration Committee. The evaluation results indicated that the Directors broadly agreed that the Board operates effectively and performs well in its governance of the Group, and they were satisfied, in general, with the composition and effectiveness of each governance committee. The 2018 Strategic Offsite Meeting was also well received by the Directors. The results of the evaluation were presented to the Nomination and Governance Committee and the Board in November and December 2018 respectively. Recommendations for improvement are being followed up.

Chairman and Chief Executive

On 26 April 2018, Laura M Cha was appointed by the Board as HKEX Chairman for a term coterminous with her directorship with HKEX. Her appointment was approved by the Chief Executive of the HKSAR pursuant to Section 69 of the SFO and took effect on 4 May 2018. In June 2018, Charles Li was re-appointed as HKEX Chief Executive for a further term of three years up to 15 October 2021, and the SFC approved his re-appointment pursuant to Section 70(1) of the SFO.

The roles of HKEX Chairman and Chief Executive are complementary, but importantly, they are distinct and separate with a clear and well established division of responsibilities. Details of their respective roles and responsibilities are available on the HKEX Group website [CG](#).

Key Responsibilities of HKEX Chairman and Chief Executive



HKEX Chairman, HKEX Chief Executive and other Directors do not have any financial, business, family or other material/relevant relationships with each other.

Induction and Development

Upon appointment to the Board, Directors are provided with comprehensive induction training to ensure that they have a thorough understanding of the Group's operations and governance policies as well as their role and responsibilities. Laura M Cha and Benjamin Hung received the induction after they became Directors on 25 April 2018. Every new Board member also receives a Director's Handbook which contains the Board's terms of reference, an overview of Directors' responsibilities, the Guidelines on Conduct and information on other key governance issues. The Director's Handbook and more information about induction training for new Directors are available on the HKEX Group website [CG](#).

Ongoing training helps Directors keep abreast of current trends and issues facing the Group, while enabling them to update and refresh their skills and knowledge necessary for the performance of their duties. In 2018, five Board knowledge sessions were arranged, at which external industry experts or senior management of HKEX shared their areas of expertise with Directors to enrich their understanding of the latest market trends and developments. A workshop was held in the UK in December to enhance Directors' knowledge about the LME and LME Clear.

All Directors are required to provide HKEX with their training records, and to confirm their respective records on a semi-annual basis. The records are maintained by the Group Company Secretary for annual review by the Nomination and Governance Committee. During 2018, the Directors received an aggregate of about 640 hours of training by attending or participating in Board knowledge sessions, management briefings and events such as conferences, seminars and workshops on directors' duties and other topics relevant to HKEX's strategy and business.

2018 Directors' Training by Topic

	HKEX's strategy/ business	Average hours of training: 49 ¹				
		Economy/ financial markets & products	Director's duties/ ESG practices	Financial reporting/risk management	Legislative/ regulatory compliance	IT
INEDs						
Laura M Cha (Chairman) ²	●	●	●	●	●	●
C K Chow (ex-Chairman) ¹	●					
Apurv Bagri	●	●		●	●	●
T C Chan	●	●	●	●	●	●
C H Cheah	●	●		●	●	●
Timothy Freshwater ¹	●		●	●	●	
Anita Fung	●	●	●	●	●	●
Rafael Gil-Tienda	●	●	●	●	●	●
Fred Hu	●	●		●	●	●
Benjamin Hung ²	●	●	●	●	●	●
Margaret Leung	●	●	●	●	●	●
Hugo Leung	●	●	●	●	●	●
John Williamson	●	●		●	●	●
Stephen Yiu	●	●	●	●	●	●
Executive Director						
Charles Li	●	●	●	●	●	●

¹ This figure excludes the training hours received by Messrs Chow and Freshwater, who retired from the Board at the end of the 2018 AGM.

² Mrs Cha and Mr Hung were appointed as Directors effective 25 April 2018.

Board Process

In addition to the annual offsite meeting in September, the Board held nine regular meetings in 2018 to discuss matters relating to the Group's strategies, business operations, performance, governance, risk management, regulatory compliance, corporate social responsibility and human capital. HKEX Chairman also had regular gatherings with other Directors, occasionally without the presence of HKEX Chief Executive, to consider issues in an informal setting.

Attendance Record of Directors and Committee Members in 2018

	2018 AGM	Board	Audit Committee	CSR Committee	Executive Committee	Investment Advisory Committee	Nomination and Governance Committee	Panel Member Selection Committee	Project ¹ Oversight Committee	Remuneration Committee	Risk Committee	Risk Management Committee (statutory)
Number of Meetings	1	9	4	4	4	4	4	1	2	6	4	4
Total Duration (Approximate number of hours)	1	27	10	3	2	7	4	1	2	11	7	4
INEDs												
Laura M Cha (Chairman) ²		8/8		3/3	3/3		3/3			5/5	3/3	3/3
C K Chow (ex-Chairman) ³	1/1	1/1		1/1	1/1		1/1			1/1	1/1	1/1
Apurv Bagri	1/1	9/9					2/4		2/2			
T C Chan	1/1	9/9	4/4				4/4	1/1			4/4	4/4
C H Cheah	1/1	9/9		4/4		4/4	4/4	1/1		6/6		
Timothy Freshwater ³	1/1	1/1			2/2	1/1				0/1		
Anita Fung	1/1	9/9	4/4		4/4			1/1	2/2			
Rafael Gil-Tienda ⁴	1/1	8/9		1/1				1/1	2/2	5/5	4/4	
Fred Hu	1/1	8/9			3/4				1/2	3/6		
Benjamin Hung ⁵		8/8			2/2							
Margaret Leung ⁶	1/1	9/9		4/4		3/3				4/4	3/4	
Hugo Leung	1/1	9/9	4/4	4/4	4/4			1/1				
John Williamson	1/1	9/9	4/4	4/4					2/2	6/6		
Stephen Yiu ⁷	1/1	9/9	4/4	3/3							4/4	
Executive Director												
Charles Li	1/1	9/9		2/4	4/4							
Market Professionals												
Henry Cheng ⁸										2/2		
Gao Yingxin										4/4		
Lawrence Lam										3/4		
Clement Lau ⁹										2/2		
Keith Lui										4/4		
Barbara Shiu										4/4		
Attendance Rate	100%	98%	100%	90%	100%	94%	90%	100%	90%	87%	100%	94%¹⁰

¹ The Project Oversight Committee was dissolved upon the pilot launch of the QME business in October 2018.

² Mrs Cha was appointed as a Director effective 25 April 2018. She was appointed as the chairman of the Nomination and Governance Committee and a member of the Remuneration Committee effective 26 April 2018, and the chairman of the CSR Committee, the Executive Committee, the Risk Committee and the Risk Management Committee (statutory) effective 4 May 2018.

³ Messrs Chow and Freshwater retired from the Board and the committees on 25 April 2018.

⁴ Mr Gil-Tienda was appointed as the chairman of the Remuneration Committee on 26 April 2018 and ceased to be a member of the CSR Committee on the same date.

⁵ Mr Hung was appointed as a Director effective 25 April 2018. He was appointed to the Investment Advisory Committee on 26 April 2018.

⁶ Mrs Leung was appointed to the Nomination and Governance Committee on 26 April 2018.

⁷ Mr Yiu was appointed to the CSR Committee on 26 April 2018.

⁸ Mr Cheng ceased to be a member of the Risk Management Committee (statutory) on 27 June 2018.

⁹ Mr Lau was appointed to the Risk Management Committee (statutory) on 27 June 2018.

¹⁰ The attendance rate calculation took into account the attendance by the alternate member of the committee.

To facilitate effective oversight and decision making by the Board, HKEX has established the Group Escalation and Incident Reporting Policy to set out guidelines on handling critical concerns relating to the Group's operations and performance. The Continuous Disclosure and Communication Policy is in place to ensure timely reporting of inside information to the Board and communication with the Group's stakeholders, which together with other key features of the Board process are available on the HKEX Group website [CG](#).

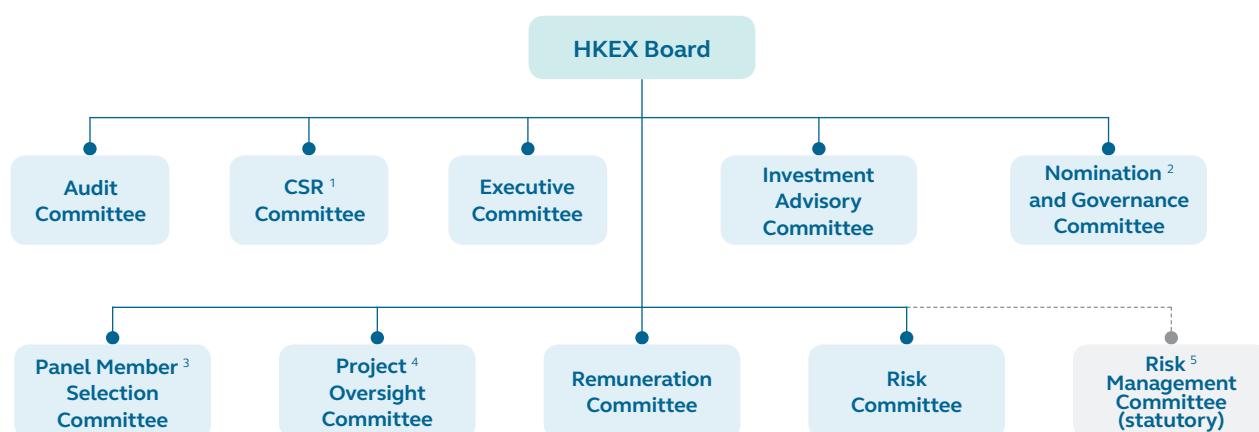
Group Company Secretary

All Directors have access to the advice and services of the Group Company Secretary. The Group Company Secretary reports to HKEX Chairman on Board governance matters, and is responsible for ensuring that Board procedures are followed and for facilitating information flows and communications among Directors as well as with Shareholders and management.

The Group Company Secretary's biography is set out in the Board of Directors and Senior Management section of this Annual Report. During 2018 the Group Company Secretary had over 15 hours of professional training.

Board Delegation

Committees



¹ Formerly known as the Environmental, Social and Governance Committee

2 Formerly known as the Nomination Committee

3 Formerly known as Panel Member Nomination Committee

⁴ Dissolved upon the pilot launch of the QME business in October 2018

5 A statutory committee established under Section 65 of the SFO

The Board has delegated authority to various committees to deal with specific matters under defined terms of reference. The composition and terms of reference of the Board committees are reviewed and updated regularly to ensure that they remain appropriate and in line with the Group's business and changes in governance practices. During 2018, the Board approved revisions to its various committees' terms of reference to strengthen their governance oversight role to meet the growing market expectations in relation to governance, risk management and social responsibilities, align with the governance practices adopted by other international exchanges, and comply with the new Corporate Governance Code effective 1 January 2019.

The responsibilities of the Nomination and Governance Committee were expanded to cover corporate governance oversight and related matters that were previously assumed by the CSR Committee.

The CSR Committee focuses on corporate social responsibility issues and initiatives under its revised scope of responsibilities.

The list of members of the Board committees is set out in the Board and Committees section of this Annual Report, and their attendance record is set out in “Board Process” above. More information about the Board committees is available on the HKEX Group website [CG](#) / [ORG](#).

International Advisory Council

In February 2019, HKEX established the International Advisory Council comprising experts in economics, business and finance from around the world who will act as advisors to the Board. The Council will provide the Board with expert insight and perspective and contribute to HKEX's understanding of the global environment, including developments in major international financial centres, the evolving global geopolitical landscape, advancements in technology and global policy and regulatory initiatives.

Consultative Panels

HKEX has three Consultative Panels which provide market expertise and advice to the Board in relation to the trading and clearing in Hong Kong's securities and derivatives markets. The composition and terms of reference of the Consultative Panels are available on the HKEX Group website [ORG](#).

Management

Senior management, under the leadership of HKEX Chief Executive, is responsible for the day-to-day management of the Group's businesses and implementation of the strategies approved by the Board. The Management Committee, a management decision-making body chaired by HKEX Chief Executive with defined authority delegated by the Board, aims to meet at least twice a month. Its membership as at the date of this report is set out in the Management Committee section of this Annual Report, and its duties are available on the HKEX Group website [ORG](#).

During 2018, several senior management changes were made to support the latest strategic focus, ensure accountability and replace retired executives. Details are set out in the Media Centre (News Release) section of the HKEX Group website. HKEX's updated organisation structure is available on the HKEX Group website [ORG](#). The members of the Senior Management and their biographies are set out in the Board of Directors and Senior Management section of this Annual Report.

The Board recognises the importance of continuity in senior management and identifying leaders with appropriate skills and experience to support delivery of the Group's strategic initiatives. Succession planning for senior management is considered by the Nomination and Governance Committee and the Board annually.

Given the competitive business environment in which the Group operates, HKEX arranges professional development programmes for its senior executives from time to time to support its long-term growth and success. During 2018, the Senior Management received an aggregate of about 670 hours of training by attending or participating in conferences, seminars and workshops on various topics, including HKEX's strategy and business, development of the financial markets, regulatory compliance, ESG practices, risk management, information technology, leadership and management. Other employees of the Group also attended training throughout the year. Details are set out in the 2018 CSR Report.

Subsidiary Governance

HKEX is committed to fostering good governance and a strong compliance culture at all levels of the organisation. To ensure there is an integrated, Group-wide approach towards upholding high governance standards, efforts have been made to strengthen the governance structures and processes of HKEX's subsidiaries.

Members of International Advisory Council

- Laura M CHA (Chairman)
- Stuart GULLIVER
- Mary SCHAPIRO
- Joseph TSAI

Number of Panel Meeting(s) Held in 2018

• Cash Market Consultative Panel	1
• Derivatives Market Consultative Panel	4
• Clearing Consultative Panel	2

For effective oversight of its subsidiaries, HKEX promotes governance linkages within the Group through common memberships between the Board and the subsidiaries' boards/committees and appointment of HKEX's senior management to the subsidiaries' boards. A list of HKEX subsidiaries' directors is set out in the Directors' Report contained in this Annual Report. Details about the governance structures of the Group's major subsidiaries (including composition and terms of reference of their boards and committees) are available on the HKEX Group website [ORG](#). Induction training and materials have been provided to subsidiaries' non-executive directors to facilitate their understanding of the Group's business and their duties and obligations as a director.

HKEX has implemented a number of Group-wide governance policies, which are subject to review from time to time, to support its commitment to high standards of business, professional and ethical conduct, and to ensure best practices across the organisation. During 2018, all the Group employees were required to complete training on risk awareness and compliance matters.

Information about the Group's governance policies and practices is available on the HKEX Group website [CG / CSR](#).

Key Governance Policies for Employees

- Code of Conduct
- Continuous Disclosure and Communication Policy
- Group Anti-Bribery and Anti-Corruption Policy
- Group Personal Account Dealing Policy
- Group Prevention of Financial Crime Policy
- Group Whistleblowing Policy

Remuneration of Directors and Senior Management

HKEX has formal and transparent procedures for fixing the remuneration packages of individual Directors and senior management. Information about HKEX's remuneration policies and the Remuneration Committee, including its work in 2018/2019, is set out in the Remuneration Committee Report.

Directors' Securities Transactions and Interests in HKEX

Compliance with Model Code

HKEX has adopted the Model Code as its own code of conduct regarding Directors' securities transactions. In response to a specific enquiry by the Company, all Directors confirmed that they complied with the Model Code at all applicable times during 2018.

Directors' Interests and Short Positions in Shares and Underlying Shares of HKEX

The interests and short positions of Directors, including HKEX Chief Executive, in the shares and underlying shares of HKEX (within the meaning of Part XV of the SFO) as at 31 December 2018 as recorded in the register required to be kept under Section 352 of the SFO, or as otherwise notified to HKEX and the SFC under the Model Code, are set out below.

Long Positions in Shares and Underlying Shares of HKEX

Name of Director	Number of shares/underlying shares held					
	Personal interests	Family interests	Corporate interests	Other interests	Total	% of HKEX ¹ shares in issue
Charles Li	1,072,046 ²	–	–	–	1,072,046	0.08
Stephen Yiu	–	2,000 ³	–	–	2,000	0.00

1 Based on 1,250,632,060 HKEX shares in issue as at 31 December 2018

2 It included Mr Li's interests in Awarded Shares and shares acquired out of the dividends from the Awarded Shares in an aggregate of 413,146 shares which remained unvested under the Share Award Scheme. Details of Mr Li's Awarded Shares are set out in the Remuneration Committee Report.

3 Mr Yiu's spouse was the beneficial owner of those shares.

Save as disclosed above, none of the Directors had any interests or short positions in the shares, underlying shares or debentures of HKEX or any of its associated corporations (within the meaning of Part XV of the SFO) as at 31 December 2018 as recorded in the register required to be kept under Section 352 of the SFO, or as otherwise notified to HKEX and the SFC under the Model Code.

Apart from the Awarded Shares as disclosed in the Remuneration Committee Report, during 2018, none of the Directors (including their spouses and children under the age of 18) had any interests in or was granted any right to subscribe for the securities of HKEX or its associated corporations (within the meaning of Part XV of the SFO), or had exercised any such rights.

Other Persons' Interests and Short Positions in Shares and Underlying Shares of HKEX Minority Controllers

As at the date of this report, other than the Government which has been a Minority Controller since 7 September 2007, nine entities had been approved as Minority Controllers on the basis that they hold HKEX shares in custody for their clients. According to the Participant Shareholding Report as at 31 December 2018, these Minority Controllers in aggregate held approximately 65 per cent of HKEX shares in issue. More information about Minority Controllers is set out on the HKEX Group website [CG](#).

Other persons' interests and short positions in the shares and underlying shares of HKEX (within the meaning of Part XV of the SFO) as at 31 December 2018 as recorded in the register required to be kept under Section 336 of the SFO are set out below.

Long Positions in Shares and Underlying Shares of HKEX

Name	Capacity	Number of shares/ underlying shares held	Total	% of HKEX ¹ shares in issue
JPMorgan Chase & Co (JPMC)	Interest of corporation controlled by JPMC	8,693,353	62,800,715 ²	5.02
	Investment manager	12,191,550		
	Person having a security interest in shares	36,266		
	Trustee	12,675		
	Approved lending agent	41,866,871		
The Government of the Hong Kong Special Administrative Region (for the account of the Exchange Fund)	Beneficial owner	74,840,961 ³	74,840,961	5.98

Short Positions in Shares and Underlying Shares of HKEX

Name	Capacity	Number of shares/ underlying shares held	Total	% of HKEX ¹ shares in issue
JPMC	Interest of corporation controlled by JPMC	10,923,476	10,923,476 ⁴	0.87

- 1 Based on 1,250,632,060 HKEX shares in issue as at 31 December 2018
 2 It included an aggregate interest in 3,199,812 underlying shares through JPMC's holding of certain listed derivatives (physically settled: 1,539,000 shares; cash settled: 1,065,330 shares) and unlisted derivatives (physically settled: 569,682 shares; cash settled: 25,800 shares).
 3 Based on Hong Kong Monetary Authority's notification to HKEX on 4 June 2018
 4 It included an aggregate interest in 7,096,841 underlying shares through JPMC's holding of certain listed derivatives (physically settled: 1,671,200 shares; cash settled: 1,745,900 shares; convertible instruments: 18 shares) and unlisted derivatives (physically settled: 3,651,430 shares; cash settled: 28,293 shares).

Save as disclosed above, no other persons had any interests or short positions in the shares or underlying shares of HKEX as at 31 December 2018 as recorded in the register required to be kept under Section 336 of the SFO, or as otherwise notified to HKEX and the Stock Exchange.

Senior Management

Members of the senior management are obliged to follow the Company's restrictions on dealing in securities, futures contracts and other derivatives, which are on terms no less stringent than the Model Code, as set out in the Group Personal Account Dealing Policy. Senior Managements' interests in the shares and underlying shares of HKEX as at 31 December 2018 are set out below.

Senior Management	Number of shares held	Number of shares that remained unvested under the Share Award Scheme	Derivatives (number of underlying shares)
Roland Chai	–	27,860	–
Matthew Chamberlain	9,703	61,303	–
Eva Chau	87	26,033	–
Tori Cowley	–	2,808	–
Adrian Farnham	29,313	38,128	–
David Graham	23,688	54,964	–
John Killian	–	18,748	–
Romnesh Lamba	28,034	51,049	–
Richard Leung	93,281	36,830	–
Li Gang	25,410	50,211	–
Ferheen Mahomed	20,953	48,473	–
Mao Zhirong	38,210	23,283	–
Calvin Tai	135,704	55,540	–

Continuing Connected Transactions

In June 2000, the SFC granted a waiver to HKEX from strict compliance with the Main Board Listing Rules with respect to certain continuing connected transactions as referred to in (A), (B) and (C) below. The waiver has remained valid since then. During 2018 and subject to the waiver, the Group had the following continuing connected transactions:

A. Transactions between HKEX or its subsidiaries and the following connected persons arising from or in connection with the use of the facilities provided by the Group for the trading, clearing and/or settlement of securities and futures products and transactions, and all services offered by the Group which are ancillary, incidental or otherwise related to the foregoing:

- Bill Kwok, who retired from the Board on 26 April 2017¹, was interested in the transactions entered into by Wocom Securities Limited (WSL) and Wocom Limited, EPs and CPs, which are Dr Kwok's associates by virtue of the Main Board Listing Rules.
- Vincent Lee, who retired from the Board on 26 April 2017¹, was interested in the transactions entered into by Hang Tai Securities Limited, Tung Tai Securities Company Limited and Tung Tai Futures Limited, EPs and CPs, which are Mr Lee's associates by virtue of the Main Board Listing Rules.

B. Transactions between HKEX or its subsidiaries and the following connected person arising from or in connection with the listing of securities on the Stock Exchange, and all services offered by the Group which are ancillary, incidental or otherwise related to the foregoing:

- Laura M Cha, HKEX Chairman, was interested in the transactions entered into by HKR International Limited and Hanison Construction Holdings Limited, which are listed on the Stock Exchange and are Mrs Cha's associates by virtue of the Main Board Listing Rules.
- Bill Kwok was interested in the transactions entered into by his associate, Wing On Company International Limited, which is listed on the Stock Exchange.

C. Transactions between HKEX or its subsidiaries and the following connected person arising from or in connection with the HKSCC arrangement on behalf of CCASS Participants for: (i) carrying out "buy-in" when a CCASS Participant has failed to deliver securities on time for settlement under the CNS System or the Isolated Trades System operated by CCASS; (ii) the purchase or sale of securities in connection with the liquidation of the positions of a CCASS Participant that has been declared by HKSCC to be in default; and (iii) the sale of entitlements of securities held through CCASS (collectively referred as Buy-in Transactions):

- WSL is one of the brokers appointed by HKSCC to assist it in carrying out Buy-in Transactions. Bill Kwok is interested in any Buy-in Transactions entered into by WSL, which is his associate by virtue of the Main Board Listing Rules. No Buy-in Transactions were conducted by WSL during the period from 1 January to 26 April 2018¹.

¹ Bill Kwok, Vincent Lee and their respective associates were connected persons of HKEX up to 26 April 2018. Hence, transactions between HKEX or its subsidiaries and Dr Kwok, Mr Lee or their respective associates that took place during the period from 1 January to 26 April 2018 constituted continuing connected transactions for HKEX.

The Board has delegated authority to the Audit Committee to review the above continuing connected transactions pursuant to Rule 14A.55 of the Main Board Listing Rules. The results of the Audit Committee's review are set out in the Audit Committee Report.

The Company's external auditor was engaged to report on the above continuing connected transactions of the Group in accordance with Hong Kong Standard on Assurance Engagements 3000 (Revised) "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information", and with reference to Practice Note 740 "Auditor's Letter on Continuing Connected Transactions under the Hong Kong Listing Rules" issued by the HKICPA. The external auditor has issued an unqualified report containing its findings and conclusions in respect of the transactions disclosed above in accordance with Rule 14A.56 of the Main Board Listing Rules. The Company provided a copy of the report to the SFC and the Stock Exchange.

Related Party Transactions

During 2018, the Group entered into certain transactions with “related parties” as defined under the applicable accounting standards. Related party transactions are disclosed in note 47 to the Consolidated Financial Statements. They include the following connected transactions under the Main Board Listing Rules.

Related party transactions which constitute connected transactions	Compliance with Listing Rules
Payment of membership fee by an associate of a Director to the LME as covered in note 47(a) to the Consolidated Financial Statements	This was a connected transaction exempt from the connected transaction requirements under Rule 14A.76(1) of the Main Board Listing Rules.
Compensation to HKEX Chief Executive and directors of HKEX's subsidiaries and remuneration to HKEX's Non-executive Directors, which form part of the “Key management personnel compensation” described in note 47(b) to the Consolidated Financial Statements	These were continuing connected transactions exempt from the connected transaction requirements under Rule 14A.76(1) or 14A.95 of the Main Board Listing Rules.

Accountability and Audit

Financial Reporting

The Board, which is responsible for overseeing the preparation of annual financial statements, receives monthly management accounts and updates on the Group’s performance, financial position and prospects. In 2018, HKEX published its annual, interim and quarterly results within three months, two months and 45 days respectively after the relevant period end. In preparing the financial statements for the year ended 31 December 2018, the Board adopted appropriate accounting policies consistently, made prudent and reasonable judgements and estimates, and ensured that the financial statements were prepared on a going concern basis and show a true and fair view of the consolidated financial position of the Group as at 31 December 2018 and of the Group’s consolidated financial performance and cash flows for the year then ended.

Risk Management and Internal Control

The Board has the overall responsibility for evaluating and determining the nature and extent of the risks (including ESG-related risks) it is willing to take in achieving the Group’s strategic objectives, maintaining sound and effective risk management and internal control systems (including those for ESG-related risks) and reviewing their effectiveness to safeguard Shareholders’ investment and the Group’s assets. To this end, management continues to allocate resources for internal control and risk management systems based on the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Internal Control – Integrated Framework 2013 and the ISO 31000 Risk Management principles and guidelines to provide reasonable, though not absolute, assurance against material misstatement or loss and to manage rather than eliminate the risk of failure to achieve business objectives. Details of the Group’s risk governance structure and the Group Risk Management Framework are set out in the Risk Committee Report. Details of the Group’s key control procedures and internal audit functions are available on the HKEX Group website [CG](#).

The Board reviews the adequacy and effectiveness of the Group’s risk management and internal control systems at least quarterly, through the Risk Committee and the Audit Committee. Information about the Risk Committee and the Audit Committee, including their work in 2018/2019, is set out in their respective reports contained in this Annual Report.

Independence of External Auditor

HKEX has engaged PricewaterhouseCoopers as its external auditor. An analysis of remuneration for audit and non-audit services provided by PricewaterhouseCoopers and details of the Audit Committee's work in assessing the independence of PricewaterhouseCoopers and ensuring audit effectiveness are set out in the Audit Committee Report.

Information about HKEX's policies and procedures in safeguarding and supporting the independence and objectivity of the external auditor is available on the HKEX Group website [CG](#).

Shareholder Relations

The Board gives high priority to maintaining balanced, clear and transparent communications with Shareholders and other investors to facilitate their understanding of the Group's performance and prospects as well as the market environment in which it operates. HKEX has an ongoing dialogue with Shareholders and other investors through various communication channels and takes any areas of concern into consideration when formulating its business strategies.

Investor Engagement and Communications

HKEX's investor relations team focuses on effective communication with and provision of relevant public information to investors and analysts to support the appropriate valuation of HKEX equity. Through an extensive engagement programme, institutional investors and analysts can interact with HKEX Chairman and HKEX Chief Executive and other senior executives for updates on the development of the Group's strategic initiatives and operations, as well as HKEX's corporate governance policies. During 2018, around 320 meetings were held with institutional investors and analysts in Hong Kong, Mainland China and overseas. To facilitate effective investor relations, regular shareholding analyses were conducted under Section 329 of the SFO to gain a better view of changes in HKEX's shareholding structure.

Investment community views are communicated regularly to the Board, including sell-side consensus rating and target price for HKEX shares and summaries of questions and feedback from investors and analysts. During 2018, investors' major areas of interest included:

- (i) Updates on financial performance of the Group;
- (ii) Updates on the progress made in respect of delivering on HKEX Strategic Plan 2016-2018, and direction of the new 3-year strategic plan for 2019-2021; and
- (iii) Latest developments regarding the Group's initiatives, including Stock Connect, Bond Connect, ETF Connect, Primary Connect, FIC strategy, LME's initiatives, development of QME and the listing regime reform.

To foster institutional investors' understanding of the Group's governance performance, HKEX continues to provide related information to international and local ESG rating agencies upon request.

Investor Relations Activities in 2018

- Small group/one-to-one meetings
 - Non-deal roadshows
 - Analyst briefings
 - Investor conferences
-

Investor Relations Contact Details

Email: investorrelations@hkex.com.hk
Tel: (852) 2840 3330

Shareholder Engagement and Communications

Corporate communications	<ul style="list-style-type: none"> HKEX ensures prompt dissemination of corporate communications to enable Shareholders and other stakeholders to keep abreast of the Group's business and developments so that they can make informed decisions. The HKEX Group website has been adopted as the designated company website for publication of HKEX's announcements, notices and other corporate communications. As at 31 December 2018, about 62 per cent of Shareholders had opted to receive corporate communications via electronic means.
Financial key dates	<ul style="list-style-type: none"> The financial calendar highlighting important dates for Shareholders in 2019 is set out in the Shareholder Information section of this Annual Report and is also available on the HKEX Group website IR.
Scrip dividend scheme	<ul style="list-style-type: none"> HKEX offers Shareholders the option of receiving their dividends in the form of scrip. Since 2015, the Board has offered a discount (currently at 3 per cent) on the subscription price to Shareholders who elect the scrip alternative to facilitate their reinvestment of their dividends in HKEX shares. Further details of the HKEX's dividend policy and scrip dividend scheme are set out in the Shareholder Information section of this Annual Report and are also available on the HKEX Group website IR.
General meetings	<ul style="list-style-type: none"> One or more Shareholders representing at least 5 per cent of the total voting rights of all Shareholders having a right to vote at general meetings may request the Board to call a general meeting. The request must state the general nature of the business to be dealt with, and it may include the text of a resolution that may properly be moved and is intended to be moved at the meeting. Such requests must be sent to the Group Company Secretary at HKEX's registered office, or by email to ssd@hkex.com.hk. Under HKEX's Articles, if a Shareholder wishes to propose a person for election as a Director at a general meeting, he or she should give written notice of the nomination to the Group Company Secretary at HKEX's registered office. Details of the procedures for nominating candidates to stand for election as a Director at the 2019 AGM will be set out in the circular to Shareholders to be sent together with this Annual Report. Shareholders may put forward proposals at general meetings by sending written notice of their proposals to the Group Company Secretary at HKEX's registered office, or by email to ssd@hkex.com.hk. Details of the procedures for putting forward proposals by Shareholders are set out on the HKEX Group website CG.
Policies and guidelines	<ul style="list-style-type: none"> The Shareholders Communication Policy ensures that Shareholders are provided with ready, equal and timely access to information about HKEX. The policy is regularly reviewed to ensure its effectiveness and is posted on the HKEX Group website CG. The Shareholders' Guide with answers to the frequently asked questions of Shareholders with regard to their interests in HKEX shares is also available on the HKEX Group website CG.
Shareholding analysis	<ul style="list-style-type: none"> Based on publicly available information and within the Directors' knowledge as at the date of this report, approximately 100 per cent of the HKEX shares were held by the public. HKEX's market capitalisation and shareholding distribution as at 31 December 2018 are set out in the Shareholder Information section of this Annual Report.

Further information about the Group's stakeholder engagement activities in 2018 is set out in the 2018 CSR Report.

The Board is grateful to Shareholders and other stakeholders for their continued support and welcomes their views as well as any questions they may have about the management and governance of the Group.

Shareholders and other stakeholders may at any time send their enquiries and concerns to the Board by addressing them to the Group Company Secretary and sending them by post to the Secretarial Services Department, HKEX, 8/F, Two Exchange Square, 8 Connaught Place, Central, Hong Kong, or by email to ssd@hkex.com.hk.

2018 Annual General Meeting

HKEX uses the AGM as a forum to establish constructive dialogue with Shareholders. Separate resolutions are proposed on each substantially separate issue, with all resolutions considered in a poll conducted by HKEX's registrar and verified by an independent scrutineer. Electronic voting is used at the AGMs to enhance efficiency and transparency of the vote counting process.

At the 2018 AGM, all Directors in office on the meeting date, including HKEX Chairman and the chairmen of the Audit Committee and other Board committees, attended the meeting along with key senior executives and the external auditor.

The voting results and the minutes of the 2018 AGM are available on the HKEX Group website [IR](#).

Key Matters Resolved at the 2018 AGM ¹

- Receipt of the 2017 audited financial statements
- Declaration of 2017 final dividend of \$2.85 per share
- Re-election of T C Chan, Fred Hu and John Williamson as Directors
- Re-appointment of PricewaterhouseCoopers as the Company's auditor
- Granting a general mandate to buy back HKEX shares (not exceeding 10 per cent of the number of shares in issue)
- Granting a general mandate to issue HKEX shares (not exceeding 10 per cent of the number of shares in issue and at a price not exceeding a discount of 10 per cent)
- Remuneration of \$2,190,000 and \$730,000 per annum respectively payable to HKEX Chairman and each of the other Non-executive Directors

¹ The full text of the resolutions is set out in the Notice of the 2018 AGM.

2019 Annual General Meeting

The 2019 AGM will be held on Wednesday, 24 April 2019 at 4:30 pm at the HKEX Connect Hall on the 1st Floor, One and Two Exchange Square, Central, Hong Kong. The Notice of the 2019 AGM, which constitutes part of a circular to Shareholders, will be sent together with this Annual Report. The Notice, the circular which sets out details of the business to be conducted at the 2019 AGM, and the proxy form will be available on the HKEX Group website [IR](#). The results of the voting on the proposed resolutions will be published on the HKEX Group website [IR](#) shortly after the 2019 AGM is held.

All Shareholders are encouraged to attend the 2019 AGM and exercise their right to vote. Shareholders are invited to ask questions related to the business of the meeting, and will be able to meet with Directors and the senior management.

Changes after Closure of Financial Year

This report takes into account the changes that occurred between the end of 2018 and the date of the approval of this report.

On behalf of the Board
MAU Kam Shing, Joseph
Group Company Secretary

Hong Kong, 27 February 2019

2018 AGM

Total number of participants: 271

Shares voted: 32.5 per cent of total issued shares

Individual Shareholders  89

Authorised representatives of HKSCC Nominees Limited  123

Shareholders appointing representatives/proxies to attend the 2018 AGM  59

Nomination and Governance Committee Report

The Nomination and Governance Committee

The Nomination and Governance Committee (NGC) (formerly known as the Nomination Committee) is delegated with the authority from the Board to review the Board's composition and diversity, formulate and implement the policy for nominating Board candidates for election by Shareholders, make recommendations to the Board on the appointment of Directors and members to the Board committees, and assess INED's independence and commitment. The NGC is also responsible for succession planning for Directors and senior management, leadership training and development, and oversight of matters relating to corporate governance. Its terms of reference are available on the HKEX Group website [ORG](#).

The NGC comprises five INEDs whose names and biographies are set out in the Board and Committees section of this Annual Report. The NGC held four meetings in 2018. Members' attendance records are in the Corporate Governance Report contained in this Annual Report.

Summary of Work in 2018/2019

- Endorsed revisions to the NGC's terms of reference to expand its scope of responsibilities to cover corporate governance oversight
- Endorsed revisions to the Board Diversity Policy and the Nomination Policy
- Approved the plan to conduct an internally led evaluation of the performance of the Board and its governance committees in 2018 and reviewed the evaluation results
- Reviewed the composition of the Board and its committees
- Nominated Board candidates for election by Shareholders at AGMs
- Considered the requirements for candidates to be appointed as Government Appointed Directors
- Recommended the appointment of Directors to the Board committees and the Consultative Panels
- Reviewed the independence of the INEDs
- Reviewed the time commitment of Directors for performance of their responsibilities
- Reviewed the succession plans for the Board and Senior Management
- Reviewed the training and continued professional development of the Directors and Senior Management
- Endorsed the annual Corporate Governance Report

Changes in Directors during 2018

In February 2018, the Government appointed Laura M Cha and Benjamin Hung to the Board, each for a term of approximately two years from the close of the 2018 AGM until the conclusion of the AGM in 2020.

At the 2018 AGM, T C Chan, Fred Hu and John Williamson were re-elected by Shareholders for a term of approximately three years from 25 April 2018 until the conclusion of the AGM in 2021. C K Chow and Tim Freshwater retired from the Board after the conclusion of the 2018 AGM.

Board Composition and Diversity

HKEX sees increasing diversity at the Board level as an essential element in attaining its strategic objectives and achieving sustainable and balanced development for the Group. During 2018, the NGC reviewed the structure, size and diversity of the Board to ensure that its composition complies with the Listing Rules and reflects an appropriate mix of skills, experience and diversity that are relevant to HKEX's strategy, governance and business and contribute to the Board's effectiveness and efficiency. Information about the Board's current composition, including a Directors' skill matrix, is set out in the Corporate Governance Report contained in this Annual Report.

In 2018, the NGC endorsed, and the Board approved, changes to the Board Diversity Policy, after taking into account the Exchange's recent guidelines on board diversity as well as the Directors' comments from the 2018 Board evaluation. The revised Board Diversity Policy, which is available on the HKEX Group website [CG](#), highlights the benefits of diversity with respect to the Board's effectiveness and decision-making process, its succession planning and development, and attainment of HKEX's strategic objectives. The Policy also sets out the Board's commitment to gender diversity and other diversity aspects, with the ultimate goal of achieving gender parity on the Board. HKEX currently has three female Directors, and the Board will take opportunities to increase the proportion of female members over time as and when suitable candidates are identified.

To further enhance Board diversity while maintaining an appropriate balance between continuity of experience and Board refreshment, the NGC endorsed, and the Board approved, amendments to the Nomination Policy by reducing the maximum tenure that Non-executive Directors are eligible for shareholder election from 12 consecutive years to nine consecutive years. The revised Nomination Policy is available on the HKEX Group website [CG](#).

Nomination of Candidate

The service term of Anita Fung, Rafael Gil-Tienda, Margaret Leung and Stephen Yiu (Government Appointed Directors), and Apurv Bagri (Elected Director) will expire at the conclusion of the 2019 AGM. The NGC has considered the requirements for candidates to be appointed as Government Appointed Directors.

On 26 February 2019, the NGC, having reviewed the Board's composition, nominated Apurv Bagri to the Board for it to recommend to Shareholders for re-election at the 2019 AGM. Mr Bagri, who is a member of the NGC, abstained from voting on the nomination when it was being considered.

The nomination was made in accordance with the Nomination Policy and took into account the diversity aspects (including without limitation, gender, age, cultural and educational background, ethnicity, professional experience, skills, knowledge and length of service), with due regard for the benefits of diversity, as set out under the Board Diversity Policy. The NGC also took into account Mr Bagri's vast experience in the non-ferrous metals futures trading business and his contributions to the Board. The NGC was satisfied with Mr Bagri's independence with reference to the criteria laid down in the Main Board Listing Rules.

Mr Bagri does not hold any cross-directorships or have any significant links with other Directors through involvement in other companies or bodies. He does not have any service contracts with any member of the Group that are not determinable by the Group within one year without compensation (other than statutory compensation). His particulars are set out in the circular to Shareholders to be sent together with this Annual Report and posted on the HKEX Group website [IR](#).

Independence of Non-executive Directors

Independent Directors enhance the effectiveness and decision-making of the Board by providing objective judgement and constructive challenge to management. Non-executive Directors' independence is assessed upon appointment, annually and at any other time where the circumstances warrant reconsideration.

Assessment upon Director's Appointment

Laura M Cha and Benjamin Hung, upon appointment, confirmed their respective independence in writing to the SFC.

Ongoing Assessment

- Each INED is required to inform HKEX as soon as practicable if there is any change in his or her personal particulars that may affect his or her independence. No such notification was received during 2018.
- Details of the Director's interests in the Group's business are set out on pages 88 and 89 of this Annual Report.

On 26 February 2019, the NGC assessed the annual independence confirmation received from each INED, having regard to the criteria under Rule 3.13 of the Main Board Listing Rules.

Annual Assessment

- As a good corporate governance practice, every NGC member abstained from assessing his/her own independence.
- Particular attention was given to assessing the independence of the Government Appointed Directors (including Laura M Cha, who is an Executive Councillor) given that the Government is a Minority Controller of HKEX.
- Consideration was given to the independence of T C Chan and John Williamson, who have been serving on the Board for more than nine years.
- The NGC affirmed that all INEDs continued to demonstrate strong independence in judgement and were free from any business or other relationship which could interfere with their ability to discharge their duties effectively, and they therefore all remained independent.

Laura M CHA

Chairman of the Nomination and Governance Committee

Hong Kong, 26 February 2019

Audit Committee Report

The Audit Committee

The Audit Committee (AC) is delegated with the authority from the Board to provide independent oversight of the Group's financial reporting and internal control systems, and the adequacy of the external and internal audits. The AC is provided with sufficient resources to perform its duties including support, as necessary, from the Internal Audit Department (IAD), the external auditor, legal counsel and management in examining all matters relating to the Group's adopted accounting principles and practices, and in reviewing all material financial, operational and compliance controls. The AC's terms of reference are available on the HKEX Group website [ORG](#).

The AC comprises five INEDs whose names and biographies are set out in the Board and Committees section of this Annual Report. None of the AC members are employed by or otherwise affiliated with the auditor of HKEX.

The AC held four meetings in 2018. Members' attendance records are disclosed in the Corporate Governance Report contained in this Annual Report.

Summary of Work in 2018/2019

- Endorsed revisions to the AC's terms of reference and approved the revised Group Internal Audit Charter
 - Approved amendments to the Group Anti-Bribery and Anti-Corruption Policy
 - Reviewed the Group's quarterly, half-yearly and annual financial results
 - Reviewed, with both the external auditor and management, the audit approach and methodology applied, and in particular to those Key Audit Matters included in the year end auditor's report
 - Approved the internal audit plan for 2019 to 2021
 - Reviewed significant findings of the IAD, the external auditor and regulators, and management's response to their recommendations
 - Reviewed quarterly reports on legal and regulatory compliance matters, including anti-bribery and anti-corruption matters and whistleblowing disclosures
 - Reviewed the adequacy and effectiveness of the Group's internal control systems and its accounting, financial reporting and internal audit functions
 - Reviewed the continuing connected transactions
 - Reviewed and monitored the external auditor's independence and engagement to perform non-audit services
 - Approved the 2018 external audit engagement letters and fees
 - Reviewed changes in accounting principles and practices proposed by management
-

Review of Financial Results

The AC reviewed the 2018 Consolidated Financial Statements in conjunction with HKEX's external auditor. Based on this review and discussions with management, the AC was satisfied that the Consolidated Financial Statements were prepared in accordance with applicable accounting standards and fairly present the Group's financial position and results for the year ended 31 December 2018. The AC therefore recommended the Consolidated Financial Statements for the year ended 31 December 2018 be approved by the Board.

Review of Key Audit Matters

The AC reviewed and discussed with the external auditor and management the following key audit matters for the audit of the 2018 Consolidated Financial Statements.

Key Audit Matters	Assessment by the AC
Goodwill impairment assessment	The AC was satisfied that sufficient analysis (including the sensitivity analysis on key assumptions) had been performed in this area to conclude that there was no impairment allocated to the group of Cash Generating Units within the respective Commodities and Clearing operating segments. The assessment was also an area of focus for the external auditor as detailed in the Auditor's Report on pages 118 to 119.
IT systems and controls over financial accounting and reporting	The external auditor's key audit matters included IT systems and controls since the Group's financial accounting and reporting processes are highly dependent on their design and operating effectiveness. The AC noted and agreed with the external auditor that the key IT systems could be relied on to ensure the accuracy and completeness of the revenue recognition during the financial accounting and reporting processes. The findings of the external auditor are set out in the Auditor's Report on page 120.

Review of Internal Control Systems

The AC reviewed the effectiveness of the Group's policies and procedures regarding internal control systems (including the financial, operational, IT, risk management, information security, outsourcing, legal, compliance and those controls designed to detect material fraud) by reviewing the work of the IAD and the Group's external auditor, and regular reports from management including those on risk management, regulatory compliance and legal matters.

In conjunction with the Risk Committee, the AC reviewed and concurred with the management confirmation that for the year ended 31 December 2018, the Group's risk management and internal control systems were effective with reference to the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Internal Control – Integrated Framework (2013) principles. The AC is satisfied that the Group has adopted necessary control mechanisms to monitor and correct non-compliance and complied satisfactorily with the requirements of the Corporate Governance Code in respect of risk management and internal control systems.

Review of Accounting, Financial Reporting and Internal Audit Functions

The AC reviewed and was satisfied with the adequacy of the resources, staff qualifications and experience, training programmes and budget of the Group's accounting, financial reporting and internal audit functions.

Review of Continuing Connected Transactions

During 2018, the Group entered into certain continuing connected transactions as disclosed in the Corporate Governance Report contained in this Annual Report. The AC, under the authority delegated by the Board, reviewed these continuing connected transactions pursuant to Rule 14A.55 of the Main Board Listing Rules. The AC confirmed that the transactions were entered into by the Group in accordance with the requirements of the Main Board Listing Rules and the conditions of the waiver granted by the SFC that:

- (i) continuing connected transactions are entered into in the Group's ordinary and usual course of business, and on normal commercial terms or on terms no more favourable than terms available to independent third parties;

- (ii) continuing connected transactions other than Buy-in Transactions are conducted in accordance with the rules and regulations of the relevant Group company governing such transactions, and where the rules and regulations do not govern those transactions in full, in accordance with the standard terms and conditions of the relevant Group company relating to such transactions;
- (iii) continuing connected transactions in respect of Buy-in Transactions are conducted in accordance with the standard terms and conditions of HKSCC applicable generally to all buy-in brokers and at the mutually agreed commission rates payable by HKSCC in respect of Buy-in Transactions generally; and
- (iv) continuing connected transactions are entered into according to the relevant agreements governing each of the continuing connected transactions on terms that are fair and reasonable and in the interests of Shareholders as a whole.

The Company's external auditor was engaged to report on the transactions in accordance with Rule 14A.56 of the Main Board Listing Rules. The AC reviewed the unqualified report issued by the external auditor dated 25 February 2019.

Independence of External Auditor

The AC is mandated to monitor the independence of the Group's external auditor, PricewaterhouseCoopers (PwC), to ensure objectivity in the financial statements. In general, the external auditor has to refrain from engaging in non-assurance services required by the Group except for limited tax-related services or specifically approved items. All services provided by PwC must be approved by the AC. To ensure that the policy of restricting the non-audit work done by the external auditor is followed strictly by all entities within the Group, appropriate policies and procedures have been established which set out: (i) the classification of services as pre-approved, not pre-approved and prohibited; and (ii) the approval process for services that have not been pre-approved.

With respect to the independence of the Group's external auditor, the AC received confirmation from and discussed with PwC on its independence and objectivity.

During the year, the AC reviewed PwC's statutory audit scope and non-audit services and approved its fees. Under the approval procedures for audit fees, all audit fees for entities within the Group were coordinated and presented by PwC Hong Kong, and all statutory audit fees for the Group companies were approved by the AC.

External Auditor's Services and Fees

	2018 \$m	2017 \$m
Audit services	15	14
Non-audit services		
• Tax advisory and compliance	1	1
• Other services	1	4
Total	17	19

Re-appointment of External Auditor

The AC was satisfied with PwC's work, its independence, and its objectivity, and therefore recommended the re-appointment of PwC (which has indicated its willingness to continue in office) as the Group's external auditor for 2019 for Shareholders' approval at the 2019 AGM.

YIU Kin Wah, Stephen

Chairman of the Audit Committee

Hong Kong, 25 February 2019

Risk Committee Report

Risk Statement

Effective risk management is important to the Group's achievement of its strategic goals. The Group manages risk across multiple risk domains, including but not limited to financial, business and strategic, operational (including IT and cyber security) and legal and regulatory risks. Business operations are managed in line with risk appetite tolerances set by the Board.

The Group seeks to ensure it achieves its strategic goal of being the global exchange and clearing provider of choice for investors and other market participants seeking exposure in the Hong Kong, Mainland China and international markets. This includes maintaining stakeholder trust and supporting the integrity of the financial system. The Group recognises its role as a market infrastructure provider and manager of systemic risk, and that its long-term sustainability is dependent on its pursuit of strategic goals while simultaneously managing risks, having sufficient capital and liquidity, ensuring continuity of operations, and protecting its reputation.

The Group aims to maintain sufficient capital and liquidity to meet its regulatory obligations, which require it to have financial resources to cover potential losses and liquidity needs for a range of stress scenarios taking into account extreme but plausible market conditions. As a business, the Group also aims to maintain sufficient capital over and above that required to meet its regulatory obligations in order to fund its strategic development objectives while ensuring the appropriate balance between risk and shareholder returns.

The Group applies risk management measures to strategic initiatives that are designed to limit the Group's exposure to potential losses. It also seeks to maintain liquid financial resources to meet unforeseen cash outflows. The Group strives to maintain stakeholder trust by avoiding business practices that could lead to reputational damage or harm to the Group. The Group, therefore, seeks to operate within all relevant rules and regulations and to avoid disruptions to its business operations that would have a negative impact on stakeholders.

The Risk Committee

The Risk Committee is delegated by the Board to oversee the Group's overall Risk Management Framework and to advise the Board on the Group's risk-related matters. The Committee is also responsible for reviewing the Group's risk policies and, in conjunction with the Audit Committee, assessing the effectiveness of the Group's risk management and internal control systems. The Committee's terms of reference are available on the HKEX Group website [ORG](#). The Committee comprises five INEDs whose names and biographies are set out in the Board and Committees section of this Annual Report. The Committee held four meetings in 2018. Members' attendance records are disclosed in the Corporate Governance Report contained in this Annual Report.

Summary of Work in 2018/2019

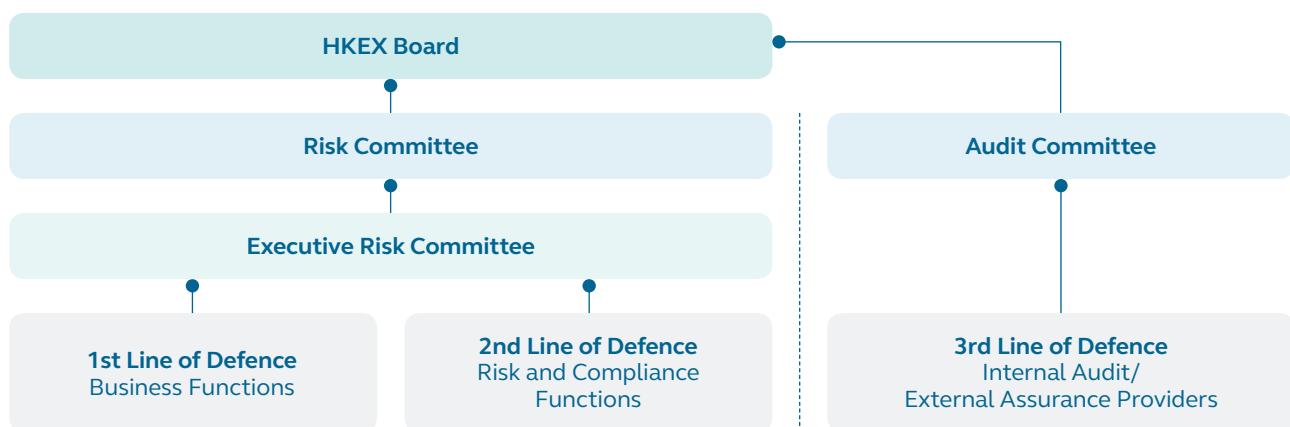
During the period, the Risk Committee oversaw key risk management activities including:

- Enhancements to the risk governance model including an update of the Risk Committee's terms of reference and the establishment of additional management forums for specific risks;
- Review of the risk appetite statements and risk tolerances;
- Implementation of risk and compliance culture initiatives;
- Enhancements to the clearing house default management and margining practices;
- Continued work on LME market surveillance and the European MIFID II compliance programme to ensure compliance;
- Review of the HKEX Compliance Monitoring Programme;
- Review of the results of the Group's quarterly Enterprise Risk Management processes including risk heatmaps and dashboards, summaries of assurance activities, emerging risks and clearing house liquidity, capital adequacy and solvency levels; and
- Review of the management confirmation on the effectiveness of the Group's risk management and internal control systems.

Operating an appropriate and effective risk management and internal control system is essential to achieving the Group's strategic objectives and maintaining service delivery targets. The Risk Committee is responsible for overseeing the Group's risk management approach, policy and framework. The Group operates a consistent methodology using the Group Risk Management Framework for the identification, assessment, reporting and management of risks. Risk identification and management is the responsibility of Group Management. The Group operates a risk governance model to effectively identify and manage risk.

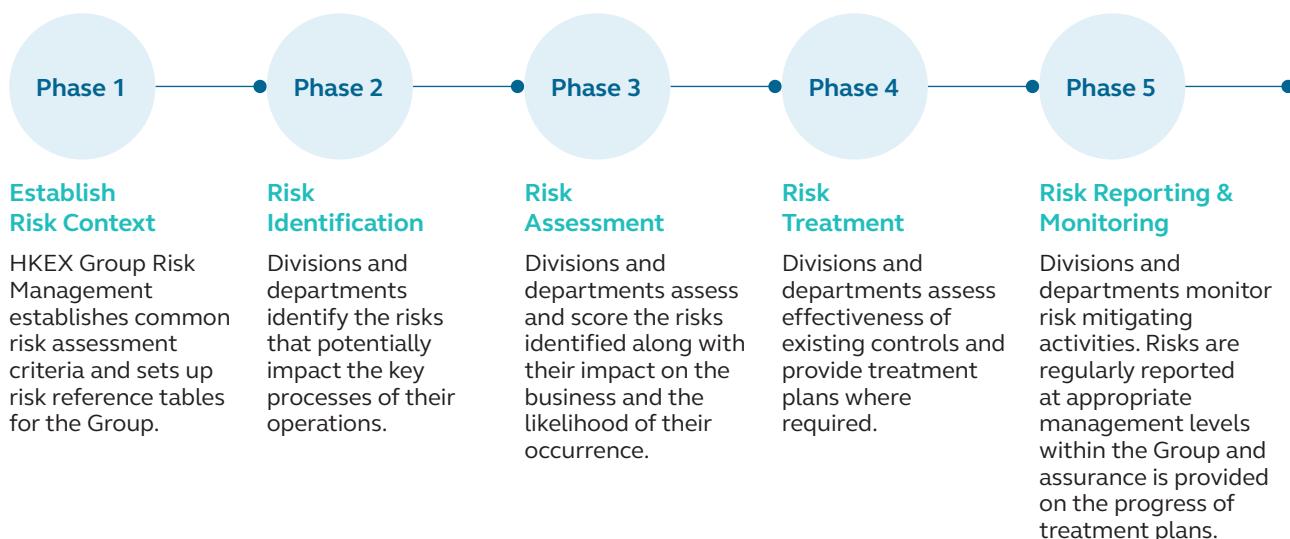
Risk Governance

The Group's risk governance structure is based on a "Three Lines of Defence" model, with oversight and directions from the Board, the Risk Committee, and Group Management through the Executive Risk Committee.



Group Risk Management

The Group Risk Management Framework, approved by the Risk Committee, mandates a consistent and effective approach applied across the Group to manage the risks associated with its business and operations. The framework is based on the international standard ISO (International Organisation for Standardisation) 31000 Risk Management – Principles and Guidelines. The following diagram illustrates the key processes adopted under the Group Risk Management Framework.



Principal Risks

The Group faces a number of principal risks and uncertainties that if not properly managed could create an exposure for the Group. Thorough risk assessment and mitigation help ensure these risks are well managed and governed effectively. The Group focuses on addressing the following principal risks.

Principal Risks	Description	Key Mitigations
Business and Strategic Risk	The risk of material adverse changes to the Group's business performance, development prospects and/or ability to deliver its strategy, caused by changes in the business, economic, competitive, regulatory or political environment in which the Group operates.	<ul style="list-style-type: none"> Proactive monitoring of global exchange industry trends, competitors and innovations; Proactive monitoring of and preparation for global and local changes in regulations affecting the Group; and Responsive project controls to allow strategic flexibility and dedicated strategy resources.
Credit Risk	The risk that a counterparty will not settle an obligation in full value, either when due or at any time thereafter.	<ul style="list-style-type: none"> Default management and recovery procedures in place; Established credit risk management function; Stress tested collateral and margin deposits; and Clearing market risk managed through collateral management and margin practices.
Market Risk	The risk resulting from adverse movements in market rates or prices such as foreign exchange rates, interest rates or equity prices impacting the Group's investment portfolio (Investment Market Risk).	<ul style="list-style-type: none"> Investment capital at risk limited by investment policies, restrictions and guidelines; and Exposure to foreign exchange risk through subsidiaries limited due to HKD/USD peg.
Liquidity Risk	The risk of being unable to settle obligations as they fall due whether relating to HKEX's cash flow requirements and/or regulatory requirements for clearing coverage confidence levels under extreme but plausible market conditions.	<ul style="list-style-type: none"> Investment policy, restrictions and guidelines in place covering Corporate Funds, Margin Funds and Clearing House Funds; and Clearing liquidity risk management requirements met through established stress testing practices.
Operational Risk	The risk of financial or reputational loss or inability to deliver services and products due to inadequate or failed internal processes, IT systems or external events.	<ul style="list-style-type: none"> ESG programmes; Low latency, highly resilient IT service design; Service delivery controls covering people, process and technology; and Site and data centre continuity arrangements.
Cyber Security Risk	The risk of financial or reputational loss or inability to deliver services and products due to unauthorized access, use, disclosure, disruption, modification, or destruction of organisational data and/or systems.	<ul style="list-style-type: none"> IT network perimeter controls and cyber attack drills; Enhanced cyber threat prevention and detection; Enhanced real time data loss monitoring; and Cyber incident forensics and breach response controls.
Legal and Compliance Risk	The risk of loss resulting from breach of or non-compliance with applicable laws, regulations or contractual obligations.	<ul style="list-style-type: none"> Internal and where appropriate external legal advice sought and compliance reviews conducted on business activities and new initiatives; Legal review of contracts; and Compliance review monitoring programme.
Listing Risk	The risk of reputational damage resulting from a failure on the part of SEHK to comply fully with its statutory obligations or the provisions of, or obligations under, the January 2003 MOU with the SFC.	<ul style="list-style-type: none"> Existing checks and balances under three-tiered regulatory structure (including the Listing Committee); Listing Division Market Contingency Plan to deal with potential business disruption events; Monitoring of unusual movements in price or trading volume of issuers' listed securities; and Segregation from other parts of HKEX using Chinese Wall arrangements to avoid leakage of inside information.

Laura M CHA

Chairman of the Risk Committee

Hong Kong, 19 February 2019

Remuneration Committee Report

The Remuneration Committee

The Remuneration Committee (RC) is delegated with the authority from the Board to establish, review, and make recommendations to the Board on the Group's remuneration policy and practices. The RC ensures that all employees and Executive and Non-executive Directors are appropriately remunerated in accordance with the Group's strategy as well as its long-term and short-term performance. Its terms of reference are available on the HKEX Group website [ORG](#).

The RC comprises five INEDs whose names and biographies are set out in the Board and Committees section of this Annual Report. The RC held six meetings in 2018. Members' attendance records are disclosed in the Corporate Governance Report contained in this Annual Report.

Summary of Work in 2018/2019

- Endorsed revisions to the RC's terms of reference
- Recommended the terms for the new employment contract for HKEX Chief Executive, based on the results of a compensation review by external consultants
- Reviewed the remuneration of non-executive directors of HKEX, the LME, LME Clear and OTC Clear
- Recommended the 2018 performance bonus and share award pools and the 2019 salary adjustment rates for the Group's employees
- Recommended the 2018 performance bonus and share award for HKEX Chief Executive
- Reviewed the achievements of HKEX Chief Executive and recommended to the Board the appropriate vesting percentage of the Senior Executive Award for the relevant performance period

Non-executive Directors' Remuneration

Objective

To remunerate Non-executive Directors at an appropriate level for their commitment to HKEX and to attract and retain high calibre and experienced individuals to oversee HKEX's business and development

Policy

- To conduct an annual review with reference to companies with comparable business or scale and recommend remuneration adjustments, if appropriate
- To seek the Board's endorsement and Shareholders' approval of any recommended changes

Annual Review for 2019/2020

- McLagan, a firm specialising in performance and rewards for the financial services industry, was appointed to conduct an independent review of the non-executive directors' remuneration for HKEX and certain subsidiaries. The consultant conducted a detailed study of market practices on chairman's and non-executive directors' fees and included an updated benchmarking exercise covering listed exchanges as well as banks and constituent companies of the FTSE 100 Index and the HSI.
- After reviewing the market information and the recommendation provided by the consultant, the RC (none of the RC members participated in the decision of his/her remuneration) recommended increases in the fees payable to Non-executive Directors, as set out in the following table, taking into account the increased time commitment and participation required of the Non-executive Directors in overseeing the governance of HKEX and the execution of the Group's business strategies, and the expanded responsibilities of the Executive Committee, the CSR Committee, the Nomination and Governance Committee and the RC following a comprehensive review of each of the Committees' terms of reference in 2018. It is proposed that the current attendance fee for committee meetings be abolished. The adjustment of Non-executive Directors' remuneration will be proposed to the Board for it to recommend to Shareholders for their approval at the 2019 AGM. More information is set out in the circular to Shareholders to be sent together with this Annual Report and posted on the HKEX Group website [IR](#).

Non-executive Directors' Remuneration Review for 2019/2020

	Proposed Fee for 2019/2020 onwards	Current Fee for 2018/2019
	\$	\$
Board		
– Chairman	3,300,000	2,190,000
– Other Non-executive Director	850,000	730,000
Audit Committee		
– Chairman	250,000	200,000
– Other member	160,000	120,000
– Attendance fee per meeting	–	3,000
Executive Committee, Investment Advisory Committee, Remuneration Committee and Risk Committee		
– Chairman	250,000	180,000
– Other member	160,000	120,000
– Attendance fee per meeting	–	3,000
Corporate Social Responsibility Committee, and Nomination and Governance Committee		
– Chairman	200,000	–
– Other member	160,000	–

Non-executive Directors are not entitled to participate in the Share Award Scheme.

The emoluments of the Non-executive Directors in 2017 and 2018 for their service on the Board and, where applicable, on its committees and the board and committees of HKEX's subsidiaries are set out below.

	2018 \$	2017 \$
Apurv Bagri	816,306	793,000
Laura M Cha ¹	2,441,993	–
T C Chan	986,500	961,000
C H Cheah	1,169,500	816,000
C K Chow ²	857,800	3,240,108
Timothy Freshwater ²	256,000	1,021,000
Anita Fung	1,124,210	1,102,000
Rafael Gil-Tienda	1,624,334	1,259,333
Fred Hu	1,071,306	1,018,000
Benjamin Hung ¹	643,500	–
Margaret Leung	986,500	961,000
Hugo Leung	986,500	723,000
John Williamson	1,086,306	1,051,000
Stephen Yiu	2,528,966	1,786,359
Total	16,579,721	16,140,445 ³

¹ Mrs Cha and Mr Hung were appointed as Directors effective 25 April 2018.

² Messrs Chow and Freshwater retired on 25 April 2018.

³ Includes a total remuneration of \$1,408,645 paid to John Harrison, Bill Kwok and Vincent Lee, who retired on 26 April 2017.

Further details of the Directors' emoluments are set out in note 13 to the Consolidated Financial Statements.

Employees' Remuneration

Objective

To ensure that employees are remunerated equitably and competitively with consideration of the achievement of their individual performance goals, the key business objectives at corporate level, and the market conditions

Policy

- To recommend, based on up-to-date market information, the appropriate salary adjustments, if any, for the Board's approval
- To evaluate the corporate performance based on a set of pre-determined indicators and to recommend the appropriate level of performance bonus and share award pools, if any, for the year to the Board
- To consult with HKEX Chief Executive about the performance of the members of the Senior Management and to ensure that they are remunerated equitably and in accordance with the established guidelines
- To review and recommend the remuneration of HKEX Chief Executive to the Board. As a good corporate governance practice, HKEX Chief Executive is not involved in the Board's discussion and decision.

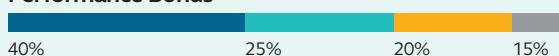
Review for 2018/2019

- The RC recommended and the Board approved in November and December 2018:
 - (i) a base salary adjustment and promotion increase effective January 2019. The salary adjustment took into consideration the competitive positioning, the cost of living and the projected pay increase in the financial services industry;
 - (ii) a discretionary performance bonus for eligible employees in recognition of their contributions in 2018;
 - (iii) a discretionary award for the purchase of HKEX shares pursuant to the Share Award Scheme for 368 selected employees, including HKEX Chief Executive, and for selected employees to be recruited in 2019; and
 - (iv) a discretionary award for the purchase of HKEX shares for a performance-based Senior Executive Award pursuant to the Share Award Scheme for HKEX Chief Executive for the performance period between 2019 and 2021.
- The performance cash bonus and share award pools for the Group's employees were determined based on the overall achievements with respect to the following on the corporate performance scorecard:

Performance Measures			
Financial	Strategic	Market & Regulatory Development	Organisation Development
<ul style="list-style-type: none"> • Relative to selected peers of other global exchanges: <ul style="list-style-type: none"> - Performance in principal market activities • Relative to budget and prior year: <ul style="list-style-type: none"> - Revenue and profit performance - Profit margin - Overall cost/income ratio • Relative to budget: <ul style="list-style-type: none"> - Absolute expenses excluding incentives 	<ul style="list-style-type: none"> • Key initiatives from HKEX Strategic Plan 2016-2018: <ul style="list-style-type: none"> - Equity & Equity Derivatives - Commodities - FIC - Platform and Infrastructure - Listing 	<ul style="list-style-type: none"> • System stability and reliability • Listing regulation • Market structure • Regulatory compliance • Stakeholders' relationships 	<ul style="list-style-type: none"> • Recruitment effectiveness • Talent retention and development • Organisation development and culture • Succession planning • CSR

Weighting for Performance Bonus and Share Award in 2018

Performance Bonus



Share Award



- Employees had to undergo a thorough annual performance appraisal process in which their performances were assessed according to the pre-determined and agreed work objectives before they were given their performance ratings (on a five-point scale) for the year. An additional multi-rater appraisal process was applied to employees at management level to ensure the assessment was multi-dimensional.
- Distribution matrices referencing to the employee's grade and year-on-year rating changes were set up to guide managers in the allocation of performance bonuses and share awards to individual employees. Managers were allowed to make adjustments to account for other factors, eg, overall total compensation position (ie, base salary plus the performance bonus and share award), internal pay levels and external remuneration benchmarks.

Further details of HKEX's remuneration policy and structure are available on the HKEX Group website [CG](#).

As at 31 December 2018, the Group had 1,854 permanent employees and 136 temporary employees.

A performance development process is in place to ensure that employees' performance objectives are defined, their performance progress is tracked, and training and development opportunities are identified for them. Employee training details are set out in the 2018 CSR Report.

Emoluments for 2018

Executive Director

	2018					2017	2018	
	Salary \$	Cash bonus \$	Other ¹ benefits \$	Retirement ² benefits cost \$	Director's fee \$	Total ³ \$	Total ³ \$	Share award ⁴ benefits \$
HKEX Chief Executive								
Charles Li	9,066,048 ⁵	18,500,000	269,483	1,133,256	-	28,968,787	25,527,501	23,443,804 ⁶

Senior Management

	2018					2017	2018
	Salary \$	Cash ⁷ bonuses \$	Other ¹ benefits \$	Retirement ² benefits cost \$	Total ³ \$	Total ³ \$	Share award ⁴ benefits \$
Roland Chai ⁸	2,870,000	3,680,000	145,556	287,000	6,982,556	3,050,277	439,031
Matthew Chamberlain ⁹	3,663,681	4,438,288	468,483	104,677	8,675,129	7,594,216	4,101,866
Eva Chau	3,240,000	3,597,320	63,188	405,000	7,305,508	7,037,679	1,675,017
Tori Cowley ¹⁰	775,000	1,150,000	333,827	96,875	2,355,702	-	18,556
Adrian Farnham ⁹	2,878,607	3,286,845	24,595	489,363	6,679,410	5,888,481	2,479,300
David Graham	4,691,040	6,958,960	517,762	586,380	12,754,142	10,804,463	4,426,853
John Killian	3,960,000	3,700,000	53,618	495,000	8,208,618	3,629,903	123,889
Romnesh Lamba	4,691,040	6,010,000	387,218	586,380	11,674,638	10,658,136	4,573,297
Richard Leung	3,213,600	4,698,080	45,978	401,700	8,359,358	7,076,658	2,613,574
Li Gang	3,600,000	5,500,000	54,179	360,000	9,514,179	9,110,011	4,311,979
Ferheen Mahomed	4,320,000	4,276,800	93,671	540,000	9,230,471	14,240,435	2,831,877
Mao Zhirong	2,958,084	3,560,670	52,566	369,761	6,941,081	6,763,194	1,958,558
Calvin Tai	3,528,000	5,647,020	73,994	441,000	9,690,014	8,265,224	4,152,186

- 1 Other benefits include leave pay, insurance premium, club membership, relocation allowance, settlement of the UK tax liability on behalf of the employee and payment in lieu of pension contributions, as applicable.
- 2 An employee who retires before normal retirement age is eligible for 18 per cent of the employer's contribution to the provident fund after completion of two years of service. The rate of vested benefit increases by 18 per cent annually thereafter and reaches 100 per cent after completion of seven years of service.
- 3 This excludes the amounts approved by the Board for the purchase of HKEX shares pursuant to the Share Award Scheme, details of which are set out in the Share Award Scheme section below.
- 4 These represent the aggregate of the amortised fair value of the Awarded Shares of HKEX Chief Executive and the members of the Senior Management that was charged to the Consolidated Income Statement for the year ended 31 December 2018.
- 5 Mr Li's salary has been adjusted to \$9,315,000 per annum with effect from 16 October 2018, in accordance with the terms of his renewed employment contract.
- 6 This includes the share award benefits relating to the Senior Executive Award granted to Mr Li in December 2018, the vesting of which is not affected if Mr Li ceases employment with the Group before the end of the performance assessment period. In accordance with prevailing accounting standards, such awards are considered to be vested immediately upon grant. The actual number of shares to be transferred to Mr Li under the Senior Executive Awards is conditional on the satisfaction of performance criteria approved by the Board as set out in note 4 under the Share Award Scheme section below.
- 7 These include year-end cash bonus and sign-on bonus paid, as applicable. Sign-on bonus is amortised to the Consolidated Income Statement over the required service period as stipulated in the employment contracts.
- 8 Mr Chai joined HKEX on 19 June 2017 and was appointed as Group Risk Officer effective 1 June 2018.
- 9 Messrs Chamberlain and Farnham were members of the LME pension scheme operating in the UK during 2018. The vesting scale of HKEX's provident fund scheme as specified in note 2 above is not applicable to them.
- 10 Ms Cowley joined HKEX on 28 September 2018.

Further details of the five top-paid employees are set out in note 14 to the Consolidated Financial Statements.

Share Award Scheme

HKEX has adopted the Share Award Scheme to recognise the contributions of certain employees and help in retaining them for the Group's operations and further development. The Scheme was adopted by the Board on 14 September 2005 (Adoption Date) and shall be valid until 31 December 2025. The maximum number of shares which can be awarded under the Scheme is 3 per cent (ie, 31,871,575 shares) of HKEX shares in issue as at the Adoption Date and the maximum number of shares which can be awarded to a selected employee in the Scheme is 1 per cent (ie, 10,623,858 shares). The rules and trust deed of the Scheme are available on the HKEX Group website [CG](#).

On 7 December 2018, the Board approved a total sum of \$350.87 million for the purchase of HKEX shares pursuant to the Scheme, details of which are set out in the Employees' Remuneration section above. Based on the Board's recommendation, the Scheme's trustee applied 169,670 shares held under the Scheme which were unallocated or forfeited pursuant to the Scheme to partly satisfy such awards.

Further details of the Scheme are set out in note 39 to the Consolidated Financial Statements.

Since the Adoption Date and up to the date of this report, a total of 12,109,574 shares had been awarded under the Scheme, representing about 1.1 per cent of the number of HKEX shares in issue on the Adoption Date.

As at 31 December 2018, taking into account the shares acquired out of the dividends from the shares held under the trust, there were 3,114,868 shares held in trust under the Scheme (excluding shares vested but not yet transferred to awardees).

Details of the interests of HKEX Chief Executive and the Senior Management in the Awarded Shares are set out below.

	Date of ² award	Number of Awarded Shares	Number of shares ¹					Vesting period ³
			As at 1 Jan 2018	Shares acquired during the year out of the dividends	Vested during the year	Lapsed during the year	As at 31 Dec 2018	
HKEX Chief Executive								
Charles Li	2 Jan 2015	95,100 ⁴	102,726	-	73,963 ⁵	28,763 ⁵	-	End of a performance period of 2015–2017
	31 Dec 2015	60,429	31,817	893	32,710	-	-	9 Dec 2017–9 Dec 2018
	31 Dec 2015	56,800 ⁴	59,808	1,678	-	-	61,486 ⁶	End of a performance period of 2016–2018
	30 Dec 2016	63,210	64,691	1,816	33,253	-	33,254	7 Dec 2018–7 Dec 2019
	30 Dec 2016	67,400 ⁴	68,979	1,936	-	-	70,915	End of a performance period of 2017–2019
	29 Dec 2017	58,853	58,853	1,652	-	-	60,505	8 Dec 2019–8 Dec 2020
	29 Dec 2017	62,123 ⁴	62,123	1,743	-	-	63,866	End of a performance period of 2018–2020
	31 Dec 2018	61,560	-	-	-	-	61,560	7 Dec 2020–7 Dec 2021
	31 Dec 2018	61,560 ⁴	-	-	-	-	61,560	End of a performance period of 2019–2021
Senior Management								
Roland Chai	23 Jun 2017	2,900	2,935	11	2,494	-	452	3 Apr 2018–18 Mar 2019 ⁷
	29 Dec 2017	5,231	5,231	145	-	-	5,376	8 Dec 2019–8 Dec 2020
	31 Dec 2018	22,032	-	-	-	-	22,032	7 Dec 2020–7 Dec 2021
Matthew Chamberlain	31 Dec 2015	21,220	11,172	312	11,484	-	-	9 Dec 2017–9 Dec 2018
	30 Dec 2016	16,492	16,877	473	8,674	-	8,676	7 Dec 2018–7 Dec 2019
	29 Dec 2017	20,688	20,688	580	-	-	21,268	8 Dec 2019–8 Dec 2020
	31 Dec 2018	31,359	-	-	-	-	31,359	7 Dec 2020–7 Dec 2021
Eva Chau	30 Dec 2016	8,533	8,732	244	4,487	-	4,489	7 Dec 2018–7 Dec 2019
	29 Dec 2017	9,939	9,939	278	-	-	10,217	8 Dec 2019–8 Dec 2020
	31 Dec 2018	11,327	-	-	-	-	11,327	7 Dec 2020–7 Dec 2021
Tori Cowley	31 Dec 2018	2,808	-	-	-	-	2,808	7 Dec 2020–7 Dec 2021
Adrian Farnham	31 Dec 2015	14,854	7,820	219	8,039	-	-	9 Dec 2017–9 Dec 2018
	30 Dec 2016	10,745	10,995	307	5,649	-	5,653	7 Dec 2018–7 Dec 2019
	29 Dec 2017	11,080	11,080	310	-	-	11,390	8 Dec 2019–8 Dec 2020
	31 Dec 2018	21,085	-	-	-	-	21,085	7 Dec 2020–7 Dec 2021
David Graham	31 Dec 2015	21,653	11,401	319	11,720	-	-	9 Dec 2017–9 Dec 2018
	30 Dec 2016	22,755	23,287	653	11,968	-	11,972	7 Dec 2018–7 Dec 2019
	29 Dec 2017	19,548	19,548	548	-	-	20,096	8 Dec 2019–8 Dec 2020
	31 Dec 2018	22,896	-	-	-	-	22,896	7 Dec 2020–7 Dec 2021
John Killian	31 Dec 2018	18,748	-	-	-	-	18,748	7 Dec 2020–7 Dec 2021
Romnesh Lamba	31 Dec 2015	30,214	15,907	446	16,353	-	-	9 Dec 2017–9 Dec 2018
	30 Dec 2016	22,123	22,640	635	11,636	-	11,639	7 Dec 2018–7 Dec 2019
	29 Dec 2017	19,005	19,005	533	-	-	19,538	8 Dec 2019–8 Dec 2020
	31 Dec 2018	19,872	-	-	-	-	19,872	7 Dec 2020–7 Dec 2021

	Date of ² award	Number of Awarded Shares	As at 1 Jan 2018	Number of shares ¹				Vesting period ³
				Shares acquired during the year out of the dividends	Vested during the year	Lapsed during the year	As at 31 Dec 2018	
Richard Leung	31 Dec 2015	14,100	7,424	207	7,631	-	-	9 Dec 2017–9 Dec 2018
	30 Dec 2016	12,852	13,152	369	6,760	-	6,761	7 Dec 2018–7 Dec 2019
	29 Dec 2017	11,230	11,230	314	-	-	11,544	8 Dec 2019–8 Dec 2020
	31 Dec 2018	18,525	-	-	-	-	18,525	7 Dec 2020–7 Dec 2021
Li Gang	31 Dec 2015	26,437	13,920	390	14,310	-	-	9 Dec 2017–9 Dec 2018
	30 Dec 2016	21,070	21,563	604	11,083	-	11,084	7 Dec 2018–7 Dec 2019
	29 Dec 2017	18,310	18,310	513	-	-	18,823	8 Dec 2019–8 Dec 2020
	31 Dec 2018	20,304	-	-	-	-	20,304	7 Dec 2020–7 Dec 2021
Ferheen Mahomed	1 Mar 2017	24,939	19,397	185	12,760	-	6,822	1 May 2017–1 May 2019 ⁷
	29 Dec 2017	14,953	14,953	419	-	-	15,372	8 Dec 2019–8 Dec 2020
	31 Dec 2018	26,279	-	-	-	-	26,279	7 Dec 2020–7 Dec 2021
Mao Zhirong	31 Dec 2015	12,337	6,496	182	6,678	-	-	9 Dec 2017–9 Dec 2018
	30 Dec 2016	9,481	9,702	272	4,985	-	4,989	7 Dec 2018–7 Dec 2019
	29 Dec 2017	8,239	8,239	230	-	-	8,469	8 Dec 2019–8 Dec 2020
	31 Dec 2018	9,825	-	-	-	-	9,825	7 Dec 2020–7 Dec 2021
Calvin Tai	31 Dec 2015	23,668	12,462	349	12,811	-	-	9 Dec 2017–9 Dec 2018
	30 Dec 2016	19,700	20,161	566	10,362	-	10,365	7 Dec 2018–7 Dec 2019
	29 Dec 2017	18,205	18,205	511	-	-	18,716	8 Dec 2019–8 Dec 2020
	31 Dec 2018	26,459	-	-	-	-	26,459	7 Dec 2020–7 Dec 2021

1 This includes shares acquired out of the dividends from the Awarded Shares according to the Scheme.

2 This refers to the date on which the trustee allocated the Awarded Shares to the selected employees from the shares purchased with the awarded sum determined by the Board.

3 Save for those Senior Executive Awards referred to in note 4 below and the awards granted referred to in note 7 below, the Awarded Shares and the related income are vested in two equal tranches in the second and third year after the grant.

4 The awards were granted under the Scheme as long-term incentives for selected senior executives of the Group (Senior Executive Awards). The Board has full discretion to determine the actual amount of the Senior Executive Awards to be vested at the end of a performance period in accordance with the performance criteria recommended by the RC and approved by the Board. These performance criteria include total shareholder return, achievements made in business development and sustaining the organisation's effectiveness.

5 On 28 February 2018, the Board approved the vesting of 73,963 shares to Mr Li based on his performance for the period 2015–2017. Pursuant to the terms of the Scheme, the remaining 28,763 Awarded Shares previously allocated to Mr Li lapsed on 28 February 2018.

6 The RC recommended a vesting of 33,202 shares to Mr Li based on the performance for the period 2016–2018.*

7 The awards were granted as part of the hiring agreement with a special vesting schedule.

Rafael GIL-TIENDA

Chairman of the Remuneration Committee

Hong Kong, 19 February 2019

* The recommendation was approved by the Board on 27 February 2019.

Corporate Social Responsibility Committee Report

The CSR Committee

The Corporate Social Responsibility (CSR) Committee (formerly known as the Environmental, Social and Governance Committee) is delegated with the authority from the Board to provide direction and oversee the development and implementation of the CSR initiatives of the Group in relation to corporate sustainability, environmental protection, philanthropy and community investment. Its terms of reference are available on the HKEX Group website [ORG](#).

The CSR Committee comprises four INEDs and HKEX Chief Executive, whose names and biographies are set out in the Board and Committees section of this Annual Report. The CSR Committee held four meetings in 2018. Members' attendance records are in the Corporate Governance Report contained in this Annual Report.

Summary of Work in 2018/2019

- Approved the proposal for HKEX to join the UN Sustainable Stock Exchanges initiative
- Endorsed revisions to the Committee's terms of reference to focus on CSR issues and initiatives
- Reviewed updates on HKEX's CSR development, including the establishment of a charitable foundation
- Approved the terms of reference of the new CSR Working Group
- Endorsed HKEX's CSR Strategy and Plan for 2019-2021
- Approved HKEX's pledges in gender equality and support to the Women's Empowerment Principles
- Endorsed the annual CSR Report

CSR Policies and Performance

HKEX is committed to promoting sustainable development in the marketplace and the community and seeks to integrate CSR considerations into its business strategy and management approach. Details of HKEX's key CSR practices and activities during 2018 are disclosed in the 2018 CSR Report. HKEX's CSR policies and management approaches are available on the HKEX Group website [CSR](#).

In view of the business nature of the Group, HKEX is not aware of any environmental laws or regulations that would have a significant impact on the Group. The Group, however, continues to do more than is required of it, by adopting enhanced measures to reduce energy and other resource utilisation, minimise waste and increase recycling, encourage its employees to adopt environmentally responsible behaviour and promote environmental protection in its supply chain and marketplace. During 2018, HKEX was awarded the "Excellence" Level Wastewi\$e Certificate under the Hong Kong Green Organisation Certification Scheme. HKEX's Data Centre at Tseung Kwan O also achieved the Platinum rating under the Building Environmental Assessment Method (BEAM Plus) for Existing Buildings V2.0 Comprehensive Scheme by the Hong Kong Green Building Council in recognition of its efforts and achievements on a number of environmental aspects, such as energy use, water use, and materials and waste management.

HKEX contributes to the community by making charitable donations and community investments in accordance with its Community Investment Policy. In 2018, the Group donated a total of \$3.3 million to various causes in communities where it operates and helped raise \$93.4 million for The Community Chest of Hong Kong via the Stock Code Balloting for Charity Scheme, and approximately £11,000 for the LME's charity partner, Little Havens Hospice. Throughout the year, the Group continued to encourage its employees to participate in different events organised by charities in their communities. The Group's employees and their guests contributed over 4,300 hours of volunteer services in total.

Relationships with Major Stakeholders

HKEX actively engages with its employees, market participants, investors, suppliers and other stakeholders through different channels to develop mutually beneficial relationships and promote sustainability.

Employees are remunerated equitably and competitively. Training and development opportunities are provided to equip staff members so that they deliver their best performance and achieve corporate goals. In June 2018, the Group undertook an interim Employee Engagement Pulse Survey to gather employees' feedback on their views of the company, their working environment and their levels of engagement. The survey attracted a high response rate of 87 per cent.

In its capacity as an exchange and a regulator, HKEX consults the market on major initiatives and the views of the respondents are carefully and thoroughly considered to ensure that decisions are made in an informed and balanced manner.

The Exchange launched a consultation in February 2018 to seek public feedback on the proposed new rules to expand the Hong Kong listing regime to facilitate listings of companies from emerging and innovative sectors, and the conclusions were issued in April 2018. In addition, three other market consultations on listing matters were conducted by the Exchange in 2018 to seek market views on (i) backdoor listing, continuing listing criteria and other rule amendments; (ii) review structure in relation to Listing Committee decisions; and (iii) proposal relating to listed issuers with disclaimer or adverse audit opinion on financial statements. In the UK, the LME introduced in March and July 2018, respectively, an updated Financial OTC Booking Fee Policy and the implied pricing for metals on its electronic trading platform as part of its Strategic Pathway commitment. The LME further launched a two-month consultation in August 2018 to seek views of its members and other interested parties on proposed amendments relating to the Strategic Pathway initiatives and other rule amendments. In October 2018, the LME published a paper outlining its proposals for responsible sourcing of metals, seeking feedback from the market on its path forward.

HKEX is committed to ensuring strong ethical supply chain management and seeks to use suppliers that reflect its values and commitment to being a good corporate citizen. During 2018, 36 key suppliers providing information technology or property management services to HKEX have completed a questionnaire regarding their CSR performance. The Group was not aware that any of its key suppliers had any significant actual or potential negative impact on business ethics, environmental protection, human rights and labour practices, nor any of them had any non-compliance incident in respect of these areas.

CSR Reporting

During 2018, HKEX Chief Executive provided to the Board quarterly CSR progress reports summarising the CSR initiatives undertaken by the Group. Details of the Group's CSR performance in 2018 are disclosed in the 2018 CSR Report.

Laura M CHA

Chairman of the CSR Committee

Hong Kong, 25 February 2019

Directors' Report

The Directors are pleased to present this Annual Report together with the audited consolidated financial statements for the year ended 31 December 2018.

Principal Activities

HKEX is a recognised exchange controller under the SFO. HKEX operates the only recognised stock and futures markets in Hong Kong through its wholly-owned subsidiaries, SEHK and HKFE, and is the frontline regulator of listed issuers in Hong Kong. In collaboration with the Shanghai and Shenzhen stock exchanges, HKEX operates Stock Connect, which gives investors in the Hong Kong and Mainland securities markets access to each other's markets. HKEX also operates HKSCC, HKCC, SEOCH and OTC Clear, which are the only recognised clearing houses in Hong Kong. HKSCC, HKCC and SEOCH provide integrated clearing and settlement services to their Participants, while OTC Clear provides clearing and settlement services for interest rate and foreign exchange derivatives traded over-the-counter. HKSCC also provides depository and nominee services to its Participants. HKEX provides market data through its data dissemination entity, HKEX Information Services Limited.

HKEX also owns the LME and LME Clear in the UK. The LME is a recognised investment exchange under the Financial Services and Markets Act 2000 (FSMA) that trades futures and options contracts on base and other metals. LME Clear is a European Market Infrastructure Regulation (EMIR) authorised CCP, which provides clearing services for the exchange contracts of the LME.

A list of HKEX's principal subsidiaries as of 31 December 2018 and their particulars are set out in note 25 to the Consolidated Financial Statements. More information about the Group's activities is available in the About HKEX section of the HKEX Group website.

Business Review

The Group's revenue is derived primarily from business activities conducted in Hong Kong and the UK. An analysis of the Group's performance for 2018 by operating segment is set out in note 4 to the Consolidated Financial Statements.

A fair review of the Group's business, including the important events affecting the Group that have occurred since the end of 2018 and the likely future developments, is set out in the Chief Executive's Review, Business Review and Financial Review sections of this Annual Report. Principal risks and uncertainties facing the Group were reviewed by the Board as delineated in the Risk Committee Report. Details about the Group's financial risk management are set out in note 50 to the Consolidated Financial Statements.

Throughout 2018, there was no incidence of non-compliance with the relevant laws and regulations that have a significant impact on the Group's business as outlined in the following table.

Primary legislation/ regulations ¹	Key scope	Compliance measures
Exchange and clearing business in Hong Kong		
SFO	HKEX is a recognised exchange controller and has duties under section 63(1) to ensure that the statutory duties placed on the recognised exchange companies (under section 21) and recognised clearing houses (under section 38) it controls are complied with. SEHK and HKFE are recognised exchange companies; and HKSCC, HKCC, SEOCH and OTC Clear are recognised clearing houses (RCHs).	A corporate governance structure ² is in place to enable HKEX to balance its public functions and its commercial profit making objectives. The Regulatory Compliance Department is responsible for ensuring compliance with rules and regulations. Rule amendments by SEHK, HKFE and each of the RCHs are approved by the SFC under section 24 (for recognised exchange companies) and section 41 (for RCHs). Fees imposed by SEHK, HKFE and each of the RCHs are approved by the SFC under section 76.

Primary Legislation/ Regulations¹	Key Scope	Compliance Measures
PFMI	HKSCC, HKCC, SEOCH and OTC Clear as the RCHs are required to observe the applicable PFMI on an ongoing basis pursuant to the guidelines issued by the SFC.	The approach of each of the RCHs to observing each applicable PFMI is summarised in its disclosure document which is available on the HKEX Market website.
Exchange and clearing business in the UK		
Part XVIII of the FSMA and Part I and Part II of the FSMA (Recognition Requirements for Investment Exchanges and Clearing Houses) Regulations 2001	The LME is a recognised investment exchange under Part XVIII of the FSMA and is required to ensure that its rules, procedures and practices are adequate for the protection of investors and for the maintenance of an orderly market.	The LME follows the rules and guidance on recognition and notification requirements as set out in the FCA's Handbook, as well as having implemented the applicable MiFID II requirements.
Markets in Financial Instruments Directive 2014/65/EU, Markets in Financial Instruments Regulation 600/2014 and associated legislation (together, MiFID II)	As a regulated market, the LME is also required to comply with applicable MiFID II requirements.	The Audit and Risk Committee of the LME, as required by the FCA and on behalf of the LME's board, has to satisfy itself formally on an annual basis that the LME continues to meet these recognition requirements.
Regulation on OTC Derivatives, Central Counterparties and Trade Repositories (known as EMIR) and MiFID II	LME Clear is an authorised CCP and is required to comply with the applicable EMIR requirements and the applicable MiFID II requirements.	The LME conducts a bottom-up in-depth analysis, listing all applicable requirements and associated arrangements and controls to demonstrate how each requirement has been met. This is supported by a detailed compliance monitoring programme.
FSMA	LME Clear is a recognised clearing house under Part XVIII of the FSMA and is required to ensure that its rules, procedures and practices are adequate for the protection of investors and for the maintenance of an orderly operation.	To ensure compliance with EMIR, LME Clear has implemented robust governance arrangements and a comprehensive risk management framework.
		LME Clear's Rules and Procedures have been developed to reflect the legal framework which applies to LME Clear, including primarily the requirements of EMIR and MiFID II.
		All documentation required in relation to LME Clear's compliance with EMIR and MiFID II is publicly disclosed on the LME website.
		LME Clear provides a high degree of legal certainty for each material aspect of its activities by setting out the rights and obligations of LME Clear and those of its Members in its Rules and Procedures (the Rules). The Rules support and allow LME Clear to conduct such material aspects appropriately and effectively, ensure Members understand the full extent of their obligations when using LMEmercury and clarify the protection provided to investors. Any changes to the Rules are notified to the Bank of England which, when appropriate, will approve the change. The Rules are publicly disclosed on the LME website.

Primary Legislation/ Regulations ¹	Key Scope	Compliance Measures
Financial Markets and Insolvency (Settlement Finality) Regulations 1999 (SFR)	LME Clear's secure payment system is a designated system and is required to meet the SFR requirements.	LME Clear has adopted, as part of its rules and procedures, a Settlement Finality Rule (Rule 11) and related Settlement Finality Procedures which define the system and the point of irrevocability and finality of instructions as well as the participants in the system. The procedures explaining how the system meets the SFR requirements are available on the LME website.
PFMI	LME Clear, as financial market infrastructure, is required to observe the applicable PFMI on an ongoing basis.	<p>LME Clear's approach to observing each applicable PFMI is summarised in its disclosure document, which is available on the LME website.</p> <p>LME Clear performs a self-assessment on an annual basis against the PFMI. This assessment is shared with LME Clear's primary regulator, the Bank of England.</p>

Operations in Hong Kong and the UK

Prevention of Bribery Ordinance (Chapter 201 of the Laws of Hong Kong)	HKEX, SEHK, HKFE, HKSCC, HKCC and SEOCH are public bodies and are subject to prohibitions on bribery (under sections 4 to 8) and corrupt transactions with agents (under section 9).	HKEX has adopted the Group Anti-Bribery and Anti-Corruption Policy to ensure that employees within the Group comply with the Prevention of Bribery Ordinance and the Bribery Act 2010, where applicable.
Bribery Act 2010	The Group's subsidiaries in the UK and persons who are British citizens are subject to the Bribery Act provisions.	

- 1 On the corporate level, all of the Group companies comply with the laws of the place in which the companies are incorporated, the Main Board Listing Rules and the SFO where they are applicable.
- 2 HKEX's corporate governance structure is available on the HKEX Group website, and its principal corporate governance practices are set out in the Corporate Governance Report, Nomination and Governance Committee Report, Audit Committee Report, Risk Committee Report, Remuneration Committee Report and CSR Committee Report.

Disclosures related to the Group's environmental policies and performance, and relationships with major stakeholders are included in the CSR Committee Report.

Major Customers and Suppliers

During the year ended 31 December 2018, the combined value of the Group's contracts with its five largest suppliers, which were not of a capital nature, was less than 30 per cent of the total value of supplies purchased. The Group's five largest customers combined contributed less than 30 per cent of its total revenue and other income during the year ended 31 December 2018.

Results and Appropriations

The Group's results for the year ended 31 December 2018 are set out in the Consolidated Income Statement.

The Board has declared a second interim dividend of \$3.07 per share, in lieu of a final dividend (2017: final dividend of \$2.85 per share), to Shareholders whose names appear on HKEX's Register of Members on 15 March 2019. A scrip dividend alternative will be offered to allow Shareholders to elect to receive the second interim dividend wholly or partly in the form of new fully paid shares in lieu of cash.

The first interim dividend of \$3.64 per share (2017: \$2.55 per share) was declared by the Board and paid to the Shareholders on 20 September 2018 in the total sum of \$4.5 billion (2017: \$3.1 billion). This included the dividends of \$10 million (2017: \$8 million) paid to shares held in trust under the Share Award Scheme.

Including the first interim dividend, the total dividends for 2018 amount to \$6.71 per share (2017: \$5.40 per share), which represents a payout ratio of 90 per cent (2017: 90 per cent) of the profit attributable to shareholders for the year ended 31 December 2018. Dividends for shares held in trust under the Share Award Scheme amount to \$19 million (2017: \$16 million). More information about HKEX's dividend policy and the second interim dividend for 2018 is set out in the Shareholder Information section of this Annual Report.

Donations

The Group's charitable donations during 2018 amounted to \$3.3 million (2017: \$3.1 million). There have never been any political donations.

HKEX continues to raise funds for The Community Chest of Hong Kong via the Stock Code Balloting for Charity Scheme. During 2018, a total sum of \$93 million (2017: \$73 million) was raised via the Stock Code Balloting for Charity Scheme for The Community Chest of Hong Kong.

Share Capital

Details of the movements in share capital of the Company during 2018 are set out in note 38 to the Consolidated Financial Statements. HKEX shares were issued during 2018 on election of scrip in lieu of cash dividends for the 2017 final dividend and the 2018 first interim dividend pursuant to HKEX's scrip dividend scheme. Details are set out in note 38(a) to the Consolidated Financial Statements.

Equity-linked Agreements

No equity-linked agreements were entered into by the Company during 2018 or subsisted at the end of 2018.

Reserves

As at 31 December 2018, HKEX's distributable reserves, calculated under Part 6 of the Companies Ordinance (Chapter 622 of the Laws of Hong Kong), amounted to \$7.6 billion (31 December 2017: \$7.3 billion).

Details of the movements in the reserves of the Group and HKEX during 2018 are set out in the Consolidated Statement of Changes in Equity and notes 39 to 42 and note 52(a) to the Consolidated Financial Statements.

Purchase, Sale or Redemption of HKEX's Listed Securities

During 2018, neither the Company nor any of its subsidiaries purchased, sold or redeemed any of HKEX shares, except that the trustee of the Share Award Scheme, pursuant to the terms of the rules and trust deed of the Share Award Scheme, purchased on the Stock Exchange a total of 1,287,300 HKEX shares at a total consideration of \$300 million.

Directors

The following is the list of Directors during 2018 and up to the date of this report (unless otherwise stated). Brief biographies of the current Directors are set out in the Board of Directors and Senior Management section of this Annual Report. Their interests in HKEX shares are set out in the Corporate Governance Report. Information about Directors' appointments, retirements and remuneration is set out in the Nomination and Governance Committee Report and the Remuneration Committee Report.

INEDs

Laura May-Lung CHA (Chairman) (Appointed on 25 April 2018)
 CHOW Chung Kong (ex-Chairman) (Retired on 25 April 2018)
 Apurv BAGRI
 CHAN Tze Ching, Ignatius (Re-elected on 25 April 2018)
 CHEAH Cheng Hye
 Timothy George FRESHWATER (Retired on 25 April 2018)
 FUNG Yuen Mei, Anita
 Rafael GIL-TIENDA
 HU Zuliu, Fred (Re-elected on 25 April 2018)
 HUNG Pi Cheng, Benjamin (Appointed on 25 April 2018)
 LEUNG KO May Yee, Margaret
 LEUNG Pak Hon, Hugo
 John Mackay McCulloch WILLIAMSON (Re-elected on 25 April 2018)
 YIU Kin Wah, Stephen

Executive Director

LI Xiaojaia, Charles (Chief Executive)

The following is the list of directors of HKEX's subsidiaries during 2018 and up to the date of this report (unless otherwise stated).

BAO Haijie	Hugh Edward GRAHAM	LIN Jiemin ³
Brian Geoffrey BENDER	GUO Xiaoli	Ferheen MAHOMED ²
Laura May-Lung CHA ¹	Elizabeth Noel HARWERTH ³	MAO Zhirong ²
Roland Paul CHAI ²	HUI Ching Yu ³	Ketan B PATEL ³
Matthew James CHAMBERLAIN ²	Marye Louise HUMPHERY	POON Hon Cheung
CHAN Chi Fai, Owens	John Patrick KILLIAN ²	POON Tim Fung
CHAU Yee Wah, Eva ²	KWAN Wai Hung ³	David Bolton RUSSELL
CHENG Mo Chi, Moses	LAM Kin	Trevor William SPANNER ³
CHEUNG Man Leung, Billy	Romnesh LAMBA ²	Marco Andrea STRIMER
CHIN Chin Fai ³	LEE Kwok Keung ³	Antony John STUART
CHOW Chung Kong ³	LEUNG Chung Kwong, Richard ²	TAI Chi Kin ²
Adrian John Winston FARNHAM ²	LI Gang ²	Richard John THORNHILL
FUNG Hau Chung, Andrew	LI Xiaojaia, Charles ¹	Herta VON STIEGEL
Rafael GIL-TIENDA ¹	LI Yutao	YIU Kin Wah, Stephen ¹
David GRAHAM ²	LIANG Cheng	ZUO Tao ³

¹ Member of the Board

² Member of Senior Management

³ No longer a director of any subsidiary of HKEX as at the date of this report

Directors' Interests in Transactions, Arrangements and Contracts

Details of the continuing connected transactions and related party transactions are set out in the Corporate Governance Report and note 47 to the Consolidated Financial Statements.

Notwithstanding the above, no transaction, arrangement or contract that is significant in relation to the Group's business to which the Company or any of its subsidiaries was a party and in which a person who at any time in 2018 was a Director or his or her connected entity had, directly or indirectly, a material interest was entered into in 2018 or subsisted at any time during 2018.

Directors' Rights to Acquire Shares or Debentures

Li Xiaojia, Charles, Executive Director, was awarded HKEX shares pursuant to the Share Award Scheme. Details are set out in the Remuneration Committee Report and note 39 to the Consolidated Financial Statements.

Save for the above, neither HKEX nor any of its subsidiary undertakings was a party to any arrangements to enable Directors to acquire benefits by means of the acquisition of shares in, or debentures of, HKEX or any other body corporate at any time during 2018 or at the end of 2018.

Management Contracts

No contract, other than employment contracts, concerning the management and administration of the whole or any substantial part of the Company's business was entered into or existed during 2018.

Permitted Indemnity Provision

Pursuant to the HKEX's Articles, subject to the provisions of the statutes, every Director shall be entitled to be indemnified by the Company against all costs, charges, losses, expenses and liabilities incurred by him or her in the execution and discharge of his or her duties or in relation thereto. The Directors and Officers Liability Insurance (D&O Insurance) undertaken by the Company provides such indemnities to all the directors of the Company and its subsidiaries. The relevant provisions in the HKEX's Articles and the D&O Insurance were in force during the financial year ended 31 December 2018 and as of the date of this report.

Auditor

The financial statements for the year ended 31 December 2018 have been audited by PricewaterhouseCoopers, which retires and, being eligible, offers itself for re-appointment at the 2019 AGM. A resolution to re-appoint PricewaterhouseCoopers and to authorise the Directors to fix its remuneration will be proposed at the 2019 AGM.

All references above to other sections, reports or notes in this Annual Report form part of this report.

Approved by the Board on 27 February 2019

Laura M CHA

Chairman

Auditor's Report

Independent Auditor's Report to the Members of Hong Kong Exchanges and Clearing Limited

(incorporated in Hong Kong with limited liability)

Opinion

What we have audited

The consolidated financial statements of Hong Kong Exchanges and Clearing Limited (the "Company") and its subsidiaries (together, "the Group") set out on pages 123 to 222, which comprise:

- the consolidated statement of financial position as at 31 December 2018;
- the consolidated income statement for the year then ended;
- the consolidated statement of comprehensive income for the year then ended;
- the consolidated statement of changes in equity for the year then ended;
- the consolidated statement of cash flows for the year then ended; and
- the notes to the consolidated financial statements, which include a summary of significant accounting policies.

Our opinion

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2018, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Hong Kong Financial Reporting Standards ("HKFRSs") issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA") and have been properly prepared in compliance with the Hong Kong Companies Ordinance.

Basis for Opinion

We conducted our audit in accordance with Hong Kong Standards on Auditing ("HKAs") issued by the HKICPA. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of the Group in accordance with the HKICPA's Code of Ethics for Professional Accountants ("the Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code.

Key Audit Matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matters identified in our audit are summarised as follows:

- Goodwill impairment assessment
- IT systems and controls over financial accounting and reporting

Key Audit Matters (continued)

Goodwill impairment assessment

Nature of the Key Audit Matter

As at 31 December 2018, the Group has goodwill of HK\$13,298 million arising from the acquisition of LME Holdings Limited and its subsidiaries (collectively "LME Group") in 2012. Goodwill was allocated to groups of Cash Generating Units ("CGUs") within the "Commodities" segment, HK\$10,412 million, and the "Clearing" segment, HK\$2,886 million and is monitored by management at the operating segment level.

Management has performed an impairment assessment over the goodwill allocated to the Commodities and Clearing segments at the operating segment level by:

1. calculating the "value-in-use" for groups of CGUs within each operating segment using discounted cash flow models. These models use future cash flow projections (revenue, expenses and capital expenditure) for each group of CGUs over a five-year period, with a terminal growth rate applied to the period beyond the fifth year. These cash flows are discounted to net present value using the weighted average cost of capital ("WACC") of groups of CGUs; and
2. comparing the resulting value-in-use of each group of CGUs to their respective book values.

We focus on goodwill due to the size of the balance and significant judgement applied by management in the value-in-use assessments.

Significant judgement was involved on the key assumptions underlying the future cash flow projections for the LME Group, including expected trade volume and pricing within the CGUs in each of the operating segments. Other assumptions involved are the discount rates applied and growth rates applied to the period beyond the fifth year ("terminal growth rate") to those future cash flow projections.

How our audit addressed the Key Audit Matter

Our work included testing management's key controls over the goodwill impairment assessment including:

1. controls exercised by management over the development of future cash flow projections used in the budget;
2. approval by the board of directors over the budget developed by management; and
3. control processes performed by management to monitor the actual performance against the budget approved by the board of directors.

Our audit procedures also included the following:

1. We have assessed the discounted cash flow model used by management to estimate the value-in-use of the respective groups of CGUs within the Commodities and Clearing segments.
2. We have assessed the reasonableness of the WACCs used and the terminal growth rates applied to the period beyond the fifth year by reviewing management's assumptions underlying the cash flow projections from the commodities and clearing business and comparing them to independent market data, industry forecasts and historical average daily volume growth for trading and clearing;
3. We have evaluated the reasonableness of management's key assumptions used in the underlying cash flow projections for the five-year period, by comparing historical budgets and achievements and the reasons for any deviations. We have also agreed the cash flow projections against the latest budgets approved by the board of directors;

Key Audit Matters (continued)

Goodwill impairment assessment (continued)

Nature of the Key Audit Matter

Management has also assessed and monitored the budgeted future cash flow projections used in calculating the value-in-use for each group of CGUs against the actual performance.

Management has concluded that there is no impairment in respect of the goodwill allocated to the groups of CGUs within the respective Commodities and Clearing segments using the value-in-use model.

Refer to note 3 for critical accounting estimates and assumptions and note 27 for the goodwill disclosure relating to the impairment assessment.

How our audit addressed the Key Audit Matter

4. We have obtained and have evaluated management's sensitivity analyses to assess the impact of reasonably possible changes to the key assumptions (cash flow projections, WACCs and growth rates). We have also performed our own independent sensitivity analyses on these key assumptions, including those applied to the period beyond the fifth year, and evaluated the impact that such possible changes have on the recoverable amount of the goodwill allocated to each group of CGUs at the financial year end;
5. We have reviewed the appropriateness of the goodwill impairment assessment disclosure.

Based on the above audit procedures, no material exceptions to management's assessment were noted.

Key Audit Matters (continued)

IT systems and controls over financial accounting and reporting

Nature of the Key Audit Matter

The Group operates securities and derivatives trading, clearing and settlement systems, which process significant volumes of daily transactions and market data. The trading, clearing and settlement fees generated from the transactions processed are the key drivers of the Group's revenue. The revenue recognition of these fees rely heavily on the Information Technology ("IT") systems processing those transactions and data.

Our audit effort focused on the key IT systems and related controls we planned to rely on over the revenue recognition and financial reporting processes. This focus includes (1) the core trading, clearing and settlement systems that process transactions for revenue recognition of these fees, (2) the financial accounting and reporting system that generates financial information utilised in the preparation of the Group's financial statements and (3) the interfaces between the core systems and the financial accounting and reporting system ("key IT systems").

During the year, the Group has developed the new Orion Trading Platform – Securities Market ("OTP-C") to replace the AMS/3.8 for its core cash equity trading platform in February 2018.

Our audit effort also focused on the system development process, in particular, the management oversight of the overall project implementation and governance.

We focused on these areas as the Group's revenue recognition and financial reporting processes are highly dependent on automated controls, system generated information and system interfaces, which are underpinned by the design and operating effectiveness of the IT general controls over the key IT systems and the automated application controls over the processes. The Group relied on the key IT systems and controls to ensure the accuracy and completeness of the revenue recognition during the financial accounting and reporting processes.

How our audit addressed the Key Audit Matter

As part of our audit, we obtained a front-to-end understanding of the revenue recognition and financial reporting processes and identified the automated controls we planned to rely on and the corresponding key IT systems that support the processes.

Our audit procedures over the relevant IT systems and related controls included the following:

1. We have assessed the IT control environment, examined the IT governance framework and tested the IT general controls of the key IT systems that support the revenue recognition and financial reporting processes to evaluate whether the system functionality, data and controls could be relied on throughout the period. Our testing of IT general controls covered access to programs and data, program changes, computer operations and program development.
2. We have tested the identified automated application controls, which are critical to the revenue recognition and financial reporting processes. Our testing procedures included the testing of system logical access, system automated calculations and validations, testing of system generated information, system interfaces and reconciliations.
3. We have placed certain reliance on the work of HKEX's internal audit function over the testing of automated calculations and system interfaces. In order to rely on their work, we have evaluated the objectivity and competence of the internal audit function and determined the nature and extent of work that can be relied on by us. Additionally, we have independently performed audit procedures to evaluate the results of the work of the internal audit function.

Regarding system development for the cash equity trading platform, we have performed assessment on the overall project implementation and governance controls, program development authorisation, system testing and data migration and conversion.

Based on the above audit procedures, no material exceptions that would impact our level of reliance on the key IT systems and the related controls for the purpose of our audit were noted.

Other Information

The directors of the Company are responsible for the other information. The other information comprises the section Overview, Organisation, Management Discussion and Analysis, Governance, Shareholder Information and Glossary included in the Annual Report, but does not include the consolidated financial statements and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Directors for the Consolidated Financial Statements

The directors of the Company are responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with HKFRSs issued by the HKICPA and the Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

The Audit Committee of the Group assists the directors in discharging their responsibilities for overseeing the Group's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. We report our opinion solely to you, as a body, in accordance with Section 405 of the Hong Kong Companies Ordinance and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with HKSAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

(continued)

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Audit Committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Audit Committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Audit Committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor's report is Colin Stuart Shaftesley.

PricewaterhouseCoopers
Certified Public Accountants

Hong Kong, 27 February 2019

Consolidated Income Statement

For the year ended 31 December 2018

	Note	2018 \$m	2017 \$m
Trading fees and trading tariffs	5(a)	6,339	4,856
Stock Exchange listing fees	5(b)	1,721	1,333
Clearing and settlement fees		3,281	2,691
Depository, custody and nominee services fees		979	892
Market data fees		899	857
Other revenue	5(c)	1,033	945
Revenue	5	14,252	11,574
Investment income		2,655	2,171
Interest rebates to Participants		(1,071)	(572)
Net investment income	6	1,584	1,599
Sundry income	7	31	7
Revenue and other income		15,867	13,180
Operating expenses			
Staff costs and related expenses	8	(2,540)	(2,273)
Information technology and computer maintenance expenses	9	(508)	(433)
Premises expenses		(437)	(354)
Product marketing and promotion expenses		(52)	(47)
Legal and professional fees		(132)	(79)
Other operating expenses	10	(441)	(380)
		(4,110)	(3,566)
EBITDA		11,757	9,614
Depreciation and amortisation		(762)	(858)
Operating profit	11	10,995	8,756
Finance costs	12	(114)	(134)
Share of profits less losses of joint ventures		2	(12)
Profit before taxation		10,883	8,610
Taxation	15	(1,592)	(1,255)
Profit for the year		9,291	7,355
Profit/(loss) attributable to:			
Shareholders of HKEX	42	9,312	7,404
Non-controlling interests	25(a)(ii)	(21)	(49)
Profit for the year		9,291	7,355
Basic earnings per share	16(a)	\$7.50	\$6.03
Diluted earnings per share	16(b)	\$7.48	\$6.02

The notes on pages 128 to 222 are an integral part of these consolidated financial statements.

Details of dividends are set out in note 17 to the consolidated financial statements.

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Consolidated Statement of Comprehensive Income

For the year ended 31 December 2018

	Note	2018 \$m	2017 \$m
Profit for the year		9,291	7,355
Other comprehensive income			
Items that may be reclassified subsequently to profit or loss:			
Currency translation differences of foreign subsidiaries	2(f)(iii)	21	156
Cash flow hedges	40(a)	(1)	1
Changes in fair value of financial assets measured at fair value through other comprehensive income	40(b)	(2)	-
Other comprehensive income		18	157
Total comprehensive income		9,309	7,512
Total comprehensive income attributable to:			
Shareholders of HKEX		9,329	7,561
Non-controlling interests		(20)	(49)
Total comprehensive income		9,309	7,512

The notes on pages 128 to 222 are an integral part of these consolidated financial statements.

Consolidated Statement of Financial Position

At 31 December 2018

		At 31 Dec 2018			At 31 Dec 2017		
	Note	Current \$m	Non- current \$m	Total \$m	Current \$m	Non- current \$m	Total \$m
Assets							
Cash and cash equivalents	18, 19	121,196	-	121,196	155,660	-	155,660
Financial assets measured at fair value through profit or loss	18, 20	61,004	-	61,004	95,037	-	95,037
Financial assets measured at fair value through other comprehensive income	18, 21	3,755	-	3,755	-	-	-
Financial assets measured at amortised cost	18, 22	31,487	398	31,885	30,757	60	30,817
Accounts receivable, prepayments and deposits	24	18,341	21	18,362	16,564	21	16,585
Interests in joint ventures	26	-	63	63	-	61	61
Goodwill and other intangible assets	27	-	18,019	18,019	-	17,925	17,925
Fixed assets	28	-	1,625	1,625	-	1,469	1,469
Lease premium for land		-	20	20	-	20	20
Deferred tax assets	37(d)	-	19	19	-	30	30
Total assets		235,783	20,165	255,948	298,018	19,586	317,604
Liabilities and equity							
Liabilities							
Financial liabilities at fair value through profit or loss	29	53,915	-	53,915	85,335	-	85,335
Margin deposits, Mainland security and settlement deposits, and cash collateral from Clearing Participants	18, 30	123,728	-	123,728	157,814	-	157,814
Accounts payable, accruals and other liabilities	31	18,316	53	18,369	16,159	51	16,210
Deferred revenue	32	1,000	418	1,418	957	-	957
Taxation payable		678	-	678	505	-	505
Other financial liabilities	33	59	-	59	58	-	58
Participants' contributions to Clearing House Funds	18, 34	14,787	-	14,787	16,626	-	16,626
Borrowings	35	1,005	161	1,166	1,027	833	1,860
Provisions	36	93	89	182	85	68	153
Deferred tax liabilities	37(d)	-	743	743	-	711	711
Total liabilities		213,581	1,464	215,045	278,566	1,663	280,229
Equity							
Share capital	38			27,750			25,141
Shares held for Share Award Scheme	38			(682)			(606)
Employee share-based compensation reserve	39			218			222
Hedging and revaluation reserves	40			(6)			1
Exchange reserve	2(f)(iii)			(84)			(104)
Designated reserves	34, 41			523			822
Reserve relating to written put options to non-controlling interests				(369)			(293)
Retained earnings	42			13,379			12,090
Equity attributable to shareholders of HKEX				40,729			37,273
Non-controlling interests	25(a)(ii)			174			102
Total equity				40,903			37,375
Total liabilities and equity				255,948			317,604
Net current assets				22,202			19,452

The notes on pages 128 to 222 are an integral part of these consolidated financial statements.

Approved by the Board of Directors on 27 February 2019

Laura M CHA
Director

LI Xiaojia, Charles
Director

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Consolidated Statement of Changes in Equity

For the year ended 31 December 2018

	Attributable to shareholders of HKEX									
	Share capital less shares held for Share Award Scheme (note 38) \$m	Employee share-based compensation reserve (note 39) \$m	Hedging and revaluation reserves (note 40) \$m	Exchange reserve \$m	Designated reserves (note 41) \$m	Reserve relating to written put options to non- controlling interests \$m	Retained earnings (note 42) \$m	Total \$m	Non- controlling interests \$m	Total equity \$m
At 1 Jan 2017	21,486	226	-	(260)	773	(293)	10,334	32,266	118	32,384
Profit for the year	-	-	-	-	-	-	7,404	7,404	(49)	7,355
Other comprehensive income	-	-	1	156	-	-	-	157	-	157
Total comprehensive income	-	-	1	156	-	-	7,404	7,561	(49)	7,512
Total transactions with shareholders of HKEX, recognised directly in equity:										
- 2016 final dividend at \$2.04 per share	-	-	-	-	-	-	(2,491)	(2,491)	-	(2,491)
- 2017 first interim dividend at \$2.55 per share	-	-	-	-	-	-	(3,133)	(3,133)	-	(3,133)
- Unclaimed HKEX dividends forfeited (note 31(a))	-	-	-	-	-	-	26	26	-	26
- Shares issued in lieu of cash dividends	3,037	-	-	-	-	-	-	3,037	-	3,037
- Shares purchased for Share Award Scheme	(228)	-	-	-	-	-	-	(228)	-	(228)
- Vesting of shares of Share Award Scheme	240	(224)	-	-	-	-	(16)	-	-	-
- Employee share-based compensation benefits	-	220	-	-	-	-	-	220	-	220
- Tax relating to Share Award Scheme	-	-	-	-	-	-	3	3	-	3
- Transfer of reserves	-	-	-	-	49	-	(49)	-	-	-
- Changes in ownership interests in a subsidiary (note 46)	-	-	-	-	-	-	12	12	33	45
	3,049	(4)	-	-	49	-	(5,648)	(2,554)	33	(2,521)
At 31 Dec 2017	24,535	222	1	(104)	822	(293)	12,090	37,273	102	37,375
At 1 Jan 2018, as previously reported	24,535	222	1	(104)	822	(293)	12,090	37,273	102	37,375
Effect of adoption of HKFRS 9 (2014) (note 2(c)(i))	-	-	(4)	-	-	-	4	-	-	-
Effect of adoption of HKFRS 15 (note 2(c)(ii))	-	-	-	-	-	-	(281)	(281)	-	(281)
At 1 Jan 2018, as restated	24,535	222	(3)	(104)	822	(293)	11,813	36,992	102	37,094
Profit for the year	-	-	-	-	-	-	9,312	9,312	(21)	9,291
Other comprehensive income	-	-	(3)	20	-	-	-	17	1	18
Total comprehensive income	-	-	(3)	20	-	-	9,312	9,329	(20)	9,309
Total transactions with shareholders of HKEX, recognised directly in equity:										
- 2017 final dividend at \$2.85 per share	-	-	-	-	-	-	(3,525)	(3,525)	-	(3,525)
- 2018 first interim dividend at \$3.64 per share	-	-	-	-	-	-	(4,527)	(4,527)	-	(4,527)
- Unclaimed HKEX dividends forfeited (note 31(a))	-	-	-	-	-	-	23	23	-	23
- Shares issued in lieu of cash dividends	2,587	-	-	-	-	-	-	2,587	-	2,587
- Shares purchased for Share Award Scheme	(300)	-	-	-	-	-	-	(300)	-	(300)
- Vesting of shares of Share Award Scheme	246	(230)	-	-	-	-	(16)	-	-	-
- Employee share-based compensation benefits	-	226	-	-	-	-	-	226	-	226
- Transfer of reserves	-	-	-	-	(299)	-	299	-	-	-
- Tax relating to Share Award Scheme	-	-	-	-	-	-	(1)	(1)	-	(1)
- Put options written to non-controlling interests (note 35(b))	-	-	-	-	-	(76)	-	(76)	-	(76)
- Changes in ownership interests in a subsidiary (note 46)	-	-	-	-	-	-	1	1	92	93
	2,533	(4)	-	-	(299)	(76)	(7,746)	(5,592)	92	(5,500)
At 31 Dec 2018	27,068	218	(6)	(84)	523	(369)	13,379	40,729	174	40,903

The notes on pages 128 to 222 are an integral part of these consolidated financial statements.

Consolidated Statement of Cash Flows

For the year ended 31 December 2018

	Note	2018 \$m	2017 \$m
Cash flows from principal operating activities			
Net cash inflow from principal operating activities	43(a)	10,416	8,013
Cash flows from other operating activities			
Net payments to external fund managers for purchases of financial assets measured at fair value through profit or loss		(936)	(600)
Net cash inflow from operating activities		9,480	7,413
Cash flows from investing activities			
Payments for purchases of fixed assets and intangible assets		(860)	(688)
Payment for interest in a joint venture		-	(14)
Net (increase)/decrease in financial assets of Corporate Funds:			
(A) Increase/decrease in time deposits with original maturities more than three months		(4,620)	2,285
Proceeds received upon maturity of financial assets measured at amortised cost (excluding time deposits)		393	-
Payments for purchases of financial assets measured at amortised cost (excluding time deposits)		(300)	(315)
Sales proceeds from financial assets measured at fair value through profit or loss		-	14
Interest received from financial assets measured at fair value through other comprehensive income		60	-
Interest received from financial assets measured at fair value through profit or loss		-	32
Net cash (outflow)/inflow from investing activities		(5,327)	1,314
Cash flows from financing activities			
Purchases of shares for Share Award Scheme		(300)	(228)
Repayment of borrowings	43(b)	(781)	(1,603)
Payments of interest on borrowings	43(b)	(42)	(66)
Payments of other finance costs		(62)	(54)
Dividends paid to shareholders of HKEX		(5,427)	(2,561)
Proceeds from disposal of interest in subsidiaries without loss of control	46(b)	93	28
Capital injection by non-controlling interest to a subsidiary		-	17
Net cash outflow from financing activities		(6,519)	(4,467)
Net (decrease)/increase in cash and cash equivalents		(2,366)	4,260
Cash and cash equivalents at 1 Jan		13,546	9,286
Cash and cash equivalents at 31 Dec		11,180	13,546
Analysis of cash and cash equivalents			
Cash on hand and balances and deposits with banks and short-term investments of Corporate Funds	19	11,904	13,546
Less: Cash reserved for supporting Skin-in-the-Game and default fund credits of clearing houses	19(b)	(724)	-
		11,180	13,546

The notes on pages 128 to 222 are an integral part of these consolidated financial statements.

- (a) “Cash flows from principal operating activities” is a non-Hong Kong Financial Reporting Standard (non-HKFRS) measure used by management for monitoring cash flows of the Group (defined in note 1) and represents the cash flows generated from the trading and clearing operations of the four exchanges and five clearing houses and ancillary services of the Group. This non-HKFRS measure may not be comparable to similar measures presented by other companies. Cash flows from principal operating activities and cash flows from other operating activities together represent cash flows from operating activities as defined by Hong Kong Accounting Standard (HKAS) 7: Statement of Cash Flows.

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Notes to the Consolidated Financial Statements

1. General Information

Hong Kong Exchanges and Clearing Limited (HKEX or the Company) and its subsidiaries (collectively, the Group) own and operate the only stock exchange and futures exchange in Hong Kong and their related clearing houses, a clearing house for clearing over-the-counter derivatives contracts in Hong Kong, an exchange and a clearing house for the trading and clearing of base and precious metals futures and options contracts operating in the United Kingdom (UK), and a commodity trading platform in the Mainland.

HKEX is a limited company incorporated and domiciled in Hong Kong. The address of its registered office is 8th Floor, Two Exchange Square, 8 Connaught Place, Central, Hong Kong.

These consolidated financial statements were approved for issue by the Board of Directors (Board) on 27 February 2019.

2. Principal Accounting Policies

Apart from the accounting policies presented within the corresponding notes to the consolidated financial statements, other principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

(a) Statement of compliance

These consolidated financial statements have been prepared in accordance with Hong Kong Financial Reporting Standards (HKFRSs) issued by the Hong Kong Institute of Certified Public Accountants (HKICPA), and accounting principles generally accepted in Hong Kong. These consolidated financial statements also comply with the applicable disclosure requirements of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (Main Board Listing Rules) and the applicable requirements of the Hong Kong Companies Ordinance (Chapter 622).

(b) Basis of preparation

These consolidated financial statements have been prepared under the historical cost convention, as modified by the revaluation of certain financial assets and financial liabilities measured at fair value.

The preparation of consolidated financial statements requires the use of certain critical accounting estimates, and requires management to exercise its judgement when applying the Group's accounting policies. Areas involving significant estimates and judgement are disclosed in note 3.

Adoption of new/revised HKFRSs

In 2018, the Group has adopted the following new standards and interpretation to HKFRSs which are pertinent to the Group's operations and effective for accounting periods beginning on or after 1 January 2018:

HKFRS 9 (2014)	Financial Instruments
HKFRS 15	Revenue from Contracts with Customers
HK(IFRIC) Interpretation 22	Foreign Currency Transactions and Advance Consideration

The impact of adoption of these new/revised standards is set out in note 2(c).

2. Principal Accounting Policies (continued)

- (b) Basis of preparation (continued)

New/revised HKFRSs issued before 31 December 2018 but not yet effective and not early adopted

The Group has not applied the following new standard and interpretation to HKFRSs which were issued before 31 December 2018 and are pertinent to its operations but not yet effective:

HKFRS 16	Leases ¹
HK(IFRIC) Interpretation 23	Uncertainty over Income Tax Treatments ¹

1 Effective for accounting periods beginning on or after 1 January 2019

HKFRS 16 will primarily affect the accounting for the Group's operating leases. Upon adoption of HKFRS 16 the majority of operating leases will be recognised in the consolidated statement of financial position as lease liabilities and right-of-use assets. The lease liabilities will be measured at the present value of the remaining lease payments and will subsequently be measured at amortised cost. The right-of-use assets will be measured at cost (which comprises the initial measurement of lease liabilities, initial direct costs, reinstatement costs, any payments made at or before the commencement date less any lease incentives received) and depreciated on a straight-line basis during the lease term. The Group will adopt the simplified transition approach and will not restate comparatives amounts for the year prior to its first adoption.

Upon adoption of HKFRS 16 on 1 January 2019, the Group recognised right-of-use assets under fixed assets of \$2,419 million and current and non-current lease liabilities amounting to \$235 million and \$2,277 million respectively, and de-recognised provision for lease incentives included under current and non-current liabilities of \$32 million and \$53 million, with the net difference of \$8 million being recognised as a reduction in retained earnings. In addition, reinstatement costs of \$36 million, which were previously included under leasehold improvements, were reclassified to right-of-use assets. As a result, the Group's net current assets and its shareholders' equity will decrease by \$203 million and \$8 million respectively.

The adoption of HK(IFRIC) Interpretation 23 would not have any financial impact on the Group.

There are no other new/revised HKFRSs not yet effective that are expected to have any impact on the Group.

- (c) Impact of adoption of new/revised HKFRSs

- (i) Adoption of HKFRS 9 (2014)

The adoption of HKFRS 9 (2014) resulted in changes in accounting policies for financial instruments and adjustments to amounts recognised in the consolidated financial statements. The new accounting policies are set out in notes 18, 20, 21, 22 and 33 and the adjustments to the consolidated financial statements are set out below and in note (iv).

2. Principal Accounting Policies (continued)

(c) Impact of adoption of new/revised HKFRSs (continued)

(i) Adoption of HKFRS 9 (2014) (continued)

Classification and measurement

The table below presents the original measurement category and carrying amount for each class of financial instruments of the Group determined in accordance with HKFRS 9 (2009) and the new measurement category and carrying amount determined in accordance with HKFRS 9 (2014) at 1 January 2018.

	Measurement category		Carrying amount	
	Original (HKFRS 9 (2009))	New (HKFRS 9 (2014))	Original \$m	New \$m
Non-current assets				
Other financial assets	Amortised cost	Amortised cost	60	60
Current assets				
Collective investment schemes	FVPL ¹	FVPL	6,643	6,643
Debt securities of Margin Funds (note)	FVPL	FVOCI ²	3,059	3,059
Derivative financial instruments	FVPL	FVPL	85,335	85,335
Debt securities of Corporate Funds	Amortised cost	Amortised cost	627	627
Time deposits with original maturities over three months	Amortised cost	Amortised cost	30,130	30,130
Accounts receivable and deposits ³	Amortised cost	Amortised cost	16,481	16,481
Cash and cash equivalents	Amortised cost	Amortised cost	155,660	155,660
Current liabilities				
Derivative financial instruments	FVPL	FVPL	85,335	85,335

1 FVPL – Financial assets/liabilities measured at fair value through profit or loss

2 FVOCI – Financial assets measured at fair value through other comprehensive income

3 Amounts exclude prepayments of \$83 million

Note: Debt securities of Margin Funds are held by the Group in a separate portfolio to provide interest income, but may be sold to meet liquidity requirements arising in the normal course of business. The Group considers that these securities are held within a business model whose objective is achieved both by collecting contractual cash flows and by selling the securities. These assets have therefore been classified as financial assets measured at fair value through other comprehensive income under HKFRS 9 (2014). Accordingly, the related cumulative fair value losses of \$4 million were transferred from retained earnings to revaluation reserve on 1 January 2018. During the year ended 31 December 2018, net fair value losses of \$2 million relating to these investments, which would otherwise have been charged to the consolidated income statement under HKFRS 9 (2009), were taken to revaluation reserve.

2. Principal Accounting Policies (continued)

(c) Impact of adoption of new/revised HKFRSs (continued)

(i) Adoption of HKFRS 9 (2014) (continued)

Impairment

The new impairment model under HKFRS 9 (2014) requires the recognition of provision for impairment losses based on expected credit losses rather than incurred credit losses. There was no material change in the amount of provision for impairment losses required under the expected credit loss model compared with the incurred credit loss model, and there was no material financial impact on such change at 1 January 2018, 31 December 2018, and for the year ended 31 December 2018.

(ii) Adoption of HKFRS 15

The adoption of HKFRS 15 resulted in changes in accounting policies for certain upfront fees and initial listing fees charged by the Group, and adjustments to amounts recognised in the consolidated financial statements. The new accounting policies are set out in note 5 and the adjustments to the consolidated financial statements are set out below and in note (iv).

HKFRS 15 is based on the principle that revenue is recognised when control of goods or services is transferred to customers.

Upfront fees

Prior to the adoption of HKFRS 15, certain upfront fees charged by the Group were recognised upon receipt. Under HKFRS 15, upfront fees are recognised over time when the services are provided. The financial impact of the change in recognition policy for upfront fees was as follows:

- During the year ended 31 December 2018, the amount of upfront fees recognised under HKFRS 15 was \$20 million, as compared to \$18 million before the adoption of HKFRS 15.
- Cumulative financial impact of previously recognised upfront fees of \$62 million was deducted from retained earnings and transferred to deferred revenue on 1 January 2018.

The revised accounting policy on upfront fees is consistent with that adopted and disclosed in the Quarterly Results Announcement for the three months ended 31 March 2018, the Interim Report for the six months ended 30 June 2018 and the Quarterly Results Announcement for the nine months ended 30 September 2018.

Initial listing fees

Prior to the adoption of HKFRS 15, initial listing fees for initial public offerings (IPOs) were recognised upon the listing of an applicant, cancellation of the application or six months after submission of the application, whichever was earlier, while initial listing fees for derivative warrants (DWs), callable bull/bear contracts (CBBCs) and other securities were recognised upon the listing of the securities.

2. Principal Accounting Policies (continued)

(c) Impact of adoption of new/revised HKFRSs (continued)

(ii) Adoption of HKFRS 15 (continued)

Initial listing fees (continued)

Based on the Group's previous assessment of HKFRS 15 as disclosed in the Quarterly Results Announcement for the three months ended 31 March 2018, the Interim Report for the six months ended 30 June 2018 and the Quarterly Results Announcement for the nine months ended 30 September 2018, initial listing fees were recognised over time when the listed companies or issuers of DWs, CBBCs and other securities received the listing services, which approximate the amount of vetting work performed, and the timing differences of recognising initial listing fees upon the adoption of HKFRS 15 were insignificant. As a result, there was no financial impact on initial listing fees on adoption of HKFRS 15.

In January 2019, the IFRS Interpretations Committee of the International Accounting Standards Board published a final agenda decision (the final decision) on how a stock exchange should recognise its initial listing fees and concluded that the performance of admission activities (eg, vetting services) does not transfer a service to the customers. Therefore, initial listing fees are considered as advance payments for future services, and should be recognised as revenue when those future services are provided (ie, throughout the periods the companies are listed). Accordingly, the Group has revised its accounting policy to adopt the final decision retrospectively from 1 January 2018. The financial impact of adopting HKFRS 15 on initial listing fees was as follows:

- During the year ended 31 December 2018, the amount of initial and subsequent issue listing fees recognised under HKFRS 15 was \$972 million, as compared to \$1,006 million before the final decision.
- Cumulative financial impact of previously recognised initial listing fees of \$274 million was deducted from retained earnings and transferred to deferred revenue on 1 January 2018.

The related tax impact for adoption of HKFRS 15 is disclosed in the tables in note (iv).

(iii) Adoption of HK(IFRIC) Interpretation 22

The Interpretation clarifies that the date of the transaction for the purpose of determining the exchange rate to be used on initial recognition of the related asset, expense or income is the date on which the Group initially pays or receives the advance consideration. The adoption did not have any financial impact on the Group.

2. Principal Accounting Policies (continued)

(c) Impact of adoption of new/revised HKFRSs (continued)

(iv) Impact on the consolidated financial statements

The Group has applied HKFRS 9 (2014) and HKFRS 15 retrospectively from 1 January 2018. As permitted by the respective transitional provisions of these accounting standards, comparatives for 2017 were not restated. The reclassifications and adjustments were recognised in the opening consolidated statement of financial position on 1 January 2018. The following table shows the adjustments recognised for each individual line item. Line items that were not affected by the changes have not been included, and therefore the line items disclosed do not add up to the sub-totals and totals below.

Consolidated statement of financial position (extracts)	31 Dec 2017 As originally presented \$m	Impact of adoption of			1 Jan 2018 Restated \$m
		HKFRS 9 (2014) (note 2(c)(i)) \$m	HKFRS 15 (note 2(c)(ii)) \$m		
Assets					
Financial assets measured at fair value through profit or loss	95,037	(3,059)		-	91,978
Financial assets measured at fair value through other comprehensive income	-	3,059		-	3,059
Total assets	317,604	-	-	-	317,604
Liabilities					
Deferred revenue	957	-	336		1,293
Taxation payable	505	-	(55)		450
Total liabilities	280,229	-	281	-	280,510
Equity					
Hedging and revaluation reserves	1	(4)	-		(3)
Retained earnings	12,090	4	(281)		11,813
Equity attributable to shareholders of HKEX	37,273	-	(281)	-	36,992
Total equity	37,375	-	(281)	-	37,094
Total liabilities and equity	317,604	-	-	-	317,604

2. Principal Accounting Policies (continued)

(c) Impact of adoption of new/revised HKFRSs (continued)

(iv) Impact on the consolidated financial statements (continued)

The following tables show the impact on each individual line item of the consolidated income statement and consolidated statement of comprehensive income for the year ended 31 December 2018 and the consolidated statement of financial position as of 31 December 2018 following the adoption of the HKFRS 9 (2014) and HKFRS 15. Line items that were not affected by the changes have not been included, and therefore the line items disclosed do not add up to the sub-totals and totals below.

Consolidated income statement (extracts)	Year ended 31 Dec 2018			
	Before adoption of HKFRS 9 (2014) and HKFRS 15 \$m	Impact of adoption of		
		HKFRS 9 (2014) (note 2(c)(i)) \$m	HKFRS 15 (note 2(c)(ii)) \$m	As reported \$m
Revenue				
Stock Exchange listing fees	1,755	–	(34)	1,721
Other revenue	1,031	–	2	1,033
Net investment income	1,582	2	–	1,584
Revenue and other income	15,897	2	(32)	15,867
Profit before taxation	10,913	2	(32)	10,883
Taxation	(1,597)	–	5	(1,592)
Profit for the year	9,316	2	(27)	9,291
Profit attributable to shareholders of HKEX	9,337	2	(27)	9,312
 Year ended 31 Dec 2018				
Consolidated statement of comprehensive income (extracts)	Before adoption of HKFRS 9 (2014) and HKFRS 15 \$m	Impact of adoption of		
		HKFRS 9 (2014) (note 2(c)(i)) \$m	HKFRS 15 (note 2(c)(ii)) \$m	As reported \$m
Profit for the year	9,316	2	(27)	9,291
Other comprehensive income				
Items that may be reclassified subsequently to profit or loss:				
Changes in fair value of financial assets measured at fair value through other comprehensive income	–	(2)	–	(2)
Other comprehensive income	20	(2)	–	18
Total comprehensive income	9,336	–	(27)	9,309
Total comprehensive income attributable to shareholders of HKEX	9,356	–	(27)	9,329

2. Principal Accounting Policies (continued)

(c) Impact of adoption of new/revised HKFRSs (continued)

(iv) Impact on the consolidated financial statements (continued)

Consolidated statement of financial position (extracts)	At 31 Dec 2018			
	Before adoption of HKFRS 9 (2014) and HKFRS 15 \$m	Impact of adoption of		As reported \$m
	HKFRS 9 (2014) (note 2(c)(i)) \$m	HKFRS 15 (note 2(c)(ii)) \$m		
Assets				
Financial assets measured at fair value through profit or loss	64,759	(3,755)	–	61,004
Financial assets measured at fair value through other comprehensive income	–	3,755	–	3,755
Total assets	255,948	–	–	255,948
Liabilities				
Deferred revenue	1,050	–	368	1,418
Taxation payable	738	–	(60)	678
Total liabilities	214,737	–	308	215,045
Equity				
Hedging and revaluation reserves	–	(6)	–	(6)
Retained earnings	13,681	6	(308)	13,379
Equity attributable to shareholders of HKEX	41,037	–	(308)	40,729
Total equity	41,211	–	(308)	40,903
Total liabilities and equity	255,948	–	–	255,948

Basic earnings per share has decreased by \$0.02 in 2018 as a result of the adoption of HKFRS 9 (2014) and HKFRS 15. The adoption of these standards has no impact on the net cash flow from operating, investing and financing activities on the consolidated statement of cash flows.

(d) Basis of consolidation

Subsidiaries are entities (including structured entities) over which the Group has control. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases. All material intra-group transactions and balances have been eliminated on consolidation.

Accounting policies of subsidiaries have been aligned on consolidation to ensure consistency with the policies adopted by the Group.

2. Principal Accounting Policies (continued)

(e) Impairment of non-financial assets

Assets with an indefinite useful life, which include interests in joint ventures, goodwill and tradenames, are not subject to amortisation but are tested at least annually for impairment. Assets subject to amortisation are reviewed for impairment whenever there is any indication that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount (ie, the higher of an asset's fair value less costs to sell and value-in-use). Such impairment losses are recognised in the consolidated income statement. An impairment loss other than goodwill is reversed if the circumstances and events leading to the impairment cease to exist.

(f) Foreign currency translation

(i) Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the functional currency). The consolidated financial statements are presented in Hong Kong Dollar (HKD), which is the Company's functional and presentation currency.

(ii) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the consolidated income statement. They are deferred in hedging reserve under equity if they relate to qualifying cash flow hedges (note 40(a)).

Translation differences on non-monetary financial assets that are classified as financial assets measured at fair value through profit or loss are reported as part of the fair value gain or loss.

(iii) Group companies

The results and financial position of all the Group entities that have a non-HKD functional currency are translated into HKD as follows:

- assets and liabilities (including goodwill and fair value adjustments arising on the acquisition of foreign subsidiaries) for each statement of financial position presented are translated at the closing rate at the end of the reporting period;
- income and expenses for each income statement are translated at the exchange rates approximating the foreign exchange rates ruling at the dates of the transactions; and
- all resulting currency translation differences are recognised in other comprehensive income in the exchange reserve under equity.

3. Critical Accounting Estimates and Assumptions

The Group makes estimates and assumptions concerning the future when the consolidated financial statements are prepared. The resulting accounting estimates may differ from the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below:

(a) Goodwill and tradenames

The Group tests annually whether goodwill and tradenames have suffered any impairment in accordance with the accounting policy stated in note 27.

The recoverable amounts of relevant cash generating units (CGUs) and relevant group of CGUs have been determined based on value-in-use calculations which are disclosed in note 27. These calculations require the use of estimates and significant judgement by management, including the future cash flows expected to arise from the CGUs, discount rates for calculating the present value and growth rates used to extrapolate cash flow projections beyond the financial forecasts approved by management.

Changes in facts and circumstances may result in revisions to estimates of recoverable amounts and to the conclusion as to whether an indication of impairment exists, which could affect the consolidated income statement in future years.

(b) Valuation of investments

The Group has a significant amount of investments that are not classified as Level 1 investments under HKFRS 13: Fair Value Measurement. The valuations have been determined based on quotes from market makers, alternative pricing sources supported by observable inputs, latest transactions prices or redemption prices provided by fund administrators of collective investment schemes.

At 31 December 2018, the financial assets that were not classified as Level 1 investments (excluding the base and precious metals futures and options contracts cleared through LME Clear Limited (LME Clear) that did not qualify for netting under the current accounting standards) under HKFRS 13 amounted to \$5,803 million (31 December 2017: \$4,802 million) which mainly comprised \$5,102 million (31 December 2017: \$4,802 million) of investments under collective investment schemes.

As the valuation of investments reflects movements in their estimated fair values, fair value gains or losses may fluctuate or reverse until the investments are sold, mature or are realised upon redemption. The potential impact of the fair value change of such investments on the Group's consolidated income statement is disclosed in note 50(a)(iv).

4. Operating Segments

Accounting Policy

Operating segments are reported in a manner consistent with the internal management reports that are used to make strategic decisions provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, is the Chief Executive of HKEX. Information relating to segment assets and liabilities is not disclosed as such information is not regularly reported to the chief operating decision-maker.

The accounting policies of the reportable segments are the same as the Group's accounting policies. Taxation charge/credit is not allocated to reportable segments.

The Group has five reportable segments ("Corporate Items" is not a reportable segment). The segments are managed separately as each segment offers different products and services and requires different information technology systems and marketing strategies. The operations in each of the Group's reportable segments are as follows:

The **Cash** segment covers all equity products traded on the Cash Market platforms, the Shanghai Stock Exchange and the Shenzhen Stock Exchange through Shanghai-Hong Kong Stock Connect and Shenzhen-Hong Kong Stock Connect (Stock Connect), sales of market data relating to these products and other related activities. The major sources of revenue of the segment are trading fees, trading tariffs, listing fees of equity products and market data fees.

The **Equity and Financial Derivatives** segment refers to derivatives products traded on The Stock Exchange of Hong Kong Limited (Stock Exchange) and Hong Kong Futures Exchange Limited (Futures Exchange) and other related activities. These include the provision and maintenance of trading platforms for a range of equity and financial derivatives products, such as stock and equity index futures and options, DWs, CBBCs and warrants and sales of related market data. The major sources of revenue are trading fees, trading tariffs, listing fees of derivatives products and market data fees.

The **Commodities** segment refers to the operations of The London Metal Exchange (LME), which operates an exchange in the UK for the trading of base and precious metals futures and options contracts, and the operations of Qianhai Mercantile Exchange Co., Ltd. (QME), the new commodity trading platform in the Mainland. It also covers the Asia Commodities contracts and gold and iron ore futures contracts traded on the Futures Exchange. The major sources of revenue of the segment are trading fees of commodity products, commodity market data fees and fees from ancillary operations.

The **Clearing** segment refers to the operations of the five clearing houses, which are responsible for clearing, settlement and custodian activities of the exchanges of the Group and Northbound trades under Stock Connect, and clearing and settlement of over-the-counter derivatives contracts. Its principal sources of revenue are derived from providing clearing, settlement, depository, custody and nominee services and net investment income earned on the Margin Funds and Clearing House Funds.

The **Platform and Infrastructure** segment refers to all services in connection with providing users with access to the platform and infrastructure of the Group. Its major sources of revenue are network, terminal user, dataline and software sub-license fees and hosting services fees.

4. Operating Segments (continued)

Central income (including net investment income of Corporate Funds) and central costs (costs of central support functions that provide services to all operating segments and other costs not directly related to any operating segment) are included as “Corporate Items”.

The chief operating decision-maker assesses the performance of the operating segments principally based on their EBITDA (defined below).

EBITDA is defined as earnings before interest expenses and other finance costs, taxation, depreciation and amortisation. It excludes the Group’s share of results of the joint ventures. EBITDA is a non-HKFRS measure used by management for monitoring business performance. It may not be comparable to similar measures presented by other companies.

An analysis by operating segment of the Group’s EBITDA, profit before taxation and other selected financial information (including disaggregation of revenue by timing of revenue recognition) for the year, is set out as follows:

	2018						
	Cash \$m	Equity and Financial Derivatives \$m	Commodities \$m	Clearing \$m	Platform and Infrastructure \$m	Corporate Items \$m	Group \$m
Timing of revenue recognition:							
Point in time	2,423	2,470	1,144	4,446	62	11	10,556
Over time	1,432	1,033	271	335	616	9	3,696
Revenue from external customers	3,855	3,503	1,415	4,781	678	20	14,252
Net investment income	-	-	-	1,377	-	207	1,584
Sundry income	-	-	-	10	-	21	31
Revenue and other income	3,855	3,503	1,415	6,168	678	248	15,867
Operating expenses	(584)	(573)	(717)	(812)	(170)	(1,254)	(4,110)
Reportable segment EBITDA	3,271	2,930	698	5,356	508	(1,006)	11,757
Depreciation and amortisation	(82)	(71)	(298)	(193)	(37)	(81)	(762)
Finance costs	-	-	-	(38)	-	(76)	(114)
Share of profits less losses of joint ventures	10	(8)	-	-	-	-	2
Reportable segment profit before taxation	3,199	2,851	400	5,125	471	(1,163)	10,883
Other segment information:							
Interest income	-	-	-	2,446	-	329	2,775
Interest rebates to Participants	-	-	-	(1,071)	-	-	(1,071)
Other material non-cash item:							
Employee share-based compensation expenses	(36)	(31)	(35)	(29)	(2)	(93)	(226)

4. Operating Segments (continued)

	2017						
	Cash \$m	Equity and Financial Derivatives \$m	Commodities \$m	Clearing \$m	Platform and Infrastructure \$m	Corporate Items \$m	Group \$m
Revenue from external customers	3,363	2,195	1,436	4,009	560	11	11,574
Net investment income	-	-	-	809	-	790	1,599
Sundry income	-	-	-	7	-	-	7
Revenue and other income	3,363	2,195	1,436	4,825	560	801	13,180
Operating expenses	(581)	(477)	(659)	(752)	(151)	(946)	(3,566)
Reportable segment EBITDA	2,782	1,718	777	4,073	409	(145)	9,614
Depreciation and amortisation	(69)	(77)	(395)	(196)	(42)	(79)	(858)
Finance costs	-	-	-	(38)	-	(96)	(134)
Share of losses of joint ventures	(4)	(8)	-	-	-	-	(12)
Reportable segment profit before taxation	2,709	1,633	382	3,839	367	(320)	8,610
Other segment information:							
Interest income	-	-	-	1,342	-	142	1,484
Interest rebates to Participants	-	-	-	(572)	-	-	(572)
Other material non-cash item:							
Employee share-based compensation expenses	(36)	(25)	(40)	(39)	(2)	(78)	(220)

(a) Geographical information

The Group's revenue from external customers is derived from its operations in Hong Kong and the UK. Such information and the Group's non-current assets (excluding financial assets and deferred tax assets) by geographical location are detailed below:

	Revenue		Non-current assets	
	2018 \$m	2017 \$m	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Hong Kong (place of domicile)	12,241	9,544	2,438	2,067
United Kingdom	2,011	2,030	17,232	17,351
Mainland China	-	-	78	78
	14,252	11,574	19,748	19,496

(b) Information about major customers

In 2018 and 2017, the revenue from the Group's largest customer amounted to less than 10 per cent of the Group's total revenue.

5. Revenue

Accounting Policy

Revenue excludes value added tax or other sales tax, and is recognised in the consolidated income statement on the following basis:

Trading fees and trading tariffs are recognised on a trade date basis.

Stock Exchange listing fees mainly comprise annual listing fees and initial listing fees. Annual listing fees are recognised on a straight-line basis over the period covered. Initial listing fees are recognised over time when the services are transferred to the listed companies or issuers of warrants, CBBCs and other securities.

Clearing and settlement fees arising from trades between Participants transacted on the Stock Exchange are recognised on the day following the trade day, upon acceptance of the trades. Fees for clearing and settlement of trades transacted on the Shanghai Stock Exchange and Shenzhen Stock Exchange through Stock Connect (A shares) are recognised on the trade day upon acceptance of the trades. Fees for clearing and settlement of trades in respect of base and precious metals futures and options contracts transacted on LME are recognised on the trade day (or trade match day, if later). Fees for all other settlement transactions are recognised upon completion of the settlement.

Custody fees for securities held in the Central Clearing and Settlement System (CCASS) depository are calculated and accrued on a monthly basis. Portfolio fees for A shares held or recorded in the CCASS depository and for Hong Kong securities held by China Depository and Clearing Corporation Limited (ChinaClear) are calculated and accrued on a daily basis.

Income on registration and transfer fees on nominee services are calculated and accrued on the book close dates of the relevant stocks during the financial year.

Market data fees and other fees are recognised when the related services are rendered.

In the comparative period, initial listing fees for IPOs were recognised upon the listing of an applicant, cancellation of the application or six months after submission of the application, whichever was earlier. Initial and subsequent listing fees for DWs, CBBCs and other securities were recognised upon the listing of the securities.

(a) Trading Fees and Trading Tariffs

	2018 \$m	2017 \$m
Equity securities traded on the Stock Exchange and through Stock Connect	2,386	1,954
DWs, CBBCs and warrants traded on the Stock Exchange	776	526
Futures and options contracts traded on the Stock Exchange and the Futures Exchange	2,108	1,260
Base and precious metals futures and options contracts traded on the LME	1,069	1,116
	6,339	4,856

5. Revenue (continued)

(b) Stock Exchange Listing Fees

	2018				2017			
	Equity		CBBCs, DWs & others	Total \$m	Equity		CBBCs, DWs & others	Total \$m
	Main Board \$m	GEM \$m			Main Board \$m	GEM \$m		
Annual listing fees	684	53	3	740	642	42	3	687
Initial and subsequent issue listing fees	121	22	829	972	87	32	519	638
Other listing fees	7	2	–	9	5	3	–	8
	812	77	832	1,721	734	77	522	1,333

(c) Other Revenue

	2018 \$m	2017 \$m
Network, terminal user, dataline and software sub-license fees	515	413
Hosting services fees	162	143
Commodities stock levies and warehouse listing fees	66	77
Participants' subscription and application fees	90	84
Accommodation income (note (i))	59	48
Sales of Trading Rights	20	41
LME financial over-the-counter booking fee	27	–
Post-liquidation interest arising from a Participant's default on market contracts (note (ii))	–	55
Miscellaneous revenue	94	84
	1,033	945

- (i) Accommodation income mainly comprises income from Participants on securities deposited as alternatives to cash deposits of Margin Funds, income from Participants on foreign currencies deposited if the relevant bank deposit rates are negative, and interest shortfall collected from LME Clear Participants on cash collateral where the investment return on the collateral is below the benchmarked interest rates stipulated in the clearing rules of LME Clear.
- (ii) In 2017, the liquidators of Lehman Brothers Securities Asia Limited (LBSA) paid post-liquidation interest of \$55 million on LBSA's debts arising from its default on market contracts, and an equal amount was appropriated to the Guarantee Fund reserve of Hong Kong Securities Clearing Company Limited (HKSCC) from retained earnings during the year ended 31 December 2017 (note 41).
- (d) Revenue recognised in 2018 that was included in the deferred revenue balance at 1 January 2018 amounted to \$1,022 million.

6. Net Investment Income

Accounting Policy

Interest income on investments and interest rebates to Participants are recognised on a time apportionment basis using the effective interest method.

Gains and losses arising from changes in fair value of financial assets measured at fair value through profit or loss and financial liabilities at fair value through profit or loss are included under net investment income in the consolidated income statement.

	2018 \$m	2017 \$m
Gross interest income from financial assets measured at amortised cost	2,715	1,484
Gross interest income from financial assets measured at fair value through other comprehensive income	60	–
Interest rebates to Participants	(1,071)	(572)
 Net interest income	 1,704	 912
 Net (losses)/gains including interest income on financial assets mandatorily measured at fair value through profit or loss and financial liabilities at fair value through profit or loss	 (106)	 682
Others	(14)	5
 Net investment income	 1,584	 1,599

7. Sundry Income

	2018 \$m	2017 \$m
Forfeiture of unclaimed dividends (note (a))	10	7
Others	21	–
 31	 7	

- (a) In accordance with CCASS Rule 1109, the Group exercised its forfeiture right to appropriate cash dividends of \$10 million (2017: \$7 million) held by HKSCC Nominees Limited, which had remained unclaimed for a period of more than seven years and recognised these as sundry income. The Group has, however, undertaken to honour all forfeited claims amounting to \$188 million at 31 December 2018 (31 December 2017: \$178 million) if adequate proof of entitlement is provided by the beneficial owner claiming any dividends forfeited.

8. Staff Costs and Related Expenses

	2018 \$m	2017 \$m
Salaries and other short-term employee benefits	2,130	1,865
Employee share-based compensation benefits of Share Award Scheme (note 39)	226	220
Termination benefits	26	38
Retirement benefit costs (note (a)):		
– ORSO Plan	124	116
– MPF Scheme	3	2
– LME Pension Scheme	24	23
– PRC Retirement Schemes	7	9
	2,540	2,273

(a) Retirement Benefit Costs

Accounting Policy

Contribution to the defined contribution plans are expensed as incurred.

The Group has sponsored a defined contribution provident fund scheme (ORSO Plan) which is registered under the Occupational Retirement Schemes Ordinance (ORSO) and a Mandatory Provident Fund scheme (MPF Scheme) for the benefits of its employees in Hong Kong. The Group contributes 12.5 per cent of the employee's basic salary to the ORSO Plan if an employee contributes 5 per cent. If the employee chooses not to contribute, the Group will contribute 10 per cent of the employee's salary to the ORSO Plan. Contributions to the MPF Scheme are in accordance with the statutory limits prescribed by the MPF Ordinance. Forfeited contributions of the ORSO Plan for employees who leave before the contributions are fully vested are not used to offset existing contributions but are credited to a reserve account of that Plan, and are available for distribution to the members of the Plan at the discretion of the trustees.

For all employees of HKEX Investment (UK) Limited, LME Holdings Limited (LMEH), LME and LME Clear (collectively, LME Group), the Group has also sponsored a defined contribution pension scheme (LME Pension Scheme). For employees who joined the LME Group before 1 May 2014, the Group contributes 15 per cent to 17 per cent of the employee's basic salary to the LME Pension Scheme. For employees who joined the LME Group on or after 1 May 2014, they are automatically enrolled into the LME Pension Scheme on a matched contribution basis and may choose a personal contribution level ranging from 3 per cent to 5 per cent of their basic salaries, which is matched by the Group's contribution ranging from 6 per cent to 10 per cent of their basic salaries. Staff may opt-out of the scheme if they wish. There are no forfeited contributions for the LME Pension Scheme as the contributions are fully vested to the employees upon payment to the scheme.

8. Staff Costs and Related Expenses (continued)

(a) Retirement Benefit Costs (continued)

Pursuant to the relevant laws and regulations in the People's Republic of China (PRC), the Group has joined defined contribution retirement schemes for the employees arranged by local government labour and security authorities (PRC Retirement Schemes). The Group makes contributions to the retirement schemes at the applicable rates based on the amounts stipulated by the local government organisations. Upon retirement, the local government labour and security authorities are responsible for the payment of the retirement benefits to the retired employees.

Assets of the ORSO Plan, MPF Scheme, LME Pension Scheme and PRC Retirement Schemes are held separately from those of the Group and are independently administered and are not included in the consolidated statement of financial position.

9. Information Technology and Computer Maintenance Expenses

	2018 \$m	2017 \$m
Costs of services and goods:		
– consumed by the Group	420	360
– directly consumed by Participants	88	73
	508	433

10. Other Operating Expenses

	2018 \$m	2017 \$m
Bank charges	25	19
Communication expenses	16	14
Contribution to Financial Reporting Council	8	8
Custodian and fund management related fees	27	27
Financial data subscription fees	38	28
Insurance	12	11
License fees	44	31
Office demolition and relocation expenses	30	8
Repairs and maintenance expenses	62	61
Security expenses	19	18
Travel expenses	44	54
Other miscellaneous expenses	116	101
	441	380

11. Operating Profit

	2018 \$m	2017 \$m
Operating profit is stated after charging/(crediting):		
Auditor's remuneration		
– audit fees	15	14
– other non-audit fees	2	5
Operating lease rentals		
– land and buildings	330	263
– computer systems and equipment	43	31
Provision for impairment losses of receivables	1	6
Net foreign exchange losses/(gains) on financial assets and liabilities (excluding financial assets and financial liabilities measured at fair value through profit or loss)	14	(5)

12. Finance Costs

Accounting Policy

Interest expenses are charged to the consolidated income statement and recognised on a time apportionment basis, taking into account the principal outstanding and the applicable interest rates using the effective interest method. Other finance costs, which include banking facility commitment fees that relate to liquidity support provided to the Group's clearing houses, are recognised in the consolidated income statement in the period in which they are incurred.

	2018 \$m	2017 \$m
Interest for financial liabilities not at fair value through profit or loss	52	80
Banking facility commitment fees	45	41
Negative interest on Euro and Japanese Yen deposits	17	13
	114	134

13. Directors' Emoluments and Interests of Directors

All Directors, including one Executive Director (HKEX's Chief Executive), received emoluments during the years ended 31 December 2018 and 31 December 2017. The aggregate emoluments paid and payable to the Directors during the year were as follows:

	2018 \$'000	2017 \$'000
Executive Director:		
Salaries and other short-term employee benefits	9,336	9,403
Performance bonus	18,500	15,000
Retirement benefit costs	1,133	1,125
	28,969	25,528
Employee share-based compensation benefits (note (a))	23,444	23,328
	52,413	48,856
Non-executive Directors:		
Fees	16,573	16,140
Other benefits	7	-
	16,580	16,140
	68,993	64,996

- (a) Employee share-based compensation benefits represent the fair value of share awards granted under the Share Award Scheme (Awarded Shares) on grant date (note 39) amortised to the consolidated income statement during the year.
- (b) The emoluments of all Directors, including HKEX's Chief Executive who is an ex-officio member, are set out below. The amounts represent emoluments paid or receivable in respect of their services as a director.

Name of Director	2018							
	Fees \$'000	Salary \$'000	Other benefits (note (i)) \$'000	Performance bonus \$'000	Retirement benefit costs (note (ii)) \$'000	Sub-total \$'000	Employee share-based compensation benefits \$'000	Total \$'000
Laura M Cha (note (iii))	2,435	-	7	-	-	2,442	-	2,442
C K Chow (note (iv))	858	-	-	-	-	858	-	858
Charles X Li	-	9,066	270	18,500	1,133	28,969	23,444	52,413
Apurv Bagri	816	-	-	-	-	816	-	816
T C Chan	987	-	-	-	-	987	-	987
C H Cheah (note (v))	1,169	-	-	-	-	1,169	-	1,169
Timothy G Freshwater (note (iv))	256	-	-	-	-	256	-	256
Anita Y M Fung	1,124	-	-	-	-	1,124	-	1,124
Rafael Gil-Tienda	1,624	-	-	-	-	1,624	-	1,624
Fred Z Hu	1,071	-	-	-	-	1,071	-	1,071
Benjamin P C Hung (note (iii))	644	-	-	-	-	644	-	644
Margaret M Y Leung Ko	987	-	-	-	-	987	-	987
Hugo P H Leung (note (v))	987	-	-	-	-	987	-	987
John M M Williamson	1,086	-	-	-	-	1,086	-	1,086
Stephen K W Yiu (note (vi))	2,529	-	-	-	-	2,529	-	2,529
Total	16,573	9,066	277	18,500	1,133	45,549	23,444	68,993

13. Directors' Emoluments and Interests of Directors (continued)

(b) (continued)

Name of Director	2017							
	Fees \$'000	Salary \$'000	Other benefits (note (i)) \$'000	Performance bonus \$'000	Retirement benefit costs (note (ii)) \$'000	Sub-total \$'000	Employee share-based compensation benefits \$'000	Total \$'000
C K Chow (note (iv))	3,240	-	-	-	-	3,240	-	3,240
Charles X Li	-	9,000	403	15,000	1,125	25,528	23,328	48,856
Apurv Bagri	793	-	-	-	-	793	-	793
T C Chan	961	-	-	-	-	961	-	961
C H Cheah (note (v))	816	-	-	-	-	816	-	816
Timothy G Freshwater (note (iv))	1,021	-	-	-	-	1,021	-	1,021
Anita Y M Fung	1,102	-	-	-	-	1,102	-	1,102
Rafael Gil-Tienda	1,259	-	-	-	-	1,259	-	1,259
John B Harrison (note (vii))	700	-	-	-	-	700	-	700
Fred Z Hu	1,018	-	-	-	-	1,018	-	1,018
Bill C P Kwok (note (vii))	432	-	-	-	-	432	-	432
Vincent K H Lee (note (vii))	277	-	-	-	-	277	-	277
Margaret M Y Leung Ko	961	-	-	-	-	961	-	961
Hugo P H Leung (note (v))	723	-	-	-	-	723	-	723
John M M Williamson	1,051	-	-	-	-	1,051	-	1,051
Stephen K W Yiu (note (vi))	1,786	-	-	-	-	1,786	-	1,786
Total	16,140	9,000	403	15,000	1,125	41,668	23,328	64,996

Notes:

- (i) Other benefits represented estimated money value of leave pay, insurance premium, club membership and UK tax liability of Non-Resident Director.
- (ii) Employees who retire before normal retirement age are eligible for 18 per cent of the employer's contribution to the provident fund after completion of two years of service. The rate of vested benefit increases at an annual increment of 18 per cent thereafter reaching 100 per cent after completion of seven years of service.
- (iii) Appointment effective 25 April 2018
- (iv) Retired on 25 April 2018
- (v) Elected on 26 April 2017
- (vi) Appointment effective 26 April 2017
- (vii) Retired on 26 April 2017

(c) Directors' material interests in transactions, arrangements or contracts

No significant transactions, arrangements and contracts in relation to HKEX's business to which HKEX was a party and in which a director of HKEX had a material interest, whether directly or indirectly, subsisted at the end of the year or at any time during the year.

14. Five Top-paid Employees

One (2017: one) of the five top-paid employees was a Director whose emoluments are disclosed in note 13. Details of the emoluments of the other four (2017: four) top-paid employees were as follows:

	2018 \$'000	2017 \$'000
Salaries and other short-term employee benefits	17,150	22,196
Performance bonus	23,477	17,946
Sign-on bonus	–	3,050
Retirement benefit costs	2,306	2,211
	42,933	45,403
Employee share-based compensation benefits (note (a))	25,064	17,583
	67,997	62,986

- (a) Employee share-based compensation benefits represent the fair value of Awarded Shares on grant date (note 39) amortised to the consolidated income statement during the year.
- (b) The emoluments of these four (2017: four) employees, including share-based compensation benefits, were within the following bands:

	2018 Number of employees	2017 Number of employees
\$13,500,001 – \$14,000,000	1	–
\$14,000,001 – \$14,500,000	–	1
\$15,000,001 – \$15,500,000	–	1
\$16,000,001 – \$16,500,000	1	1
\$17,000,001 – \$17,500,000	1	–
\$17,500,001 – \$18,000,000	–	1
\$20,500,001 – \$21,000,000	1	–
	4	4

The above employees included senior executives who were also Directors of the subsidiaries during the years. No Directors of the subsidiaries waived any emoluments.

15. Taxation

Accounting Policy

Tax charge for the period comprises current and deferred tax. Tax is recognised in the consolidated income statement, except to the extent that it relates to items recognised directly in equity, in which case, the tax is also recognised directly in equity.

The current tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the end of the reporting period in the countries where HKEX and its subsidiaries operate and generate taxable income. Provisions are established where appropriate on the basis of amounts expected to be paid to the tax authorities.

The Group's accounting policy for recognition of deferred tax is described in note 37.

- (a) Taxation charge/(credit) in the consolidated income statement represented:

	2018 \$m	2017 \$m
Current tax – Hong Kong Profits Tax		
– Provision for the year	1,421	1,047
– Over provision in respect of prior years	–	(4)
	1,421	1,043
Current tax – Overseas Tax		
– Provision for the year	182	229
– Over provision in respect of prior years	(52)	(4)
	130	225
Total current tax (note (i))	1,551	1,268
Deferred tax (note 37(a))		
– Provision for/(reversal of) temporary differences	41	(13)
Taxation charge	1,592	1,255

- (i) Hong Kong Profits Tax has been provided at the rate of 16.5 per cent (2017: 16.5 per cent) on the estimated assessable profit for the year. Taxation on overseas profits has been calculated on the estimated assessable profit at the rates of taxation prevailing in the countries in which the Group operates, with the average corporation tax rate applicable to the subsidiaries in the UK being 19 per cent (2017: 19.25 per cent).

15. Taxation (continued)

- (b) The taxation on the Group's profit before taxation differs from the theoretical amount that would arise using the weighted average tax rate applicable to profits of the consolidated entities as follows:

	2018 \$m	2017 \$m
Profit before taxation	10,883	8,610
Tax calculated at domestic tax rates applicable to profits in the respective countries (note (i))	1,843	1,424
Income not subject to taxation	(288)	(267)
Expenses not deductible for taxation purposes	34	32
Change in deferred tax arising from unrecognised tax losses and other deferred tax adjustments	55	74
Over provision in respect of prior years	(52)	(8)
 Taxation charge	 1,592	 1,255

(i) The weighted average applicable tax rate was 16.9 per cent (2017: 16.5 per cent).

16. Earnings Per Share

The calculation of the basic and diluted earnings per share is as follows:

- (a) Basic earnings per share

	2018	2017
Profit attributable to shareholders (\$m)	9,312	7,404
Weighted average number of shares in issue less shares held for Share Award Scheme (in '000)	1,242,059	1,227,674
 Basic earnings per share (\$)	 7.50	 6.03

- (b) Diluted earnings per share

	2018	2017
Profit attributable to shareholders (\$m)	9,312	7,404
Weighted average number of shares in issue less shares held for Share Award Scheme (in '000)	1,242,059	1,227,674
Effect of Awarded Shares (in '000)	2,759	3,124
 Weighted average number of shares for the purpose of calculating diluted earnings per share (in '000)	 1,244,818	 1,230,798
 Diluted earnings per share (\$)	 7.48	 6.02

17. Dividends

Accounting Policy

Dividends declared are recognised as liabilities in the consolidated financial statements in the period in which the dividends are approved by shareholders or directors, where appropriate.

	2018 \$m	2017 \$m
First interim dividend paid:		
\$3.64 (2017: \$2.55) per share	4,537	3,141
Less: Dividend for shares held by Share Award Scheme (note (a))	(10)	(8)
	4,527	3,133
Second interim dividend declared (notes (b) and (c)):		
\$3.07 (2017: \$Nil) per share based on issued share capital at 31 Dec 2018	3,839	–
Less: Dividend for shares held by Share Award Scheme at 31 Dec 2018 (note (a))	(9)	–
	3,830	–
Final dividend proposed (note (b)):		
\$2.85 per share based on issued share capital at 31 Dec 2017	–	3,533
Less: Dividend for shares held by Share Award Scheme at 31 Dec 2017 (note (a))	–	(8)
	–	3,525
	8,357	6,658

- (a) The results and net assets of The HKEx Employees' Share Award Scheme (Share Award Scheme) are included in HKEX's financial statements. Therefore, dividends for shares held by the Share Award Scheme were deducted from the total dividends.
- (b) The dividend proposed/declared after 31 December was not recognised as a liability at 31 December as it had not been approved by the shareholders/the Board.
- (c) The 2018 second interim dividend will be payable in cash with a scrip dividend alternative subject to the permission of the Securities and Futures Commission (SFC) of the listing of and permission to deal in the new shares to be issued.

18. Financial Assets

Accounting Policy

The Group classifies its financial assets in the following measurement categories:

- those measured at fair value (either through profit or loss (note 20) or through other comprehensive income (note 21)); and
- those measured at amortised cost (note 22).

The classification depends on the business model for managing the financial assets and the contractual terms of the cash flows.

The Group reclassifies debt investments when and only when its business model for managing those assets changes.

Financial assets of Clearing House Funds and Margin Funds are classified as current assets as they will be liquidated whenever liquid funds are required.

Other financial assets are classified as current assets unless they are expected to mature or be disposed of after twelve months from the end of the reporting period, in which case, they are included in non-current assets. For collective investment schemes which have no maturity date, they are included in current assets unless they cannot be redeemed within twelve months from the end of the reporting period.

Financial assets are derecognised when the rights to receive cash flows from the assets have expired or have been transferred and the Group has transferred substantially all the risks and rewards of ownership of the assets.

In the comparative period, investments and other financial assets of the Group were classified under financial assets measured at fair value through profit or loss (note 20) or financial assets measured at amortised cost (note 22). The classification depends on the business model for managing the financial assets and the contractual terms of the cash flows.

19. Cash and Cash Equivalents

Accounting Policy

Cash and cash equivalents comprise cash on hand, bank balances and other short-term highly liquid investments that are readily convertible into known amounts of cash and are subject to an insignificant risk of changes in value (mainly reverse repurchase investments and time deposits), with original maturities of three months or less.

19. Cash and Cash Equivalents (continued)

	At 31 Dec 2018				
	Cash for A shares (notes (a) and (c)) \$m	Corporate Funds (notes (b) and 23) \$m	Margin Funds (notes (c) and 30) \$m	Clearing House Funds (notes (c) and 34) \$m	Total \$m
Cash on hand and balances and deposits with banks	3,014	10,681	43,165	6,963	63,823
Reverse repurchase investments	-	1,223	47,608	8,542	57,373
	3,014	11,904	90,773	15,505	121,196

	At 31 Dec 2017				
	Cash for A shares (notes (a) and (c)) \$m	Corporate Funds (notes (b) and 23) \$m	Margin Funds (notes (c) and 30) \$m	Clearing House Funds (notes (c) and 34) \$m	Total \$m
Cash on hand and balances and deposits with banks	1,689	12,540	42,410	8,413	65,052
Reverse repurchase investments	-	1,006	80,434	9,168	90,608
	1,689	13,546	122,844	17,581	155,660

(a) Cash for A shares includes:

- (i) Renminbi (RMB) cash prepayments received by HKSCC from its Clearing Participants for releasing their allocated A shares on the trade day. Such prepayments will be used to settle HKSCC's Continuous Net Settlement (CNS) obligations payable on the next business day; and
 - (ii) Hong Kong Dollar/United States Dollar cash collateral received by HKSCC from its Clearing Participants for releasing their allocated A shares on the trade day. Such collateral will be refunded to the Clearing Participants when they settle their RMB CNS obligations on the next business day.
- (b) At 31 December 2018, cash and cash equivalents of Corporate Funds of \$724 million (31 December 2017: \$Nil) were solely used to support Skin-in-the-Game and default fund credits for HKSCC Guarantee Fund, SEOCH Reserve Fund and HKCC Reserve Fund (note 34(a)).
- (c) The cash and cash equivalents of Margin Funds, Clearing House Funds, Corporate Funds reserved for supporting Skin-in-the-Game and default fund credits of Clearing House Funds (note (b)), and Cash for A shares are held for specific purposes and cannot be used by the Group to finance other activities. These balances are not included in cash and cash equivalents of the Group for cash flow purpose in the consolidated statement of cash flows.

20. Financial Assets Measured at Fair Value through Profit or Loss

Accounting Policy

Classification

Investments and other financial assets are classified under financial assets measured at fair value through profit or loss if they do not meet the conditions to be measured at fair value through other comprehensive income (note 21) or amortised cost (note 22). On initial recognition, the Group may irrevocably designate a financial asset as at fair value through profit or loss that otherwise meets the requirements to be measured at amortised cost or at fair value through other comprehensive income if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise. Derivative financial instruments (see below) are classified as financial assets measured at fair value through profit or loss when their fair values are positive.

Investments in equity instruments that are not held for trading are classified under financial assets measured at fair value through profit or loss unless the Group has made an irrevocable election at the time of initial recognition to account for the investment at fair value through other comprehensive income.

In the comparative period, investments and other financial assets were classified under financial assets measured at fair value through profit or loss if they did not meet the conditions to be measured at amortised cost (note 22).

Recognition and measurement

Purchases and sales of financial assets measured at fair value through profit or loss are recognised on the trade date. They are initially recognised at fair value with transaction costs recognised as expenses in the consolidated income statement and subsequently carried at fair value. Gains and losses arising from changes in fair value are included in the consolidated income statement in the period in which they arise.

Interest income is included in net fair value gains/(losses) from these financial assets.

Fair values of quoted investments are based on the most representative prices within the bid-ask spreads which are currently considered as the bid-prices. The collective investment schemes are valued based on the latest available transaction price or redemption price for each fund, as determined by the fund administrator. For unlisted securities or financial assets without an active market, the Group establishes the fair value by using valuation techniques including the use of recent arm's length transactions, reference to other instruments that are substantially the same and discounted cash flow analysis.

Derivative financial instruments

Derivative financial instruments include outstanding derivatives contracts of LME Clear, which acts as a central counterparty to the base and precious metals futures and options contracts traded on the LME, and forward foreign exchange contracts. Derivatives are initially recognised at fair value on trade date and subsequently remeasured at their fair values. Except where outstanding derivatives contracts are held in the capacity as a central counterparty, derivatives are categorised as held for trading with changes in fair value recognised in the consolidated income statement.

20. Financial Assets Measured at Fair Value through Profit or Loss (continued)

	At 31 Dec 2018			
	Corporate Funds (note 23) \$m	Margin Funds (note 30) \$m	Metals derivatives contracts (note (a)) \$m	Total \$m
<u>Mandatorily measured at fair value</u>				
Collective investment schemes:				
– listed outside Hong Kong	1,987	–	–	1,987
– unlisted	5,102	–	–	5,102
	7,089	–	–	7,089
Derivative financial instruments:				
– base and precious metals futures and options contracts cleared through LME Clear (note (a))	–	–	53,915	53,915
	7,089	–	53,915	61,004
 At 31 Dec 2017				
	Corporate Funds (note 23) \$m	Margin Funds (note 30) \$m	Metals derivatives contracts (note (a)) \$m	Total \$m
<u>Mandatorily measured at fair value</u>				
Collective investment schemes:				
– listed outside Hong Kong	1,841	–	–	1,841
– unlisted	4,802	–	–	4,802
	6,643	–	–	6,643
Unlisted debt securities	–	3,059	–	3,059
Derivative financial instruments:				
– base and precious metals futures and options contracts cleared through LME Clear (note (a))	–	–	85,335	85,335
	6,643	3,059	85,335	95,037

- (a) Metals derivatives contracts represent the fair value of the outstanding base and precious metals futures and options contracts cleared through LME Clear that do not qualify for netting under HKAS 32: Financial Instruments: Presentation, where LME Clear is acting in its capacity as a central counterparty to the contracts traded on the LME. A corresponding amount has been recognised under financial liabilities at fair value through profit or loss (note 29).

21. Financial Assets Measured at Fair Value through Other Comprehensive Income

Accounting Policy

Classification

A debt investment is measured at fair value through other comprehensive income if it meets both of the following conditions and is not designated as at fair value through profit or loss:

- it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

The nature of any derivatives embedded in the debt instruments is considered in determining whether the cash flows are solely payment of principal and interest on the principal outstanding and are not accounted for separately. If the combined cash flows of the debt instruments and embedded derivatives are considered not satisfying the “solely payments of principal and interest” condition, the financial assets are classified as financial assets measured at fair value through profit or loss (note 20).

Recognition and measurement

At initial recognition, the Group measures a financial asset at its fair value plus transaction costs that are directly attributable to the acquisition of the financial asset.

Financial assets measured at fair value through other comprehensive income are subsequently measured at fair value. Interest income calculated using the effective interest method, foreign exchange gains and losses and impairment are recognised in the consolidated income statement. Other changes in carrying amounts are recognised in other comprehensive income. On derecognition, gains and losses accumulated in other comprehensive income are reclassified to consolidated income statement.

Fair values of quoted investments are based on the most representative prices within the bid-ask spreads which are currently considered as the bid-prices. For unlisted securities or financial assets without an active market, the Group establishes the fair value by using valuation techniques including the use of recent arm's length transactions and dealer quotes for similar investments.

Impairment

The Group assesses on a forward looking basis the expected credit losses associated with its debt instruments measured at fair value through other comprehensive income. Expected credit losses are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all expected cash shortfalls (ie, the difference between the cash flows due to the Group in accordance with the contract and the cash flows that the Group expects to receive).

In measuring expected credit losses, the Group takes into account reasonable and supportable information that is available without undue cost or effort. This includes information about past events, current conditions and forecasts of future economic conditions.

Expected credit losses are measured on either of the following bases:

- 12-month expected credit losses: these are losses that are expected to result from possible default events within the 12 months after the reporting date; and
- Lifetime expected credit losses: these are losses that are expected to result from all possible default events over the expected lives of the items to which the expected credit loss model applies.

21. Financial Assets Measured at Fair Value through Other Comprehensive Income (continued)

Accounting Policy (continued)

Impairment (continued)

For financial assets measured at fair value through other comprehensive income, the Group recognises a provision for impairment losses equal to 12-month expected credit losses unless there has been a significant increase in credit risk of the financial assets since initial recognition, in which case the provision for impairment losses is measured at an amount equal to lifetime expected credit losses.

Expected credit losses are measured at each reporting date to reflect changes in the financial asset's credit risk since initial recognition.

In assessing whether the credit risk of a financial asset has increased significantly since initial recognition, the Group compares the risk of default occurring on the financial asset assessed at the reporting date with that assessed at the date of initial recognition. In making this reassessment, the Group considers that a default event occurs when the financial asset is past due by 90 days or one or more credit impaired events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred.

The following information is taken into account when assessing whether credit risk has increased significantly since initial recognition:

- failure to make payments of principal or interest on their contractually due dates;
- an actual or expected significant deterioration in a financial asset's external or internal credit rating (if available);
- an actual or expected significant deterioration in the operating results of the debtor; and
- existing or forecast changes in the technological, market, economic or legal environment that have a significant adverse effect on the debtor's ability to meet its obligation to the Group.

Depending on the nature of the financial instruments, the assessment of a significant increase in credit risk is performed on either an individual basis or a collective basis. When the assessment is performed on a collective basis, the financial assets are grouped based on shared credit risk characteristics, such as past due status and credit risk ratings.

Any change in the expected credit loss amount is recognised as an impairment loss or reversal of impairment loss in the consolidated income statement, with a corresponding adjustment to the other comprehensive income.

	Margin Funds (note 30)	
	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Unlisted debt securities (note (a))	3,755	-
The expected recovery dates of the financial assets are analysed as follows:		
Within twelve months (note (b))	3,755	-

21. Financial Assets Measured at Fair Value through Other Comprehensive Income (continued)

- (a) No provision for impairment loss was made at 31 December 2018 as the financial assets were considered to be of low credit risk and the expected credit loss was minimal. The investments in debt securities held were of investment grade and had a weighted average credit rating of Aa1 (Moody) with no history of default and there was no unfavourable current conditions and forecast of future economic conditions at 31 December 2018.
- (b) Includes financial assets maturing after twelve months of \$1,875 million (31 December 2017: \$Nil) attributable to Margin Funds that could readily be liquidated to meet liquidity requirements of the Fund (note 50 (b)).

22. Financial Assets Measured at Amortised Cost

Accounting Policy

Classification

Investments are classified under financial assets measured at amortised cost if they satisfy both of the following conditions:

- the assets are held within a business model whose objective is to hold assets in order to collect contractual cash flows; and
- the contractual terms of the financial assets give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

The nature of any derivatives embedded in the financial assets is considered in determining whether the cash flows are solely payment of principal and interest on the principal outstanding and are not accounted for separately. If the combined cash flows of the financial assets and embedded derivatives are considered not satisfying the “solely payments of principal and interest” condition, the financial assets are classified as financial assets measured at fair value through profit or loss (note 20).

Accounts receivable and other deposits are also classified under this category (note 24).

Recognition and measurement

Financial assets measured at amortised cost are initially recognised at fair value plus transaction costs and subsequently carried at amortised cost using the effective interest method. The amortised cost is reduced by loss allowance for expected credit losses. Interest income, foreign exchange gains and losses and impairment are recognised in the consolidated income statement. Any gains and losses on derecognition is recognised in the consolidated income statement.

Impairment

- (i) Policy applicable from 1 January 2018

The Group assesses on a forward looking basis the expected credit losses associated with its financial assets measured at amortised cost.

For accounts receivable due from customers, the Group applied the simplified approach permitted by HKFRS 9 (2014), which requires expected lifetime losses (note 21) to be recognised from initial recognition of the receivables. Expected credit losses of receivables are estimated using a provision matrix based on the Group's historical credit loss experience, adjusted for factors that are specific to the debtors and an assessment of both the current and forecast general economic conditions at the reporting date.

22. Financial Assets Measured at Amortised Cost (continued)

Accounting Policy (continued)

Impairment (continued)

(i) Policy applicable from 1 January 2018 (continued)

For all other financial assets measured at amortised cost (including time deposits, debt instruments and other deposits), the Group recognises a provision for impairment losses equal to 12-month expected credit losses (refer to note 21 for details of assessment of credit risk) unless there has been a significant increase in credit risk of the financial assets since initial recognition, in which case the provision for impairment losses is measured at an amount equal to lifetime expected credit losses.

Expected credit losses are remeasured at each reporting date to reflect changes in the financial asset's credit risk since initial recognition (note 21). Any change in the expected credit loss amount is recognised as an impairment loss or reversal of impairment loss in the consolidated income statement, with a corresponding adjustment to the carrying amount through a loss allowance account.

The gross carrying amount of a financial asset is written off (either partially or in full) to the extent that there is no realistic prospect of recovery. This is generally the case when the Group determines that the debtor does not have assets or sources of income that could generate sufficient cash flows to repay the amounts subject to the write-off.

Subsequent recoveries of an asset that was previously written off are recognised as a reversal of impairment in the consolidated income statement in the period in which the recovery occurs.

(ii) Policy applicable prior to 1 January 2018

The Group assesses at the end of each reporting period whether there is objective evidence that a financial asset or a group of financial assets is impaired. Impairment losses are incurred when there is objective evidence of impairment that, as a result of one or more loss events that have occurred after the initial recognition of the financial assets, the estimated future cash flows of the financial assets have been affected.

If there is objective evidence that an impairment loss has been incurred, the loss is measured as the difference between the assets' carrying amounts and the present values of estimated future cash flows discounted at the financial assets' original effective interest rates. The carrying amounts of the assets are reduced through the use of a doubtful debt allowance account and the amount of the loss is recognised in the consolidated income statement.

If, in a subsequent period, the amount of impairment loss decreases and the decrease can be shown to relate objectively to an event occurring after the impairment was recognised, the previously recognised impairment loss is reversed by adjusting the doubtful debt allowance account. The amount of reversal is recognised in the consolidated income statement.

22. Financial Assets Measured at Amortised Cost (continued)

	At 31 Dec 2018			
	Corporate Funds (note 23) \$m	Margin Funds (note 30) \$m	Clearing House Funds (note 34) \$m	Total \$m
Debt securities	535	–	–	535
Time deposits with original maturities over three months	5,208	26,045	–	31,253
Other financial assets	97	–	–	97
	5,840	26,045	–	31,885
The expected recovery dates of the financial assets are analysed as follows:				
Within twelve months	5,442	26,045	–	31,487
More than twelve months	398	–	–	398
	5,840	26,045	–	31,885
	At 31 Dec 2017			
	Corporate Funds (note 23) \$m	Margin Funds (note 30) \$m	Clearing House Funds (note 34) \$m	Total \$m
Debt securities	627	–	–	627
Time deposits with original maturities over three months	588	29,481	61	30,130
Other financial assets	60	–	–	60
	1,275	29,481	61	30,817
The expected recovery dates of the financial assets are analysed as follows:				
Within twelve months	1,215	29,481	61	30,757
More than twelve months	60	–	–	60
	1,275	29,481	61	30,817

- (a) No provision for impairment loss for these financial assets was made at 31 December 2018 as the financial assets were considered to be of low credit risk and the expected credit loss of these financial assets was minimal. Debt securities held were of investment grade and had a weighted average credit rating of Aa3 (Moody) (31 December 2017: Aaa (Moody)). Deposits were placed with the investment grade banks, licensed banks and restricted licence banks regulated by the Hong Kong Monetary Authority, and banks regulated by local banking regulators in the countries where the Group's subsidiaries operate. All these financial assets had no history of default and there was no unfavourable current conditions and forecast of future economic conditions at 31 December 2018.
- (b) The fair values of financial assets maturing after twelve months are disclosed in note 50(d)(ii).

23. Corporate Funds

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Corporate Funds comprised the following instruments:		
Cash and cash equivalents (notes (b) and 19)	11,904	13,546
Financial assets measured at fair value through profit or loss (note 20)	7,089	6,643
Financial assets measured at amortised cost (note 22)	5,840	1,275
	24,833	21,464

- (a) Financial assets held by the Group which are funded by share capital and funds generated from operations are classified as Corporate Funds (ie, other than financial assets of Margin Funds, Clearing House Funds, Cash for A shares and base and precious metals derivatives contracts).
- (b) At 31 December 2018, cash and cash equivalents of Corporate Funds of \$724 million (31 December 2017: \$Nil) were solely used to support Skin-in-the-Game and default fund credits for HKSCC Guarantee Fund, SEOCH Reserve Fund and HKCC Reserve Fund (note 34(a)).

24. Accounts Receivable, Prepayments and Deposits

Accounting Policy

Accounts receivable and other deposits are financial assets measured at amortised cost less impairment. The accounting policy for financial assets measured at amortised cost is disclosed in note 22.

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Receivable from ChinaClear, Exchange and Clearing Participants:		
– CNS money obligations receivable (note (a))	13,471	12,515
– transaction levy, stamp duty and fees receivable	537	676
– Settlement Reserve Fund and Settlement Guarantee Fund held by ChinaClear (note 30)	3,150	2,421
– others	6	12
Payment in advance for collective investment schemes traded on 1 Jan 2019	229	–
Receivables from collective investment schemes sold prior to 31 Dec 2018	155	–
Other receivables, prepayments and deposits	824	970
Less: Provision for impairment losses of receivables (notes (b) and (c))	(10)	(9)
	18,362	16,585

24. Accounts Receivable, Prepayments and Deposits (continued)

- (a) Upon acceptance of Stock Exchange trades for settlement in CCASS under the CNS basis, HKSCC interposes itself between the HKSCC Clearing Participants as the settlement counterparty to the trades through novation. The CNS money obligations due by/to HKSCC Clearing Participants on the Stock Exchange trades are recognised as receivables and payables (note 31) when they are confirmed and accepted on the day after the trade day.

For a trade in A shares transacted for Stock Exchange Participants, the rights and obligations of the parties to the trade will be transferred to ChinaClear, and a market contract between HKSCC and the relevant HKSCC Clearing Participant is created through novation. The CNS money obligations due by/to HKSCC Clearing Participants and ChinaClear are recognised as receivables and payables (note 31) when they are confirmed on the trade day.

- (b) Expected credit losses

For accounts receivable, the Group applied the simplified approach permitted by HKFRS 9 (2014), which requires expected lifetime losses to be recognised from initial recognition of the receivables.

The expected loss rates are based on the payment profiles of debtors and the corresponding historical credit losses experienced during the year. The historical loss rates are adjusted to reflect current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle the receivables. On that basis, the loss allowance for accounts receivable as at 31 December 2018 and 1 January 2018 (on the date of initial adoption of HKFRS 9 (2014)) was determined as follows:

	At 31 Dec 2018			
	Current or within 30 days past due	31 to 180 days past due	More than 180 days past due	Total
Expected loss rate	<1%	2%	100%	
Gross carrying amount – accounts receivable subject to expected credit loss provision (\$m)	532	53	9	594
Loss allowance (\$m)	–	1	9	10

	At 1 Jan 2018			
	Current or within 30 days past due	31 to 180 days past due	More than 180 days past due	Total
Expected loss rate	<1%	2%	100%	
Gross carrying amount – accounts receivable subject to expected credit loss provision (\$m)	558	25	8	591
Loss allowance (\$m)	–	1	8	9

For the remaining receivables and other deposits (excluding prepayments) amounting to \$17,662 million as of 31 December 2018 (1 January 2018: \$15,899 million), the expected credit loss was minimal as these receivables were mainly due from Participants which are subject to the Group's stringent financial requirements and admission criteria, compliance monitoring and risk management measures, these receivables had no recent history of default, part of receivables were subsequently settled, and there was no unfavourable current conditions and forecast future economic conditions at the reporting dates.

24. Accounts Receivable, Prepayments and Deposits (continued)

- (c) The movements in provision for impairment losses of receivables were as follows:

	2018 \$m	2017 \$m
At 1 Jan	9	3
Provision for loss allowance for receivables under other operating expenses	1	6
At 31 Dec	10	9

- (i) The balance at 31 December 2017 was derived based on the incurred credit loss model. Upon adoption of HKFRS 9 (2014), there was no change in the amount of provision for impairment losses calculated based on the expected credit loss model.
- (d) CNS money obligations receivable mature within two days after the trade date. The majority of the remaining accounts receivable, prepayments and deposits were due within three months.

25. Principal Subsidiaries and Controlled Structured Entity

Accounting Policy

Subsidiaries are entities (including structured entities (note (b)) over which the Group has control. The Group controls an entity when the Group is exposed to, or has the rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

A structured entity is an entity that has been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when any voting rights relate to administrative tasks only and the relevant activities are directed by means of contractual arrangements.

The Group considers all of its investments in collective investment schemes to be investments in unconsolidated structured entities, which are classified as financial assets measured at fair value through profit or loss (note 20).

25. Principal Subsidiaries and Controlled Structured Entity (continued)

(a) Principal subsidiaries

HKEX had direct or indirect interests in the following principal subsidiaries:

Company	Place of incorporation and operation	Issued and fully paid up share/registered capital	Principal activities	Interest held by the Group	
				At 31 Dec 2018	At 31 Dec 2017
Direct principal subsidiaries:					
The Stock Exchange of Hong Kong Limited	Hong Kong	929 ordinary shares (\$929)	Operates the single Stock Exchange in Hong Kong	100%	100%
Hong Kong Futures Exchange Limited	Hong Kong	230 ordinary shares (\$28,750,000)	Operates a futures and options exchange in Hong Kong	100%	100%
Hong Kong Securities Clearing Company Limited (HKSCC) (note (i))	Hong Kong	4 ordinary shares (\$1,060,000,002)	Operates a clearing house for securities traded on the Stock Exchange in Hong Kong, Shanghai Stock Exchange and Shenzhen Stock Exchange in Mainland China through Stock Connect and the central securities depository, and provides custody and nominee services for eligible securities listed in Hong Kong and Mainland China	100%	100%
OTC Clearing Hong Kong Limited (OTC Clear) (note (ii))	Hong Kong	11,187 ordinary shares (\$921,206,421) 3,541 non-voting ordinary shares (\$433,291,660)	Operates a clearing house for over-the-counter derivatives	76%	75%
HKFE Clearing Corporation Limited (HKCC) (note (i))	Hong Kong	3,766,700 ordinary shares (\$831,010,000)	Operates a clearing house for derivatives contracts traded on the Futures Exchange	100%	100%
The SEHK Options Clearing House Limited (SEOCH) (note (i))	Hong Kong	4,000,000 ordinary shares (\$271,000,000)	Operates a clearing house for stock options contracts traded on the Stock Exchange in Hong Kong	100%	100%
Indirect principal subsidiaries:					
The London Metal Exchange	United Kingdom	100 ordinary shares of £1 each	Operates an exchange for the trading of base and precious metals futures and options contracts	100%	100%
LME Clear Limited	United Kingdom	107,500,001 ordinary shares of £1 each	Operates a clearing house for base and precious metals futures and options contracts	100%	100%
Qianhai Mercantile Exchange Co., Ltd. (QME) (note (ii))	Mainland China	RMB400,000,000	Operates a commodity trading platform in Mainland China	90.01%	90.01%

The above table lists the subsidiaries of the Group which, in the opinion of its directors, principally affect the results or assets of the Group.

25. Principal Subsidiaries and Controlled Structured Entity (continued)

(a) Principal subsidiaries (continued)

(i) Capital injection to clearing houses

In June 2018, the Group's clearing houses, HKSCC, HKCC and SEOCH implemented certain changes to their default fund resource arrangement. As a result, additional capital of \$1,060 million, \$830 million and \$270 million were injected into HKSCC, HKCC and SEOCH respectively by HKEX in 2018 to provide resources for them to absorb losses in case of Participants' default.

(ii) Subsidiaries with non-controlling interests

At 31 December 2018, the Group held 76 per cent (31 December 2017: 75 per cent) interest in OTC Clear, while the remaining 24 per cent (31 December 2017: 25 per cent) interest was held by non-controlling interests. The non-controlling interests do not have voting rights at general meetings of OTC Clear. Details of change in interest held by the Group are set out in note 46.

QME is a limited company established in Mainland China. At 31 December 2018, the Group held 90.01 per cent (31 December 2017: 90.01 per cent) interest in QME, while the remaining 9.99 per cent (31 December 2017: 9.99 per cent) interest was held by non-controlling interests. Details of change in interest held by the Group in 2017 are set out in note 46.

Set out below is the financial information related to the non-controlling interests of each subsidiary:

	OTC Clear		QME	
	2018 \$m	2017 \$m	2018 \$m	2017 \$m
Loss allocated to non-controlling interests	10	27	11	22
Accumulated non-controlling interests	173	91	1	11

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Accumulated non-controlling interests	173	91	1	11

No summarised financial information of OTC Clear or QME is presented as the non-controlling interests are not material to the Group.

(iii) Significant restrictions

Cash and savings deposits are held by subsidiaries in Mainland China and are subject to exchange control restrictions. The carrying amount of these restricted assets in the consolidated financial statements at 31 December 2018 was \$132 million (31 December 2017: \$148 million).

25. Principal Subsidiaries and Controlled Structured Entity (continued)

(b) Controlled structured entities

HKEX controls two structured entities which operate in Hong Kong, particulars of which are as follows:

Structured entity	Principal activities
The HKEx Employees' Share Award Scheme (HKEX Employee Share Trust)	Purchases, administers and holds HKEX shares for the Share Award Scheme for the benefit of eligible HKEX employees (note 39)
HKEX Foundation Limited	Charitable foundation

HKEX has the power to direct the relevant activities of the HKEX Employee Share Trust and HKEX Foundation Limited and it has the ability to use its power over the entities to affect its exposure to returns. Therefore, they are considered as controlled structured entities of the Group.

26. Interests in Joint Ventures

Accounting Policy

Interests in joint ventures are accounted for in the consolidated financial statements under the equity method. The entire carrying amount of the investment is tested for impairment in accordance with the accounting policy stated in note 2(e).

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Share of net assets of joint ventures	63	61

(a) Details of the joint ventures were as follows:

Name	Place of business and country of incorporation	Principal activities	% of ownership interest	
			At 31 Dec 2018	At 31 Dec 2017
China Exchanges Services Company Limited (CESC)	Hong Kong	Development of index-linked and equity derivatives products	33.33%	33.33%
Bond Connect Company Limited (BCCL)	Hong Kong	Provision of support services related to Bond Connect	40%	40%

In 2012, HKEX, the Shanghai Stock Exchange and the Shenzhen Stock Exchange established a joint venture, CESC, with an aim of developing financial products and related services. CESC is a strategic investment for the Group and it is expected to enhance the competitiveness of Hong Kong, help promote the development of Mainland China's capital markets and the internationalisation of the Group.

In 2017, HKEX and China Foreign Exchange Trade System (CFETS) established a joint venture, BCCL, which provides support services related to Bond Connect. BCCL is a strategic investment of the Group as it provides services to facilitate the trading of Bond Connect, which enhances HKEX's position in the fixed income market and expands the mutual market programme from equity into a new asset class.

26. Interests in Joint Ventures (continued)

(a) (continued)

Set out below is the measurement method and the carrying amounts of the two joint ventures:

Name	Measurement method	Carrying amount	
		At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
CESC	Equity	43	51
BCCL	Equity	20	10
		63	61

The two joint ventures are private companies and no quoted market prices are available for their shares.

No summarised financial information of CESC and BCCL is presented as the joint ventures are not material to the Group.

27. Goodwill and Other Intangible Assets

Accounting Policy

Goodwill

Goodwill arising on the acquisition of subsidiaries is carried at cost as established at the date of acquisition less accumulated impairment losses, if any.

For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each CGU, or group of CGUs, that is expected to benefit from the synergies of the combination. Each CGU or group of CGUs to which the goodwill is allocated represents the lowest level within the entity at which the goodwill is monitored for internal management purposes (ie, operating segment level).

Goodwill is not amortised but impairment reviews are undertaken annually or more frequently if events or changes in circumstances indicate a potential impairment. The carrying value of goodwill is compared to the recoverable amount, which is the higher of value-in-use and the fair value less costs to sell. Any impairment is recognised immediately in the consolidated income statement and is not subsequently reversed.

Tradenames

Tradenames acquired in a business combination are recognised at fair value at the acquisition date. The fair value is based on the discounted estimated royalty payments that are expected to be avoided as a result of the tradenames being owned.

Tradenames arising from the acquisition of the LME Group have indefinite useful lives and are carried at cost less accumulated impairment losses, if any.

Tradenames are reviewed annually to determine whether events and circumstances continue to support the indefinite useful life assessment.

27. Goodwill and Other Intangible Assets (continued)

Accounting Policy (continued)

Customer relationships

Customer relationships acquired in a business combination are recognised initially at fair value at the acquisition date. The fair value is determined using the multi-period excess earnings method, whereby the asset is valued after deducting a fair return on all other assets that are part of creating the related cash flows. Subsequently, the customer relationships are carried at cost (ie, the initial fair value) less accumulated amortisation and impairment losses, if any. Amortisation is calculated using the straight-line method over the expected lives of the customer relationships, which are determined to be 20 to 25 years.

Computer software systems

Development costs that are directly attributable to the design and testing of identifiable and unique software products controlled by the Group are recognised as intangible assets if the related software does not form an integral part of the hardware on which it operates (ie, system software without which the related hardware can still operate) and when the following criteria are met:

- It is technically feasible to complete the software so that it will be available for use;
- Management intends to complete the software and use it;
- There is an ability to use the software;
- It can be demonstrated how the software will generate probable future economic benefits;
- Adequate technical, financial and other resources to complete the development and to use the software are available; and
- The expenditure attributable to the software during its development can be reliably measured.

Other development expenditures that do not meet these criteria are recognised in the consolidated income statement as incurred. Development costs previously recognised in the consolidated income statement are not recognised as an asset in a subsequent period.

Qualifying software system development expenditure and related directly attributable costs capitalised as intangible assets are amortised when they are available for use. They are amortised at rates sufficient to write off their costs net of residual values over their estimated useful lives of three to five years on a straight-line basis. The residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

Costs associated with maintaining computer systems and software programmes are recognised in the consolidated income statement as incurred.

The Group's accounting policy for impairment is described in note 2(e).

27. Goodwill and Other Intangible Assets (continued)

	Other Intangible Assets				
	Goodwill \$m	Tradenames \$m	Customer relationships \$m	Software systems \$m	Total \$m
Cost:					
At 1 Jan 2017	13,167	891	3,111	2,292	19,461
Exchange differences	110	7	25	15	157
Additions	-	-	-	537	537
Disposals	-	-	-	(11)	(11)
At 31 Dec 2017	13,277	898	3,136	2,833	20,144
At 1 Jan 2018	13,277	898	3,136	2,833	20,144
Exchange differences	21	1	5	(2)	25
Additions	-	-	-	602	602
Disposals	-	-	-	(13)	(13)
At 31 Dec 2018	13,298	899	3,141	3,420	20,758
Accumulated amortisation:					
At 1 Jan 2017	-	-	527	1,122	1,649
Exchange differences	-	-	4	8	12
Amortisation	-	-	130	439	569
Disposals	-	-	-	(11)	(11)
At 31 Dec 2017	-	-	661	1,558	2,219
At 1 Jan 2018	-	-	661	1,558	2,219
Exchange differences	-	-	1	(3)	(2)
Amortisation	-	-	130	405	535
Disposals	-	-	-	(13)	(13)
At 31 Dec 2018	-	-	792	1,947	2,739
Net book value:					
At 31 Dec 2018	13,298	899	2,349	1,473	18,019
At 31 Dec 2017	13,277	898	2,475	1,275	17,925
Cost of software systems under development included above:					
At 31 Dec 2018	-	-	-	674	674
At 31 Dec 2017	-	-	-	547	547

Amortisation of \$535 million (2017: \$569 million) is included in “depreciation and amortisation” in the consolidated income statement.

Tradenames are regarded as having indefinite useful lives and there is no foreseeable limit to the period over which they are expected to generate cash flows for the Group as it is expected that their values will not be reduced through usage and there are no legal or similar limits on the period for their use.

27. Goodwill and Other Intangible Assets (continued)

Impairment tests for CGUs containing goodwill and intangible assets with indefinite useful lives

Goodwill and tradenames that arose on the acquisition of the LME Group in 2012 are allocated to and monitored by management at the operating segment level, which comprises CGUs, or groups of CGUs that are expected to benefit from synergies of combination with the acquired businesses. A summary of the allocation of goodwill and tradenames to these operating segments is as follows:

	At 31 Dec 2018		At 31 Dec 2017	
	Goodwill \$m	Tradenames \$m	Goodwill \$m	Tradenames \$m
Commodities segment	10,412	704	10,396	703
Clearing segment	2,886	195	2,881	195
	13,298	899	13,277	898

The Commodities segment comprises the commodities trading platform in the UK (LME commodities CGU) and the commodities trading platform in Mainland China (China commodities CGU). As the China commodities CGU is still at an early stage of operation, its valuation has not been taken into account in determining the recoverable amount of the Commodities segment at 31 December 2018.

The recoverable amount of each CGU is determined based on value-in-use calculations. These calculations use cash flow projections based on financial forecasts approved by management covering a five-year period. Cash flows beyond the five-year period are extrapolated using the estimated terminal growth rates stated below. The key assumptions, EBITDA margins, growth rates and discount rates used for value-in-use calculations are as follows:

	At 31 Dec 2018		At 31 Dec 2017	
	Commodities segment	Clearing segment	Commodities segment	Clearing segment
EBITDA margin (average of next five years)	61%	49%	61%	50%
Growth rate	3%	3%	3%	3%
Discount rate	9%	9%	9%	9%

For the LME commodities CGU and the Clearing segment, management determined the EBITDA margins based on past performance and expectations regarding market development. The growth rates do not exceed the long-term average growth rate for the business in the markets in which each of the CGUs currently operates. The discount rates used are pre-tax and reflect specific risks relating to each CGU.

The recoverable amounts of the operating segments (including goodwill and tradenames) based on the estimated value-in-use calculations were higher than their carrying amounts at 31 December 2018 and 31 December 2017. Accordingly, no provision for impairment loss for goodwill or tradenames is considered necessary.

If the LME trading fee in the forecast period was 9 per cent lower than forecast, or the discount rate increased to 10 per cent, the recoverable amount of the Commodities segment would be approximately equal to its carrying amount. Except for this, any reasonable possible changes in the key assumptions used in the value-in-use assessment would not affect management's view on impairment at 31 December 2018.

28. Fixed Assets

Accounting Policy

Tangible fixed assets are stated at historical cost less accumulated depreciation and impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the assets.

Tangible fixed assets are depreciated when they are available for use. They are depreciated at rates sufficient to write off their costs net of expected residual values over their estimated useful lives on a straight-line basis. The residual values and useful lives are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

The useful lives of major categories of fixed assets are as follows:

Leasehold buildings	Up to 35 years or remaining lives of the leases if shorter
Leasehold improvements	Over the remaining lives of the leases but not exceeding 10 years
Computer trading and clearing systems – hardware and software	3 to 5 years
Other computer hardware and software	3 years
Furniture, equipment and motor vehicles	3 to 5 years
Data centre facilities and equipment	3 to 20 years

Expenditure incurred in the construction of leasehold buildings and other directly attributable costs are capitalised when it is probable that future economic benefits associated with the expenditure will flow to the Group and the costs can be measured reliably.

Qualifying software expenditure and related directly attributable costs are capitalised and recognised as a fixed asset if the software forms an integral part of the hardware on which it operates (ie, operating system software without which the related hardware cannot operate).

Subsequent costs and qualifying development expenditure incurred after the completion of a system are included in the asset's carrying amount or recognised as a separate asset only when it is probable that future economic benefits associated with that item will flow to the Group and the cost of the item can be measured reliably. All other repairs and maintenance costs and other subsequent expenditure are charged to the consolidated income statement when incurred.

The Group's accounting policy for impairment is described in note 2(e).

28. Fixed Assets (continued)

	Leasehold buildings \$m	Computer trading and clearing systems \$m	Other computer hardware and software \$m	Data centre facilities and equipment \$m	Leasehold improvements, furniture, equipment and motor vehicles \$m	Total \$m
Cost:						
At 1 Jan 2017	708	1,348	523	410	888	3,877
Exchange differences	–	5	2	–	5	12
Additions	–	75	29	6	141	251
Disposals	–	(7)	(8)	–	(37)	(52)
At 31 Dec 2017	708	1,421	546	416	997	4,088
At 1 Jan 2018	708	1,421	546	416	997	4,088
Exchange differences	–	(2)	(1)	–	(2)	(5)
Additions	–	35	112	12	227	386
Disposals	–	(27)	(8)	–	(6)	(41)
At 31 Dec 2018	708	1,427	649	428	1,216	4,428
Accumulated depreciation:						
At 1 Jan 2017	121	1,187	438	112	520	2,378
Exchange differences	–	2	1	–	1	4
Depreciation	28	55	44	27	135	289
Disposals	–	(7)	(8)	–	(37)	(52)
At 31 Dec 2017	149	1,237	475	139	619	2,619
At 1 Jan 2018	149	1,237	475	139	619	2,619
Exchange differences	–	(1)	–	–	(1)	(2)
Depreciation	29	31	42	28	97	227
Disposals	–	(27)	(8)	–	(6)	(41)
At 31 Dec 2018	178	1,240	509	167	709	2,803
Net book value:						
At 31 Dec 2018	530	187	140	261	507	1,625
At 31 Dec 2017	559	184	71	277	378	1,469
Cost of fixed assets in the course of construction included above:						
At 31 Dec 2018	–	46	91	–	132	269
At 31 Dec 2017	–	110	14	1	103	228

29. Financial Liabilities at Fair Value through Profit or Loss

Accounting Policy

Financial liabilities at fair value through profit or loss are initially recognised at fair value on trade date and subsequently remeasured at their fair values. Changes in fair value of the liabilities are recognised in the consolidated income statement.

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
<u>Held by LME Clear in its capacity as a central counterparty</u>		
Derivative financial instruments:		
– base and precious metals futures and options contracts cleared through LME Clear (note (a))	53,915	85,335
	53,915	85,335

- (a) The amount represents the fair value of outstanding base and precious metals futures and options contracts cleared through LME Clear that do not qualify for netting under HKAS 32 Financial Instruments: Presentation, where LME Clear is acting in its capacity as a central counterparty to the contracts traded on the LME.

30. Margin Deposits, Mainland Security and Settlement Deposits, and Cash Collateral from Clearing Participants

Accounting Policy

The obligation to refund the Margin deposits, Mainland security and settlement deposits, and cash collateral from Clearing Participants is disclosed under current liabilities. Non-cash collateral received from Clearing Participants is not recognised on the consolidated statement of financial position.

Margin Funds are established by cash received or receivable from Clearing Participants in respect of margin deposits, Mainland security and settlement deposits, and cash collateral of the five clearing houses to cover their open positions. Part of the Mainland security and settlement deposits is used by HKSCC to satisfy its obligations as a clearing participant of ChinaClear in respect of trades transacted through Stock Connect. These funds are held in segregated accounts of the respective clearing houses for this specified purpose and cannot be used by the Group to finance any other activities.

30. Margin Deposits, Mainland Security and Settlement Deposits, and Cash Collateral from Clearing Participants (continued)

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Margin deposits, Mainland security and settlement deposits, and cash collateral from Clearing Participants comprised:		
SEOCH Clearing Participants' margin deposits	9,011	14,571
HKCC Clearing Participants' margin deposits	52,446	49,245
HKSCC Clearing Participants' margin deposits, Mainland security and settlement deposits, and cash collateral	7,982	8,553
OTC Clear Clearing Participants' margin deposits	3,395	1,730
LME Clear Clearing Participants' margin deposits	50,894	83,715
	123,728	157,814
The margin deposits, Mainland security and settlement deposits, and cash collateral were invested in the following instruments for managing the obligations of the Margin Funds (note 18):		
Cash and cash equivalents (note 19)	90,773	122,844
Financial assets measured at fair value through profit or loss (note 20)	–	3,059
Financial assets measured at fair value through other comprehensive income (note 21)	3,755	–
Financial assets measured at amortised cost (note 22)	26,045	29,481
Settlement Reserve Fund and Settlement Guarantee Fund held by ChinaClear (note 24)	3,150	2,421
Margin receivable from Clearing Participants	5	9
	123,728	157,814

31. Accounts Payable, Accruals and Other Liabilities

Accounting Policy

Financial liabilities (other than financial liabilities at fair value through profit or loss (note 29) and financial guarantee contracts (note 33)) are initially recognised at fair value, which is then treated as their cost after initial recognition, and subsequently carried at amortised cost using the effective interest method.

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Payable to ChinaClear and Exchange and Clearing Participants:		
– CNS money obligations payable (note 24(a))	16,279	14,204
– HKD/USD cash collateral for A shares (note 19(a)(ii))	206	–
– others	191	212
Transaction levy payable to the SFC	90	120
Unclaimed dividends (note (a))	276	269
Stamp duty payable to the Collector of Stamp Revenue	323	416
Other payables, accruals and deposits received	1,004	989
	18,369	16,210

31. Accounts Payable, Accruals and Other Liabilities (continued)

- (a) Unclaimed dividends represent dividends declared by listed companies, including HKEX, which were held by HKSCC Nominees Limited (HKSN) but not yet claimed by shareholders of the companies concerned and dividends declared by HKEX but not yet claimed by its shareholders. During the year, cash dividends held by HKSN which had remained unclaimed for a period of more than seven years amounting to \$10 million (2017: \$7 million) were forfeited and recognised as sundry income (note 7) and dividends declared by HKEX which were unclaimed over a period of six years amounting to \$23 million (2017: \$26 million) were forfeited and transferred to retained earnings in accordance with HKEX's Articles of Association (note 42).
- (b) CNS money obligations payable mature within two days after the trade date. The majority of the remaining accounts payable, accruals and other liabilities would mature within three months.

32. Deferred Revenue

Accounting Policy

Deferred revenue, or “contract liability” under HKFRS 15, is recognised when the Group receives consideration (or the amount is due) from the customers before the Group transfers goods or services to the customers.

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Deferred revenue arising from unsatisfied performance obligations	1,418	957
Analysed as:		
Non-current liabilities	418	–
Current liabilities	1,000	957
	1,418	957

33. Other Financial Liabilities

Accounting Policy

A financial guarantee contract is a contract that requires the Group to make specified payments to reimburse the holder for a loss it incurs because a specified entity or person fails to make payment when due in accordance with the original or modified terms of an undertaking.

Financial guarantee contracts are initially recognised at fair value, and subsequently at the higher of the amount determined in accordance with the expected credit loss model under HKFRS 9 (2014) and the amount initially recognised less, where appropriate, the cumulative amount of income recognised in accordance with the principles of HKFRS 15.

In the comparative period, financial guarantee contracts were also initially recognised at fair value, and subsequently measured at the higher of the best estimate of the amount required to settle the guarantee (in accordance with HKAS 37: Provisions, Contingent Liabilities and Contingent Assets) and the amount initially recognised less, where appropriate, cumulative amortisation over the life of the guaranteee on a straight-line basis.

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Financial liabilities of Clearing House Funds (note 34)	39	38
Financial liabilities of Corporate Funds:		
Financial guarantee contract (note (a))	20	20
	59	58

- (a) The amount represents the carrying value of a financial guarantee provided by the Group to the Collector of Stamp Revenue, details of which are disclosed in note 45(b).

34. Clearing House Funds

Accounting Policy

Clearing Participants' cash contributions to Clearing House Funds are included under current liabilities. Non-cash collateral received from Clearing Participants is not recognised on the consolidated statement of financial position.

Clearing House Funds, or default funds, are established under the Clearing House Rules. Assets contributed by the Clearing Participants and the Group are held by the respective clearing houses (together with the accumulated income less related expenses for the clearing houses in Hong Kong) expressly for the purpose of ensuring that the respective clearing houses are able to fulfil their counterparty obligations in the event that one or more of the Clearing Participants fail to meet their obligations to the clearing houses. The HKSCC Guarantee Fund also provides resources to enable HKSCC to discharge its liabilities and obligations if defaulting Clearing Participants deposit defective securities into CCASS. The amounts earmarked for contribution to the Rates and FX Guarantee Resources of OTC Clear and its accumulated investment income was also included in Clearing House Funds for presentation purpose. These funds are held in segregated accounts of the respective clearing houses for this specified purpose and cannot be used by the Group to finance any other activities. From 1 June 2018 onwards, contributions by HKSCC, HKCC and SEOCH to their respective default funds (Skin-in-the-Game) are set at 10 per cent of the size of the respective funds, and such contributions, together with default fund credits granted to HKSCC and HKCC Participants, are included in Corporate Funds.

34. Clearing House Funds (continued)

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
The Clearing House Funds comprised:		
Clearing Participants' cash contributions	14,787	16,626
Contribution to OTC Clear Rates and FX Guarantee Resources	156	156
Clearing house funds reserves (note 41)	523	822
	15,466	17,604
The Clearing House Funds were invested in the following instruments for managing the obligations of the Funds (note 18):		
Cash and cash equivalents (note 19)	15,505	17,581
Financial assets measured at amortised cost (note 22)	-	61
	15,505	17,642
Less: Other financial liabilities of Clearing House Funds (note 33)	(39)	(38)
	15,466	17,604
The Clearing House Funds comprised the following Funds:		
HKSCC Guarantee Fund	2,075	2,712
SEOCH Reserve Fund	957	2,454
HKCC Reserve Fund	1,167	1,887
OTC Clear Rates and FX Guarantee Fund	2,561	1,222
OTC Clear Rates and FX Guarantee Resources	164	161
LME Clear Default Fund	8,542	9,168
	15,466	17,604

- (a) At 31 December 2018, the Skin-in-the-Game, together with default fund credits granted to HKSCC and HKCC Participants (note 50(c)), amounted to \$724 million (31 December 2017: \$Nil), and were included in Corporate Funds (note 19(b)).

35. Borrowings

Accounting Policy

Borrowings are recognised initially at fair value of proceeds received, net of transaction costs incurred (net proceeds). The difference between the net proceeds and the redemption value is amortised and recognised in the consolidated income statement as interest expense over the period of the borrowings using the effective interest method and added to borrowings.

The borrowings are subsequently carried at amortised cost (ie, net proceeds plus the cumulative amortisation using the effective interest method less payments).

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least twelve months after the end of the reporting period.

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Notes (note (a))	753	1,533
Written put options to non-controlling interests (note (b))	413	327
Total borrowings	1,166	1,860
Analysed as:		
Non-current liabilities	161	833
Current liabilities	1,005	1,027
	1,166	1,860

The borrowings were repayable as follows:

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Within one year	1,005	1,027
After one year but within two years	85	751
After two years but within five years	76	82
	1,166	1,860

(a) Notes

In December 2013 and January 2014, HKEX issued US\$100 million (HK\$775 million) and US\$95 million (HK\$737 million) of fixed rate senior notes which were due in December 2018 and January 2019 respectively. The US\$100 million note was fully repaid in December 2018. The average effective interest rate of the senior notes was 2.9 per cent (2017: 2.9 per cent) per annum.

35. Borrowings (continued)

- (b) Written put options to non-controlling interests

Accounting Policy

The potential cash payments related to put options issued by HKEX for the non-voting ordinary shares of a subsidiary held by non-controlling interests are accounted for as financial liabilities, which are initially recognised at present value of amount payable by HKEX to acquire the shares held by non-controlling interests with a corresponding charge directly to equity under “reserve relating to written put options to non-controlling interests”.

The written put option financial liabilities are subsequently measured at amortised cost (ie, the initial fair value plus cumulative amortisation of the difference between the initial fair value and the cash payments related to the put options using the effective interest method). The interest charge arising is recorded under finance costs in the consolidated income statement.

	2018 \$m	2017 \$m
At 1 Jan	327	317
Issuance of written put options to non-controlling interests debited against related reserve under equity attributable to shareholders of HKEX (note (i))	76	–
Interest expenses (note (ii))	10	10
 At 31 Dec	 413	 327

- (i) Prior to 2018, OTC Clear issued 1,620 non-voting ordinary shares to certain third party shareholders at a total consideration of \$340 million. In October 2018, a further 1,921 non-voting ordinary shares of OTC Clear were issued at a consideration of \$93 million. As part of the arrangement, put options were written by HKEX to the non-controlling interests to sell part or all of their non-voting ordinary shares in OTC Clear to HKEX at the initial subscription prices less accumulated dividends received by the non-controlling interests. The put options are exercisable by the non-controlling interests at any time following the date falling five years after the shares were issued if the non-controlling interests can demonstrate to HKEX that they have used reasonable endeavours for at least three months to find a suitable purchaser for their shares at a price equal to or more than their fair market values. The carrying amount of written put options represents the present value of the amount payable by HKEX to acquire the shares held by non-controlling interests at the date at which the written put options first become exercisable.

\$252 million of the written put options became exercisable in October 2018, and \$85 million and \$76 million of the options will become exercisable in August 2020 and October 2023 respectively.

- (ii) The effective interest rate of the liabilities was 3.0 per cent (2017: 3.0 per cent) per annum.

36. Provisions

Accounting Policy

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate of the amount can be made. The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period.

	Reinstatement costs \$m	Employee benefit costs \$m	Total \$m
At 1 Jan 2018	81	72	153
Exchange differences	(1)	–	(1)
Provision for the year	23	103	126
Amount used during the year	–	(86)	(86)
Amount paid during the year	(1)	(9)	(10)
At 31 Dec 2018	102	80	182

- (a) The provision for reinstatement costs represents the estimated costs of restoring the leased office premises to their original state upon the expiry of the leases. The leases are expected to expire within twelve years.
- (b) The provision for employee benefit costs represents unused annual leave that has been accumulated at the end of the reporting period. It is expected to be fully utilised in the coming twelve months.

37. Deferred Taxation

Accounting Policy

Deferred tax is recognised, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements, except that deferred tax liabilities are not recognised if they arise from the initial recognition of goodwill. Deferred tax is determined using tax rates that have been enacted or substantively enacted by the end of the reporting period and are expected to apply when the related deferred tax asset is realised or the deferred tax liability is settled.

Deferred tax assets are recognised to the extent that it is probable that future taxable profit will be available against which the temporary differences or the current tax losses can be utilised.

- (a) The movements on the net deferred tax liabilities account were as follows:

	2018 \$m	2017 \$m
At 1 Jan	681	691
Exchange differences	1	4
Charged/(credited) to the consolidated income statement (note 15(a))	41	(13)
Charged/(credited) directly to retained earnings	1	(1)
At 31 Dec (note (d))	724	681

37. Deferred Taxation (continued)

- (b) The Group had unrecognised tax losses of \$1,280 million at 31 December 2018 (31 December 2017: \$1,068 million) that may be carried forward for offsetting against future taxable income. Tax losses of PRC entities amounting to \$458 million (31 December 2017: \$340 million) will expire 5 years after the losses were incurred, and the remaining tax losses can be carried forward indefinitely and have no expiry date.
- (c) The movements on the net deferred tax liabilities/(assets) were as follows:

	Accelerated tax depreciation		Intangible assets ¹		Financial assets		Tax losses		Employee benefits		Total	
	2018 \$m	2017 \$m	2018 \$m	2017 \$m	2018 \$m	2017 \$m	2018 \$m	2017 \$m	2018 \$m	2017 \$m	2018 \$m	2017 \$m
At 1 Jan	174	161	578	599	-	2	(51)	(52)	(20)	(19)	681	691
Exchange differences	-	-	1	4	-	-	-	-	-	-	1	4
Charged/(credited) to the consolidated income statement	52	13	(24)	(25)	-	(2)	12	1	1	-	41	(13)
Charged/(credited) directly to retained earnings	-	-	-	-	-	-	-	-	1	(1)	1	(1)
At 31 Dec	226	174	555	578	-	-	(39)	(51)	(18)	(20)	724	681

1 Intangible assets include customer relationships and trademarks.

- (d) Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when the deferred taxes relate to tax levied by the same taxation authority on the same taxable entity or different taxable entities where there is an intention to settle the balances on a net basis. The following amounts, determined after appropriate offsetting, are shown in the consolidated statement of financial position:

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Deferred tax assets	(19)	(30)
Deferred tax liabilities	743	711
	724	681

- (e) The analysis of deferred tax (assets)/liabilities is as follows:

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Deferred tax assets		
Amounts to be recovered after more than 12 months	(10)	(24)
Amounts to be recovered within 12 months	(9)	(6)
	(19)	(30)
Deferred tax liabilities		
Amounts to be settled after more than 12 months	730	695
Amounts to be settled within 12 months	13	16
	743	711
Net deferred tax liabilities	724	681

38. Share Capital and Shares Held for Share Award Scheme

Accounting Policy

Shares

Ordinary shares are classified as equity.

Shares held for Share Award Scheme

Where HKEX shares are acquired by the Share Award Scheme from the market or by electing for scrip in lieu of cash dividends, the total consideration of shares acquired from the market (including any directly attributable incremental costs) or under the scrip dividend scheme is presented as Shares held for Share Award Scheme and deducted from total equity.

Upon vesting, the related costs of the vested Awarded Shares purchased from the market and shares acquired under the scrip dividend scheme (dividend shares) are credited to Shares held for Share Award Scheme, with a corresponding decrease in employee share-based compensation reserve for Awarded Shares, and decrease in retained earnings for dividend shares.

Issued and fully paid – ordinary shares with no par:

	Number of shares '000	Number of shares held for Share Award Scheme ¹ '000	Share capital \$m	Shares held for Share Award Scheme \$m	Total \$m
At 1 Jan 2017	1,224,322	(3,217)	22,085	(599)	21,486
Shares issued in lieu of cash dividends (note (a))	15,487	(74)	3,052	(15)	3,037
Shares purchased for Share Award Scheme (note (b))	–	(1,000)	–	(228)	(228)
Vesting of shares of Share Award Scheme (note (c))	–	1,297	4	236	240
At 31 Dec 2017	1,239,809	(2,994)	25,141	(606)	24,535
At 1 Jan 2018	1,239,809	(2,994)	25,141	(606)	24,535
Shares issued in lieu of cash dividends (note (a))	10,823	(81)	2,605	(18)	2,587
Shares purchased for Share Award Scheme (note (b))	–	(1,288)	–	(300)	(300)
Vesting of shares of Share Award Scheme (note (c))	–	1,248	4	242	246
At 31 Dec 2018	1,250,632	(3,115)	27,750	(682)	27,068

¹ Excluding shares vested but not yet transferred to awardees of 121,520 shares at 31 December 2018 (31 December 2017: 29,005 shares)

38. Share Capital and Shares Held for Share Award Scheme (continued)

- (a) During the year, the following shares were issued to shareholders who elected to receive HKEX shares in lieu of cash dividends pursuant to the scrip dividend scheme:

	2018				
	Number of shares	Scrip price \$	Share capital \$m	Shares held for Share Award Scheme \$m	Total \$m
Issued as 2017 final scrip dividends:					
– total	6,949,778	252.98	1,758	–	1,758
– to Share Award Scheme	(32,705)	252.98	–	(8)	(8)
Issued as 2018 first interim scrip dividends:					
– total	3,872,805	218.83	847	–	847
– to Share Award Scheme	(48,012)	218.83	–	(10)	(10)
	10,741,866		2,605	(18)	2,587

	2017				
	Number of shares	Scrip price \$	Share capital \$m	Shares held for Share Award Scheme \$m	Total \$m
Issued as 2016 final scrip dividends:					
– total	7,275,254	186.05	1,354	–	1,354
– to Share Award Scheme	(34,906)	186.05	–	(7)	(7)
Issued as 2017 first interim scrip dividends:					
– total	8,211,651	206.77	1,698	–	1,698
– to Share Award Scheme	(39,379)	206.77	–	(8)	(8)
	15,412,620		3,052	(15)	3,037

- (b) During the year, the Share Award Scheme (note 39) acquired 1,287,300 HKEX shares (2017: 999,700 shares) through purchases on the open market. The total amount paid to acquire the shares during the year was \$300 million (2017: \$228 million).
- (c) During the year, a total of 1,247,793 HKEX shares (2017: 1,296,700 shares) were vested. The total cost of the vested shares was \$242 million (2017: \$236 million). In 2018, \$4 million (2017: \$4 million) was credited to share capital in respect of vesting of certain shares whose fair values were higher than the costs.

39. Employee Share-based Arrangements

Accounting Policy

The Group operates the Share Award Scheme (the Scheme), which is an equity-settled share-based compensation plan under which Awarded Shares are granted to employees of the Group (including the Executive Director) as part of their remuneration package.

The amount to be expensed as share-based compensation expenses is determined by reference to the fair value of the Awarded Shares granted, taking into account all non-vesting conditions associated with the grants on grant date. The total expense is recognised on a straight-line basis over the relevant vesting periods (or on the grant date if the shares vest immediately), with a corresponding credit to an employee share-based compensation reserve under equity.

For those Awarded Shares which are amortised over the vesting periods, the Group revises its estimates of the number of Awarded Shares that are expected to ultimately vest based on the vesting conditions at the end of each reporting period. Any resulting adjustment to the cumulative fair value recognised in prior years is charged/credited to employee share-based compensation expense in the current year, with a corresponding adjustment to the employee share-based compensation reserve.

The movements of employee share-based compensation reserve were as follows:

	2018 \$m	2017 \$m
At 1 Jan	222	226
Employee share-based compensation benefits (note 8)	226	220
Vesting of shares of Share Award Scheme	(230)	(224)
At 31 Dec	218	222

The Scheme allows shares to be granted to employees under the following two categories of awards:

- (i) Employee Share Awards – for all employees of the Group (including the Executive Director); and
- (ii) Senior Executive Awards – for selected senior executives of the Group (including the Executive Director).

Following the Board's decision to award an award sum (Awarded Sum) for the purchase of Awarded Shares to eligible employees and/or selected senior executives, the Awarded Shares are either purchased from the market or are awarded by regranting the forfeited or unallocated shares held by the Scheme. Before vesting, the Awarded Shares are held in a trust set up by the Scheme.

Further shares are derived from dividends payable on the Awarded Shares held in the Scheme from scrip shares received under the scrip dividend scheme (dividend shares), and are allocated to the awardees on a pro rata basis and have the same vesting periods as the related Awarded Shares.

39. Employee Share-based Arrangements (continued)

(a) Employee Share Awards

Employee Share Awards vest progressively over the vesting period after the awards are granted, provided that the relevant awardee (i) remains employed by the Group (ii) is made redundant or (iii) is deemed to be a “good leaver”, and Employee Share Awards vest immediately if the relevant awardee retires on reaching normal retirement age or suffers from permanent disability. Unless otherwise determined by the Board, the Remuneration Committee or the Chief Executive, the vesting period of Employee Share Awards granted is three years, and the shares will be vested in two equal tranches from the second to the third year after the shares are granted.

For awardees who do not meet the vesting criteria, the unvested shares are forfeited. The forfeited shares are held by the trustee of the Scheme who may award such shares to the other awardees, taking into consideration recommendations of the Board.

Details of Awarded Shares awarded during 2017 and 2018

Date of award	Number of Awarded Shares awarded	Average fair value per share \$	Vesting period
1 Mar 2017	24,939	193.76	1 May 2017 – 1 May 2019
1 Mar 2017	25,960	193.76	1 Mar 2017 – 13 Jan 2020
15 May 2017	1,100	197.23	13 Jan 2018 – 13 Jan 2019
23 Jun 2017	2,900	200.82	3 Apr 2018 – 18 Mar 2019
12 Sep 2017	600	213.29	23 Jun 2019 – 23 Jun 2020
29 Dec 2017	1,017,886 ^{1,2}	229.99	8 Dec 2019 – 8 Dec 2020
5 Mar 2018	1,400	282.45	29 Dec 2019 – 29 Dec 2020
4 Apr 2018	6,499	253.91	31 Dec 2018 – 1 Apr 2020
30 May 2018	4,199	253.05	10 Mar 2019 – 22 Mar 2021
6 Jul 2018	5,099	228.79	1 Oct 2018 – 29 Jun 2021
17 Aug 2018	500	220.72	24 Feb 2019 – 24 Feb 2020
31 Aug 2018	2,100	224.85	18 Jan 2019 – 18 Jan 2020
4 Oct 2018	800	215.54	31 Dec 2018 – 31 Dec 2020
14 Nov 2018	5,900	225.84	28 Feb 2019 – 28 Feb 2021
19 Nov 2018	200	228.90	1 Nov 2021 – 1 Jan 2022
7 Dec 2018	900	231.24	20 Jan 2019 – 20 Jan 2022
31 Dec 2018	1,367,631 ^{1,2}	232.10	7 Dec 2020 – 7 Dec 2021

1 58,853 and 61,560 shares were awarded to HKEX's Chief Executive on 29 December 2017 and 31 December 2018 respectively.

2 135,970 and 169,670 shares were awarded by re-granting the forfeited or unallocated shares held by the Scheme on 29 December 2017 and 31 December 2018 respectively.

Details of Awarded Shares vested during 2017 and 2018

During the year, 1,105,298 HKEX shares (2017: 1,175,914 shares) were vested at an aggregate fair value of \$218 million (2017: \$218 million), of which 61,820 shares (2017: 74,387 shares) were for HKEX's Chief Executive.

39. Employee Share-based Arrangements (continued)

(b) Senior Executive Awards

The actual number of shares to be transferred to the awardees under the Senior Executive Awards is conditional on the satisfaction of performance conditions set by the Board. The Board has full discretion to determine the actual amount of award to be paid at the end of a performance assessment period (which shall normally be a period of at least three financial years) in accordance with these criteria.

The vesting of Senior Executive Awards is not affected by the awardees ceasing employment with the Group before the end of the performance assessment period. The Senior Executive Awards are considered to be vested immediately upon grant and the performance conditions are considered as non-vesting conditions.

Details of Senior Executive Awards awarded during 2017 and 2018

Date of award	Number of Awarded Shares awarded	Average fair value per share \$	Total fair value \$m	Performance period
29 Dec 2017	62,123	172.49	11	2018–2020
31 Dec 2018	61,560	174.07	11	2019–2021

All of the Senior Executive Awards were awarded to the HKEX's Chief Executive. The fair value per share is determined by taking into account various factors including the probability of the performance conditions being satisfied.

Details of Senior Executive Awards vested during 2017 and 2018

In 2018, 68,472 HKEX shares (2017: 42,720 shares) granted under the Senior Executive Awards were transferred to the awardee at a fair value of \$12 million (2017: \$6 million), and \$1 million was credited to share capital as the cost of Awarded Shares vested was lower than the fair value of shares previously charged to the consolidated income statement (2017: \$1 million was charged to retained earnings in respect of the vesting as the cost of Awarded Shares vested was higher than the fair value of shares previously charged to the consolidated income statement).

39. Employee Share-based Arrangements (continued)

(c) Summary of Awarded Shares awarded and dividend shares

Movements in number of Awarded Shares awarded and dividend shares

	2018	2017
Number of Awarded Shares and dividend shares:		
Outstanding at 1 Jan	2,990,188	3,217,209
Awarded ³	1,456,788	1,135,508
Forfeited	(154,658)	(132,444)
Vested	(1,173,770)	(1,218,634)
Dividend shares:		
– allocated to awardees	76,781	71,305
– allocated to awardees but subsequently forfeited	(6,617)	(4,690)
– vested ⁴	(74,023)	(78,066)
Outstanding at 31 Dec	3,114,689	2,990,188

3 Average fair value per share was \$232.24 (2017: \$225.11).

4 In 2018, 74,023 dividend shares (2017: 78,066 shares), including 9,634 shares (2017: 7,509 shares) for HKEX's Chief Executive, at a cost of \$16 million (2017: \$15 million) were vested.

Remaining vesting periods or performance period of Awarded Shares awarded and dividend shares outstanding at 31 December

	At 31 Dec 2018		At 31 Dec 2017	
	Remaining vesting or performance period	Number of Awarded Shares and dividend shares outstanding	Remaining vesting or performance period	Number of Awarded Shares and dividend shares outstanding
Shares awarded in				
2015	–	56,800	0.00 year to 1.00 year	687,790
2016	0.34 year to 1.00 year	550,505	0.34 year to 2.00 years	1,124,409
2017	0.04 year to 2.00 years	1,013,930	0.04 year to 3.00 years	1,111,931
2018	0.05 year to 3.06 years	1,431,255	–	–
Dividend shares	0.00 year to 2.50 years	62,199	0.00 year to 2.48 years	66,058
		3,114,689		2,990,188

39. Employee Share-based Arrangements (continued)

- (d) Total number of shares held by Share Award Scheme

	At 31 Dec 2018	At 31 Dec 2017
Number of Awarded Shares and dividend shares (note (c))	3,114,689	2,990,188
Forfeited or unallocated shares ⁵	179	4,456
Number of shares held by Share Award Scheme ⁶ (note 38)	3,114,868	2,994,644

5 These shares will be regranted to eligible employees in future.

6 Excluding shares vested but not yet transferred to awardees of 121,520 shares at 31 December 2018 (31 December 2017: 29,005 shares)

40. Hedging and Revaluation Reserves

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Hedging reserve (note (a))	-	1
Revaluation reserve (note (b))	(6)	-
	(6)	1

- (a) Hedging reserve

Accounting Policy

The Group designates certain bank balances as hedges of foreign exchange risks associated with the cash flows of highly probable forecast transactions (cash flow hedges).

The Group documents at the inception of the transaction the relationship between hedging instruments and hedged items, as well as its risk management objectives and strategies for undertaking various hedge transactions. The Group also documents its assessment, both at hedge inception and on an ongoing basis, of whether the hedging instruments have been and will continue to be highly effective in offsetting changes in cash flows of hedged items.

The changes in the fair value relating to the effective portion of hedging instruments that are designated and qualify as cash flow hedges is recognised in other comprehensive income and accumulated in hedging reserve in equity. The gains or losses relating to the ineffective portion are recognised immediately in the consolidated income statement.

Amounts accumulated in hedging reserve are reclassified to the consolidated income statement in the periods when the hedged item is recognised in the consolidated income statement.

When a hedging instrument expires or is sold, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in hedging reserve at that time remains in hedging reserve and is recognised when the forecast transaction is ultimately recognised in the consolidated income statement. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was retained in hedging reserve is immediately reclassified to the consolidated income statement.

40. Hedging and Revaluation Reserves (continued)

(a) Hedging reserve (continued)

The movements of hedging reserve were as follows:

	2018 \$m	2017 \$m
At 1 Jan	1	-
Cash flow hedges:		
– net fair value (losses)/gains of hedging instruments	(2)	8
– transfer to the consolidated income statement as staff costs and related expenses	1	(6)
– transfer to the consolidated income statement as information technology and computer maintenance expenses	–	(1)
At 31 Dec	–	1
Fair value of hedging instruments at 31 Dec	–	86

The functional currency of the LME Group is United States Dollars (USD). To hedge the foreign currency exposure of its operating expenses, the LME Group has designated certain bank balances of Pound sterling (GBP) as cash flow hedges for hedging the foreign exchange risk of its staff costs and related expenses, and information technology and computer maintenance expenses.

At 31 December 2018, there was no outstanding bank balance designated as cash flow hedge (31 December 2017: GBP 8 million of the bank balances was outstanding).

The amounts arising from ineffective cash flow hedges recognised in the consolidated income statement of the Group during the year amounted to \$Nil (2017: \$Nil).

(b) Revaluation reserve

	2018 \$m	2017 \$m
At 1 Jan, as previously reported	–	–
Effect of adoption of HKFRS 9 (2014) (note 2(c)(i))	(4)	–
At 1 Jan, as restated	(4)	–
Changes in fair value of financial assets measured at fair value through other comprehensive income	(2)	–
At 31 Dec	(6)	–

41. Designated Reserves

Clearing House Funds reserves (note 34)

	HKSCC Guarantee Fund reserve \$m	SEOCH Reserve Fund reserve \$m	HKCC Reserve Fund reserve \$m	OTC Clear Rates and FX Guarantee Fund reserve \$m	OTC Clear Rates and FX Guarantee Resources reserve \$m	Total \$m
At 1 Jan 2017	311	104	350	4	4	773
Post-liquidation interest arising from a Participant's default on market contracts (note 5(c)(ii))	55	-	-	-	-	55
(Deficit)/surplus of net investment income net of expenses of Clearing House Funds	(9)	1	(1)	2	1	(6)
Transfer from/(to) retained earnings (note 42)	46	1	(1)	2	1	49
At 31 Dec 2017	357	105	349	6	5	822
At 1 Jan 2018	357	105	349	6	5	822
Contributions from clearing houses reappropriated to retained earnings of clearing houses (note (a))	(200)	-	(120)	-	-	(320)
Surplus of net investment income net of expenses of Clearing House Funds	4	1	2	11	3	21
Transfer (to)/from retained earnings (note 42)	(196)	1	(118)	11	3	(299)
At 31 Dec 2018	161	106	231	17	8	523

- (a) From 1 June 2018 onwards, the contributions by HKSCC and HKCC to the HKSCC Guarantee Fund and HKCC Reserve Fund have been changed from fixed contributions to 10 per cent of their respective fund size and are kept under Corporate Funds. Therefore, the fixed contributions from the two clearing houses to their respective Clearing House Funds are no longer needed and were transferred to retained earnings of the respective clearing houses during the year ended 31 December 2018.

42. Retained Earnings

	2018 \$m	2017 \$m
At 1 Jan, as previously reported	12,090	10,334
Effect of adoption of HKFRS 9 (2014) (note 2(c)(i))	4	–
Effect of adoption of HKFRS 15 (note 2(c)(ii))	(281)	–
At 1 Jan, as restated	11,813	10,334
Profit attributable to shareholders	9,312	7,404
Transfer from/(to) Clearing House Funds reserves (note 41)	299	(49)
Dividends:		
2017/2016 final dividend	(3,525)	(2,491)
2018/2017 first interim dividend	(4,527)	(3,133)
Unclaimed HKEX dividends forfeited (note 31(a))	23	26
Vesting of shares of Share Award Scheme	(16)	(16)
Tax relating to Share Award Scheme	(1)	3
Changes in ownership interests in subsidiaries (note 46(c))	1	12
At 31 Dec	13,379	12,090

43. Notes to the Consolidated Statement of Cash Flows

- (a) Reconciliation of profit before taxation to net cash inflow from principal operating activities

	2018 \$m	2017 \$m
Profit before taxation	10,883	8,610
Adjustments for:		
Net interest income	(1,704)	(912)
Net fair value losses/(gains) including interest income on financial assets mandatorily measured at fair value through profit or loss and financial liabilities at fair value through profit or loss	106	(682)
Finance costs	114	134
Depreciation and amortisation	762	858
Employee share-based compensation benefits	226	220
Provision for impairment losses of receivables	1	6
Other non-cash adjustments	(4)	37
Net decrease/(increase) in financial assets of Margin Funds	34,084	(30,964)
Net (decrease)/increase in financial liabilities of Margin Funds	(34,086)	30,968
Net decrease/(increase) in Clearing House Fund financial assets	2,137	(8,040)
Net (decrease)/increase in Clearing House Fund financial liabilities	(1,838)	7,991
Net decrease in financial assets measured at fair value through profit or loss less financial liabilities at fair value through profit or loss	–	5
Increase in cash prepayments and collateral for A shares	(1,325)	(1,426)
Increase in Corporate Funds used for supporting Skin-in-the-Game and default fund credits	(724)	–
Increase in accounts receivable, prepayments and deposits	(704)	(2,833)
Increase in other liabilities	2,168	4,245
Net cash inflow from principal operations	10,096	8,217
Interest received from financial assets measured at amortised cost and cash and cash equivalents	2,714	1,484
Interest paid to Participants	(1,071)	(572)
Income tax paid	(1,323)	(1,116)
Net cash inflow from principal operating activities	10,416	8,013

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Financials

Others

43. Notes to the Consolidated Statement of Cash Flows (continued)

(b) Reconciliation of liabilities arising from financing activities

	Borrowings due within one year \$m	Borrowings due after one year \$m
At 1 Jan 2017	–	3,422
Borrowings becoming due within one year in 2017	1,025	(1,025)
Interest on borrowings (note 12)	2	78
Cash flows		
– Repayment of bank borrowings	–	(1,603)
– Payments of interest on borrowings	–	(66)
Exchange differences	–	27
At 31 Dec 2017	1,027	833
At 1 Jan 2018	1,027	833
Borrowings becoming due within one year in 2018	743	(743)
Issuance of written put options during the year	–	76
Interest on borrowings (note 12)	47	5
Cash flows		
– Repayment of notes	(781)	–
– Payments of interest on borrowings	(32)	(10)
Exchange differences	1	–
At 31 Dec 2018	1,005	161

44. Commitments

(a) Commitments in respect of capital expenditures

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Contracted but not provided for:		
– fixed assets	30	13
– intangible assets	64	65
Authorised but not contracted for:		
– fixed assets	270	400
– intangible assets	571	955
	935	1,433

44. Commitments (continued)

- (b) Commitments for total future minimum lease payments under non-cancellable operating leases

Accounting Policy

Leases where substantially all the rewards and risks of ownership of assets remain with the lessor are accounted for as operating leases. Rentals under such operating leases net of any incentives received from the lessor are charged to the consolidated income statement on a straight-line basis over the lease term.

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Land and buildings		
– within one year	244	321
– in the second to fifth years	1,234	1,008
– after the fifth year	1,597	1,026
	3,075	2,355
Computer systems, software and equipment		
– within one year	60	58
– in the second to fifth years	105	216
	165	274
	3,240	2,629

At 31 December 2018 and 31 December 2017, the Group did not have any purchase options in respect of computer systems, software and equipment.

- (c) Commitments in respect of financial contributions to Financial Reporting Council

The Financial Reporting Council (FRC) is an independent statutory body established to receive and investigate complaints concerning irregularities of auditors and reporting accountants of listed companies and non-compliances with accounting requirements in the financial reports of listed companies. Since the establishment of the FRC in 2006, the Group has been contributing to the funding of the FRC's operations.

Under a memorandum of understanding signed in November 2014, the Group has agreed to make recurrent contributions to the FRC as follows:

- 2015 – 2016: \$7 million per annum
- 2017 – 2019: \$8 million per annum

45. Contingent Liabilities

Accounting Policy

A contingent liability is a possible obligation that arises from past events and whose existence will only be confirmed by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group. It can also be a present obligation arising from past events that is not recognised because it is not probable that outflow of economic resources will be required or the amount of obligation cannot be measured reliably.

A contingent liability is not recognised but is disclosed in the consolidated financial statements. When a change in the probability of an outflow occurs so that outflow is probable or when the amount of obligation becomes reliably measurable, it will then be recognised as a provision.

At 31 December 2018, the Group's material contingent liabilities were as follows:

- (a) The Group had a contingent liability in respect of potential calls to be made by the SFC to replenish all or part of compensation less recoveries paid by the Unified Exchange Compensation Fund established under the repealed Securities Ordinance up to an amount not exceeding \$71 million (31 December 2017: \$71 million). Up to 31 December 2018, no calls had been made by the SFC in this connection.
- (b) The Group had undertaken to indemnify the Collector of Stamp Revenue against any underpayment of stamp duty by its Participants of up to \$200,000 for each Participant (note 33(a)). In the unlikely event that all of its 640 trading Participants (31 December 2017: 622) covered by the indemnity at 31 December 2018 defaulted, the maximum contingent liability of the Group under the indemnity would amount to \$128 million (31 December 2017: \$124 million).
- (c) HKEX has given an undertaking in favour of HKSCC to contribute up to \$50 million in the event of HKSCC being wound up while it is a wholly-owned subsidiary of HKEX or within one year after HKSCC ceases to be a wholly-owned subsidiary of HKEX, for payment of the liabilities of HKSCC contracted before HKSCC ceases to be a wholly-owned subsidiary of HKEX, and for the costs of winding up.

46. Transactions with Non-Controlling Interests

Accounting Policy

Transactions with non-controlling interests that do not result in loss of control are accounted for as equity transactions. The difference between the fair value of any consideration paid/received and the relevant share of the carrying value of net assets of the subsidiary acquired/disposed of is recorded in retained earnings.

- (a) Acquisition of additional interest in OTC Clear

	2018 \$m
Carrying amount of non-controlling interests acquired	302
Consideration paid	(300)
 Surplus credited to retained earnings (note (c))	 2

In July 2018, OTC Clear issued 6,186 ordinary shares to HKEX at a consideration of \$300 million. After the issue, the Group's interest in OTC Clear increased to 87.2 per cent while the interest held by non-controlling interests dropped to 12.8 per cent.

- (b) Disposal of interest in subsidiaries without loss of control

	2018 \$m	2017 \$m
Consideration received from non-controlling interests	93	28
Less: carrying amount of non-controlling interests disposed of	(94)	(16)
 (Loss)/gain on disposal (debited)/credited to retained earnings (note (c))	 (1)	12

In 2017, the Group entered into an agreement to sell a 9.99 per cent stake in QME to an independent third party at a consideration of RMB25 million. After the sale, the Group's interest in QME dropped to 90.01 per cent. Subsequent to the disposal, RMB135 million and RMB15 million were further injected by the Group and the non-controlling interests into QME respectively as its registered capital in 2017 in proportion to their interests.

In October 2018, OTC Clear issued 1,921 non-voting ordinary shares to the non-controlling interests at a consideration of \$93 million and 141 ordinary shares to HKEX at a consideration of \$7 million. After the issue, the Group's interest in OTC Clear dropped to 76 per cent while the interest held by non-controlling interests rose to 24 per cent.

- (c) Effects of transactions with non-controlling interests on retained earnings

	2018 \$m	2017 \$m
Changes in retained earnings arising from:		
– Acquisition of additional interest in OTC Clear (note (a))	2	–
– Disposal of interest in subsidiaries without loss of control (note (b))	(1)	12
 Net amount credited to retained earnings (note 42)	 1	12

47. Connected Transactions and Material Related Party Transactions

(a) Connected transactions and related party transactions

Certain Directors of HKEX may be directors and/or shareholders of (i) Exchange Participants of the Stock Exchange, Futures Exchange, the LME and QME (Exchange Participants) and Clearing Participants of HKSCC, HKCC, SEOCH, LME Clear and OTC Clear (Clearing Participants); (ii) companies listed on the Stock Exchange; and (iii) Exchange Participants for buying shares on behalf of HKSCC. Securities and derivatives contracts traded by, and fees levied on, these Exchange Participants and Clearing Participants, fees levied on these listed companies and fees paid to these Exchange Participants for buying shares on behalf of HKSCC are all undertaken in the ordinary course of business of the Group on the standard terms and conditions applicable to all other Exchange Participants, Clearing Participants, listed companies and Exchange Participants for buying shares on behalf of HKSCC.

(b) Material related party transactions

In addition to the above and those disclosed elsewhere in these consolidated financial statements, the Group entered into the following material related party transactions:

(i) Key management personnel compensation

	2018 \$m	2017 \$m
Salaries and other short-term employee benefits	179	173
Employee share-based compensation benefits	74	77
Retirement benefit costs	8	8
	261	258

(ii) Post-retirement benefit plans

The Group has sponsored an ORSO Plan and the LME Pension Scheme as its post-retirement benefit plans (note 8(a)).

(iii) Save as aforesaid, the Group has entered into other transactions in the ordinary course of business with companies that are related parties but the amounts were immaterial.

48. Pledges of Assets

LME Clear receives securities, gold bullion and warrants as collateral for margins posted by its Clearing Participants. The total fair value of this collateral was US\$1,490 million (HK\$11,666 million) at 31 December 2018 (31 December 2017: US\$1,319 million (HK\$10,311 million)). LME Clear is obliged to return this non-cash collateral upon request when the Clearing Participants' collateral obligations have been substituted with cash collateral or otherwise discharged.

LME Clear also holds securities as collateral in respect of its investments in overnight triparty reverse repurchase agreements under which it is obliged to return equivalent securities to the counterparties at maturity of the reverse repurchase agreements. The fair value of this collateral was US\$7,650 million (HK\$59,895 million) at 31 December 2018 (31 December 2017: US\$11,462 million (HK\$89,602 million)).

The above non-cash collateral, which LME Clear is permitted to sell or repledge in the absence of default by the counterparties, was not recorded on the consolidated statement of financial position of the Group at 31 December 2018. Such non-cash collateral, together with certain financial assets amounting to US\$420 million (HK\$3,288 million) at 31 December 2018 (31 December 2017: US\$471 million (HK\$3,686 million)), have been repledged to LME Clear's investment agent and custodian banks under first floating charge and security arrangements for the settlement and depository services they provide in respect of the collateral and investments held. The floating charge could convert to a fixed charge in the event of contract termination, or default or insolvency of LME Clear.

49. Capital Management

The Group's objectives when managing capital are:

- To safeguard the Group's ability to continue as a going concern, so that it continues to provide returns for shareholders and benefits for other stakeholders;
- To support the Group's stability and growth;
- To provide capital for the purpose of strengthening the Group's risk management capability; and
- To ensure that the Group's regulated entities comply with their respective regulatory capital requirements.

The Group actively and regularly reviews and manages its capital structure to ensure an optimal capital structure and shareholder returns. The Group takes into consideration the expected capital requirements and capital efficiency, regulatory capital requirements of its regulated entities, prevailing and projected profitability, projected operating cash flows, projected capital expenditures and projected strategic investment opportunities.

49. Capital Management (continued)

The Group has a number of regulated entities that are subject to capital requirements set by the respective regulators. The regulatory capital requirements of the Group's subsidiaries at 31 December 2018 are summarised as follows:

Subsidiaries	Regulatory authority	Regulatory capital requirements
Stock Exchange, Futures Exchange	SFC, Hong Kong	Maintain at all times net current assets funded by equity sufficient to cover each subsidiary's projected total operating expenses for at least the following six months (approximately \$1,362 million), and net current assets funded by equity or long-term loans from HKEX sufficient to cover its projected total operating expenses for at least the following twelve months (approximately \$2,725 million).
HKSCC, HKCC, SEOCH, OTC Clear	SFC, Hong Kong	Maintain at all times liquid net assets funded by equity (ie, liquid assets of Corporate Funds (excluding those solely used to support Skin-in-the-Game and default fund credits of Clearing House Funds) minus non-current liabilities) sufficient to cover each subsidiary's projected total operating expenses for at least the following six months (approximately \$604 million), and net current assets funded by equity or long-term loans from HKEX (excluding those solely used to support Skin-in-the-Game and default fund credits of Clearing House Funds) sufficient to cover its projected total operating expenses for at least the following twelve months (approximately \$1,208 million).
LME	Financial Conduct Authority, UK	Maintain at all times liquid financial assets amounting to at least six months' operating costs plus a risk based capital charge (approximately US\$56 million (HK\$435 million)), and net capital of at least this amount.
LME Clear	Bank of England, UK	Maintain cash or highly liquid financial instruments with minimal market and credit risk, amounting to US\$81.3 million (HK\$636 million), plus 10 per cent minimum reporting threshold of US\$8.1 million (HK\$63 million) and US\$20.3 million (HK\$159 million) financial resources available to set off losses in the event of default. Capital resources must be in the form of share capital, retained earnings and reserves, reduced by intangible assets and retained losses.

At 31 December 2018, the Group had set aside \$4,000 million (31 December 2017: \$4,000 million) of shareholders' funds for the purpose of supporting the risk management regime of the clearing houses in their roles as central counterparties, of which \$2,160 million had been injected into HKSCC, HKCC and SEOCH as share capital.

49. Capital Management (continued)

All regulated entities of the Group had adequate capital to meet their regulatory requirements at 31 December 2018 and 31 December 2017.

The Group adopts a dividend policy of providing shareholders with regular dividends with a normal target payout ratio of 90 per cent of the Group's profit of the year and it may also offer a scrip dividend alternative to shareholders. The consideration of share capital issued under the scrip dividend scheme, together with the 10 per cent of the profit not declared as dividends, are retained as capital of the Group for future use.

The Group monitors capital on the basis of its gross gearing ratio (ie, gross debt divided by adjusted capital) and net gearing ratio (ie, net debt divided by adjusted capital). For this purpose, the Group defines gross debt as total borrowings, net debt as total borrowings less cash and cash equivalents of Corporate Funds (excluding those reserved for supporting Skin-in-the-Game and default fund credits of Clearing House Funds), and adjusted capital as all components of equity attributable to shareholders of HKEX other than designated reserves. The Group's strategy is to maintain the ratios at less than 50 per cent.

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Total borrowings	1,166	1,860
Less:		
Cash and cash equivalents of Corporate Funds (note 19)	11,904	13,546
Less: Amounts reserved for supporting Skin-in-the-Game and default fund credits of Clearing House Funds (note 19(b))	(724)	–
	(11,180)	(13,546)
Net debt (note (a))	–	–
Equity attributable to shareholders of HKEX	40,729	37,273
Less: designated reserves	(523)	(822)
Adjusted capital	40,206	36,451
Gross gearing ratio	3%	5%
Net gearing ratio	0%	0%

- (a) Net debt is zero when the amount of cash and cash equivalents of Corporate Funds (excluding those reserved for supporting Skin-in-the-Game and default fund credits of Clearing House Funds) is higher than total borrowings.

50. Financial Risk Management

The Group's activities expose it to a variety of financial risks: market risk (including foreign exchange risk, price risk and interest rate risk), liquidity risk and credit risk. The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's performance.

(a) Market risk

Nature of risk

Market risk is the risk of loss arising from movements in observable market variables such as foreign exchange rates, equity prices and interest rates. The Group is exposed to market risk primarily through its financial assets and financial liabilities (including borrowings).

Risk management

The Group's investment policy is to prudently invest all funds managed by the Group in a manner which will satisfy liquidity requirements, safeguard financial assets and manage risks while optimising return on investments.

Investment and fund management by HKEX and the Group's subsidiaries is governed by the HKEX Investment Policy, Restrictions and Guidelines (Investment Guidelines), which is approved by the Board and reviewed regularly. Investment restrictions and guidelines form an integral part of risk control. Fund-specific restrictions and guidelines are set according to the investment objectives of each fund (ie, Corporate Funds, Clearing House Funds, Margin Funds and Cash for A shares). Specific limits are set for each fund to control risks (eg, permissible asset type, asset allocation, liquidity, credit requirement, counterparty concentration, maturity, foreign exchange exposures and interest rate risks) of the investments.

A portion of the Corporate Funds is invested in collective investment schemes (External Portfolio) under the External Investment Guidelines (the Investment Policy, Restrictions and Guidelines for externally-managed Corporate Funds) approved by the Board. The guidelines include an asset allocation policy which aims to preserve and enhance the return of the External Portfolio by investing in a diverse mix of asset classes whose returns are not highly correlated to each other over time to mitigate portfolio volatility and asset class concentration risk. The guidelines also define the risk-return parameters for the External Portfolio and restrictions to be observed, and the governance structure on selection and monitoring of fund managers. The fund managers of the collective investment schemes are selected based on their performance track records and areas of expertise, and each should be financially strong and stable, and their selections are approved by the Investment Advisory Committee as delegated by the Board. Specific risk management limits are set for the External Portfolio (eg, permissible asset type, asset allocation, liquidity and foreign exchange exposures).

The Investment Advisory Committee, comprised of Non-executive Directors of HKEX, advises the Board on portfolio management and monitors the risk and performance of HKEX's investments. A Treasury team in the Finance Division is dedicated to the day-to-day management and investment of the internally-managed funds and monitor the performance of the External Portfolio.

50. Financial Risk Management (continued)

(a) Market risk (continued)

(i) Foreign exchange risk

Nature of risk

Foreign exchange risk is the risk that the value or cash flows of an asset, liability or forecast transaction denominated in foreign currency (ie, a currency other than the functional currency of the entity to which the transactions relate) will fluctuate because of changes in foreign exchange rates. The functional currency of the Hong Kong and PRC entities are HKD and Renminbi (RMB) respectively and the functional currency of LME entities is USD. Foreign exchange risks arise mainly from the Group's investments and bank deposits in currencies other than HKD and USD and its GBP expenditure for the LME entities.

Risk management

Forward foreign exchange contracts and foreign currency bank deposits may be used to hedge the currency exposure of the Group's non-HKD and non-USD assets and liabilities and highly probable forecast transactions to mitigate risks arising from fluctuations in exchange rates. In particular, the LME Group designates certain GBP bank balances as cash flow hedges for hedging the foreign exchange risk of certain operating expenses.

Under the Investment Guidelines, investment in non-HKD financial instruments is subject to the following restrictions:

- Under the External Investment Guidelines, up to 50 per cent of the External Portfolio may be invested in non-HKD or non-USD investments not hedged back to HKD or USD.
- For internally-managed Corporate Funds, Clearing House Funds, Margin Funds and Cash for A shares, unhedged investments in currencies other than HKD or USD must fully match the respective liabilities or forecast payments for the funds. Unhedged investments in USD may not exceed 20 per cent of the respective funds.

The Group's non-HKD borrowings by the Hong Kong entities are denominated in USD, which is pegged against HKD, and are therefore not subject to significant foreign currency risks.

For LME Clear, investments of the Margin Fund and Default Fund will generally be in the currency in which cash was received.

50. Financial Risk Management (continued)

(a) Market risk (continued)

(i) Foreign exchange risk (continued)

Exposure

The following table details the Group's financial assets and financial liabilities denominated in a currency other than the functional currency of the entity to which they relate and the net open foreign currency positions (ie, gross positions less forward foreign exchange contracts and other offsetting exposures (hedges)), at 31 December presented in HKD equivalents.

	Foreign currency	At 31 Dec 2018			At 31 Dec 2017		
		Gross open position \$m	Hedges \$m	Net open position \$m	Gross open position \$m	Hedges \$m	Net open position \$m
Financial assets ¹	EUR	5,664	(5,655)	9	5,471	(5,465)	6
	GBP	9,110	(8,577)	533	9,125	(8,775)	350
	JPY	229	(228)	1	232	(231)	1
	RMB	10,011	(9,806)	205	6,514	(6,502)	12
	USD	4,228	(801)	3,427	2,847	(445)	2,402
	Others	3	-	3	1	-	1
Financial liabilities ²	EUR	(5,657)	5,655	(2)	(5,465)	5,465	-
	GBP	(8,737)	8,577	(160)	(8,942)	8,775	(167)
	JPY	(228)	228	-	(231)	231	-
	RMB	(9,808)	9,806	(2)	(6,505)	6,502	(3)
	USD	(1,577)	801	(776)	(2,012)	445	(1,567)
	Others	(3)	-	(3)	-	-	-
Total net open positions for the Group	EUR			7			6
	GBP			373			183
	JPY			1			1
	RMB			203			9
	USD			2,651			835
	Others			-			1
				3,235			1,035

¹ Financial assets comprised cash and cash equivalents, financial assets measured at fair value through profit or loss (excluding collective investment schemes), financial assets measured at fair value through other comprehensive income, financial assets measured at amortised cost, and accounts receivable and deposits.

² Financial liabilities comprised margin deposits, Mainland security and settlement deposits, and cash collateral from Clearing Participants, financial liabilities at fair value through profit or loss, borrowings and accounts payable and other liabilities.

50. Financial Risk Management (continued)

- (a) Market risk (continued)
- (ii) Equity and commodity price risk

Nature of risk

The Group is exposed to equity price risk from collective investment schemes held as part of the External Portfolio. The movements of fair value of base and precious metals futures and options contracts cleared through LME Clear would not have any financial impact on the Group's results as the assets and liabilities will move by the same amount and fully offset each other.

Risk management

The Group sets prudent investment limits and restrictions to control investment in collective investment schemes. The Group selects fund managers after an extensive assessment of the underlying funds, their strategy and the overall quality of the fund managers, and the performance of the funds is monitored on a monthly basis.

- (iii) Interest rate risk

Nature of risk

There are two types of interest rate risk:

- Fair value interest rate risk – the risk that the value of a financial instrument will fluctuate because of changes in market interest rates; and
- Cash flow interest rate risk – the risk that the future cash flows of a financial instrument will fluctuate because of changes in market interest rates.

The Group is exposed to both fair value and cash flow interest rate risks as the Group has significant assets and liabilities (including borrowings) which are interest-bearing.

Risk management

The Group manages its interest rate risks by setting limits on the residual maturity of the investments and on the fixed and floating rate mismatches of its assets and liabilities.

Exposure

The following tables present the carrying value and highest and lowest contractual interest rates of the financial assets held by the Group (excluding collective investment schemes and bank deposits held at savings and current accounts) at 31 December:

	Fixed rate financial assets		Floating rate financial assets	
	At 31 Dec 2018	At 31 Dec 2017	At 31 Dec 2018	At 31 Dec 2017
Carrying value (\$m)	72,229	70,863	60,724	94,365
Highest contractual interest rates	5.90%	3.80%	3.25%	1.93%
Lowest contractual interest rates ¹	0.69%	0.00%	-1.00%	-4.00%

1 The contractual interest rates for certain reverse repurchase investments denominated in Euro held by LME Clear were below 0 per cent.

The contractual interest rates of the borrowings are disclosed in note 35 to the consolidated financial statements.

50. Financial Risk Management (continued)

(a) Market risk (continued)

(iv) Sensitivity analysis

Investments other than collective investment schemes

The Group uses Value-at-Risk (VaR) and portfolio stress testing to identify, measure, monitor and control foreign exchange risk and interest rate risks of the Group's investments other than collective investment schemes.

VaR measures the expected maximum loss over a given time interval (a holding period of 10 trading days is used by the Group) at a given confidence level (95 per cent confidence interval is adopted by the Group) based on historical data (one year is used by the Group). VaR is monitored on a weekly basis and the Board sets a limit on total VaR for the Group.

VaR is a statistical measure of risks and has limitations associated with the assumptions employed. The calculation is based on historical simulation and therefore vulnerable to sudden changes in market behaviour. The use of a 10-day holding period may be insufficient at times of severe illiquidity. Also, VaR does not necessarily reflect all aspects of risks that affect the price of financial instruments and may underestimate real market risk exposure. In addition, VaR does not factor in the possibility of catastrophic risks but the use of stress testing for abnormal market conditions can mitigate this limitation.

The VaR for each risk factor and the total VaR of the investments other than collective investment schemes and related hedges of the Group at 31 December were as follows:

	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Foreign exchange risk	16	10
Interest rate risk	17	7
Total VaR	24	12

VaR for each risk factor is the independently derived largest potential loss due to fluctuations solely in that risk factor. The individual VaRs did not add up to the total VaR as there was diversification effect due to correlation amongst the risk factors.

50. Financial Risk Management (continued)

- (a) Market risk (continued)
- (iv) Sensitivity analysis (continued)

Collective investment schemes

At 31 December, the fair value of the Group's collective investment schemes (Funds) by strategy employed was as follows:

Strategy	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m
Public Equities	2,021	2,225
Absolute Return	1,312	1,245
Multi-Sector Fixed Income	2,108	1,922
US Government Bonds and Mortgage-backed Securities	1,648	1,251
Total	7,089	6,643
Number of Funds	18	15

The Group monitors the market value sensitivity of the Funds through a high-level simulation of the Funds' 1-year Value at Risk (simplified 1-year VaR) using the Funds' returns and volatilities. The simplified 1-year VaR helps to determine the potential changes in the market values of the Funds over a 1-year period. At 31 December 2018, the simplified 1-year VaR calculated at a 95 per cent confidence level was 1.7 per cent (31 December 2017: 0.2 per cent), implying that the market value of the Group's Funds during the year ended 31 December 2018 could potentially change by approximately \$121 million (2017: \$13 million).

The simplified 1-year VaR is computed using historical monthly returns of the Funds with the following steps:

1. Compute blended monthly returns of the Group's Funds using monthly historical returns of the respective Funds for the past 36 months (2017: 36 months), and their corresponding portfolio weights, assuming monthly rebalancing to the intended portfolio weights of the respective Funds;
2. Compute the average monthly return and standard deviation of the Funds' returns and derive the annualised amounts; and
3. Compute the simplified 1-year VaR, at a 95 per cent confidence level, by subtracting 1.65 times of the annualised standard deviation from the annualised average return.

The simplified 1-year VaR is a statistical measure of the historical risks and has limitations associated with the assumptions employed. Historical simulation assumes that actual observed historical changes in the respective Funds' monthly performance reflect possible future changes. This implies that the approach is vulnerable to sudden changes in market behaviour. In addition, it does not cover stressed market events, nor does it represent the Group's forecast of the Funds' future returns.

50. Financial Risk Management (continued)

- (b) Liquidity risk

Nature of risk

Liquidity risk is the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities that are settled by delivering cash or another financial asset, and it results from amount and maturity mismatches of assets and liabilities.

Risk management

The Group employs projected cash flow analysis to manage liquidity risk by forecasting the amount of cash required and monitoring the working capital of the Group to ensure that all liabilities due and known funding requirements could be met.

Investments are kept sufficiently liquid to meet operational needs and regulatory requirements, and possible liquidity requirements of the Clearing House Funds and Margin Funds. The Group sets minimum levels of highly liquid assets for Corporate Funds, Clearing House Funds and Margin Funds. In particular, Corporate Funds solely used for supporting the Skin-in-the-Game and default fund credits of Clearing House Funds are invested in overnight deposits and monitored on a daily basis.

Apart from the borrowings used to fund the acquisition of the LME Group, banking facilities have been put in place for contingency purposes. At 31 December 2018, the Group's total available banking facilities for its daily operations amounted to \$20,024 million (31 December 2017: \$18,963 million), which included \$13,523 million (31 December 2017: \$11,954 million) of committed banking facilities and \$6,500 million (31 December 2017: \$7,000 million) of repurchase facilities.

The Group also put in place foreign exchange facilities for its daily clearing operations and for the RMB Equity Trading Support Facility to support the trading of RMB stocks listed on the Stock Exchange. At 31 December 2018, the total amount of such facilities was RMB21,500 million (HK\$24,501 million) (31 December 2017: RMB21,500 million (HK\$25,809 million)).

In addition, the Group has arranged contingency banking facilities amounting to RMB13,000 million (HK\$14,815 million) (31 December 2017: RMB13,000 million (HK\$15,606 million)) for settling payment obligations to ChinaClear should there be events that disrupt normal settlement arrangements for Stock Connect.

50. Financial Risk Management (continued)

(b) Liquidity risk (continued)

Exposure

The Group is not exposed to liquidity risk on the outstanding base and precious metals futures and options contracts cleared through LME Clear. Accordingly, they are not included in the analyses for financial assets and financial liabilities in the tables below.

The tables below analyse the Group's financial assets into the relevant maturity buckets based on the following criteria:

- investments held under the collective investment schemes are allocated taking into account the redemption notice periods, lock-up periods and redemption restrictions;
- the expected amounts, subject to costs to liquidate that are expected to be immaterial, that could be realised from the investments (other than collective investment schemes), bank deposits and cash and cash equivalents within one month to meet cash outflows on financial liabilities if required are allocated to the up to 1 month bucket; and
- other financial assets are allocated based on their contractual maturity dates or the expected dates of disposal.

	At 31 Dec 2018						Total \$m
	Up to 1 month \$m	>1 month to 3 months \$m	>3 months to 1 year \$m	>1 year to 5 years \$m	>5 years \$m		
Cash and cash equivalents	121,196	–	–	–	–	–	121,196
Financial assets measured at fair value through profit or loss	5,646	861	582	–	–	–	7,089
Financial assets measured at fair value through other comprehensive income	3,755	–	–	–	–	–	3,755
Financial assets measured at amortised cost	31,788	–	3	19	75	31,885	
Accounts receivable and deposits ¹	18,213	32	1	–	–	–	18,246
	180,598	893	586	19	75	182,171	

50. Financial Risk Management (continued)

(b) Liquidity risk (continued)

Exposure (continued)

	At 31 Dec 2017					
	Up to 1 month \$m	>1 month to 3 months \$m	>3 months to 1 year \$m	>1 year to 5 years \$m	>5 years \$m	Total \$m
Cash and cash equivalents	155,660	–	–	–	–	155,660
Financial assets measured at fair value through profit or loss	9,047	334	321	–	–	9,702
Financial assets measured at amortised cost	30,757	–	–	9	51	30,817
Accounts receivable and deposits ¹	16,420	32	29	–	–	16,481
	211,884	366	350	9	51	212,660

1 Amounts excluded prepayments of \$116 million (31 December 2017: \$104 million).

The table below analyses the Group's financial liabilities at 31 December into relevant maturity buckets based on their contractual maturity dates. The amounts disclosed in the tables are the contractual undiscounted cash flows.

	At 31 Dec 2018				
	Up to 1 month \$m	>1 month to 3 months \$m	>3 months to 1 year \$m	>1 year to 5 years \$m	Total \$m
Margin deposits, Mainland security and settlement deposits, and cash collateral from Clearing Participants	123,728	–	–	–	123,728
Accounts payable, accruals and other liabilities ²	18,190	15	111	–	18,316
Other financial liabilities:					
Other financial liabilities of Clearing House Funds	38	1	–	–	39
Other financial liabilities of Corporate Funds:					
Financial guarantee contract (maximum amount guaranteed) (note 45(b))	128	–	–	–	128
Participants' contributions to Clearing House Funds	14,270	465	52	–	14,787
Borrowings:					
Notes	754	–	–	–	754
Written put options to non-controlling interests	–	–	252	181	433
Total	157,108	481	415	181	158,185

50. Financial Risk Management (continued)

(b) Liquidity risk (continued)

Exposure (continued)

	At 31 Dec 2017				
	Up to 1 month \$m	>1 month to 3 months \$m	>3 months to 1 year \$m	>1 year to 5 years \$m	Total \$m
Margin deposits, Mainland security and settlement deposits, and cash collateral from Clearing Participants					
Participants	157,814	–	–	–	157,814
Accounts payable, accruals and other liabilities ²	16,037	11	111	–	16,159
Other financial liabilities:					
Other financial liabilities of Clearing House Funds	38	–	–	–	38
Other financial liabilities of Corporate Funds:					
Financial guarantee contract (maximum amount guaranteed) (note 45(b))	124	–	–	–	124
Participants' contributions to Clearing House Funds	16,122	453	51	–	16,626
Borrowings:					
Notes	11	–	813	753	1,577
Written put options to non-controlling interests	–	–	252	88	340
Total	190,146	464	1,227	841	192,678

² Amounts excluded non-financial liabilities of \$53 million (31 December 2017: \$51 million).

(c) Credit risk

Nature of risk

The Group is exposed to credit risk, which is the risk that a counterparty will be unable to pay amounts in full when due. It arises primarily from the Group's investments and accounts receivable. Impairment provisions are made against the Group's investments and accounts receivable based on the accounting policy set out in notes 21 and 22.

The Group is also exposed to clearing and settlement risk, as the clearing houses of the Group act as the counterparties to eligible trades concluded on the Stock Exchange, the Futures Exchange, the over-the-counter market and the LME through the novation of the obligations of the buyers and sellers. HKSCC is also responsible for the good title to the securities deposited and accepted in the CCASS depository. As a result, the Group has considerable market risk and credit risk since the Participants' ability to honour their obligations in respect of their trades and securities deposited may be adversely impacted by economic conditions. If the Participants default on their obligations on settlement or there are defects in the title of securities deposited and accepted in the CCASS depository, the Group could be exposed to potential risks not otherwise accounted for in these consolidated financial statements.

50. Financial Risk Management (continued)

(c) Credit risk (continued)

Risk management – Investment and accounts receivable risk

The Group limits its exposure to credit risk by rigorously selecting the counterparties (ie, deposit-takers, bond issuers, debtors and fund managers) and by diversification. All investments (excluding those held by the collective investment schemes) were governed by the Group Credit Limit for Settlement and Investments framework. Under the framework, specific limits are set on an investment portfolio level and on single counterparty level. The investment portfolio is subject to a maximum portfolio expected loss limit, each investment counterparty is subject to a minimum investment grade rating, and each investment is also subject to maximum concentration limit per counterparty. Fund managers of the collective investment schemes are financially strong and stable and their selections are approved by the Investment Advisory Committee as delegated by the Board.

At 31 December 2018, the investments in debt securities held by the Group (excluding those held by the collective investment schemes) were of investment grade and had a weighted average credit rating of Aa1 (Moody) (31 December 2017: Aaa (Moody)). Deposits are placed only with the investment grade banks (licensed banks and restricted licence banks regulated by the Hong Kong Monetary Authority, and banks regulated by local banking regulators in the countries where the Group's subsidiaries operate). The LME Group invests a significant portion of cash in reverse repurchase investments, where high quality assets are held against such investments as collateral.

The Group mitigates its exposure to risks relating to accounts receivable from its Participants by requiring the Participants to meet the Group's established financial requirements and criteria for admission as Participants.

Risk management – Clearing and settlement risk

The Group mitigates its exposure to clearing and settlement-related risks by requiring the Participants to meet the Group's established financial requirements and criteria for admission as Participants, monitoring compliance with risk management measures such as imposing position limits and requiring Clearing Participants to deposit margins, Mainland security and settlement deposits, and cash collateral and contribute to the Clearing House Funds set up by the Group's five clearing houses. HKSCC also retains recourse against those Participants whose securities are deposited and accepted in the CCASS depository.

50. Financial Risk Management (continued)

(c) Credit risk (continued)

Risk management – Clearing and settlement risk (continued)

Under the HKSCC Margining and Guarantee Fund arrangements, each HKSCC Clearing Participant is granted by HKSCC a Margin Credit of \$5 million and a Dynamic Contribution Credit of \$1 million. Effective from 1 June 2018, each HKCC Clearing Participant is granted a Dynamic Contribution Credit of HKCC Reserve Fund of \$1 million. If an HKSCC or HKCC Clearing Participant defaults and any loss arises, HKSCC will absorb the default loss up to the Margin Credit and Dynamic Contribution Credit utilised by the defaulting HKSCC Clearing Participant, after deducting its collateral and Guarantee Fund contribution maintained with HKSCC, and HKCC will absorb the default loss up to the Dynamic Contribution Credit utilised by the defaulting HKCC Clearing Participant, after deducting its collateral and Reserve Fund contribution maintained with HKCC. After the initial losses, HKSCC is required to absorb further losses after the HKSCC Guarantee Fund reserve and the Guarantee Fund contribution (excluding the Dynamic Contribution portion) of non-defaulting HKSCC Clearing Participants are depleted, and HKCC is required to absorb further losses after the HKCC Reserve Fund reserve and the Reserve Fund contribution (excluding the Dynamic Contribution portion) of non-defaulting HKCC Clearing Participants are depleted. The amount of losses borne by HKSCC and HKCC will be calculated on a pro rata basis with reference to the non-defaulting HKSCC and HKCC Clearing Participants' Dynamic Contributions and Dynamic Contribution Credits granted by HKSCC and HKCC respectively.

At 31 December 2018, HKSCC had 625 Clearing Participants (31 December 2017: 605) and the total amounts of Margin Credit and Dynamic Contribution Credit utilised by HKSCC Clearing Participants amounted to \$790 million (31 December 2017: \$1,017 million), while HKCC had 171 Clearing Participants and the total amount of Dynamic Contribution Credit utilised by Clearing Participants amounted to \$53 million.

The HKSCC Margin Credit and Dynamic Contribution Credit and the HKCC Dynamic Contribution Credit are supported by the \$4,000 million of shareholders' funds set aside by the HKEX Group for risk management purpose, of which \$1,060 million and \$830 million were injected into HKSCC and HKCC respectively in 2018.

Exposure

At 31 December, the maximum exposure to credit risk of the financial assets of the Group was equal to their carrying amounts. The maximum exposure to credit risk of the financial guarantee contract issued by the Group was as follows:

	At 31 Dec 2018	At 31 Dec 2017		
	Carrying amount in consolidated statement of financial position \$m	Maximum exposure to credit risk \$m	Carrying amount in consolidated statement of financial position \$m	Maximum exposure to credit risk \$m
Financial guarantee contract				
Undertaking to indemnify the Collector of Stamp Revenue (note 45(b))	(20)	128	(20)	124

50. Financial Risk Management (continued)

(c) Credit risk (continued)

Collateral held for mitigating credit risk

Certain securities, cash deposits and non-cash collateral are being held by the Group to mitigate the Group's exposure to credit risk. The financial effect of the collateral, which is capped by the amount receivable from each counterparty, was as follows:

	At 31 Dec 2018	At 31 Dec 2017		
	Carrying amount in consolidated statement of financial position \$m	Collateral held for mitigating credit risk \$m	Carrying amount in consolidated statement of financial position \$m	Collateral held for mitigating credit risk \$m
Accounts receivable and deposits ¹	18,246	5,997	16,481	3,424
Fair value of base and precious metals futures and options contracts cleared through LME Clear	53,915	53,915	85,335	85,335
Reverse repurchase investments	57,373	57,373	90,608	90,608

¹ Amounts excluded prepayments of \$116 million (31 December 2017: \$104 million).

(d) Fair values of financial assets and financial liabilities

(i) Financial assets and financial liabilities carried at fair value

At 31 December 2018 and 31 December 2017, no non-financial assets or liabilities were carried at fair values.

The following tables present the carrying value of financial assets and financial liabilities measured at fair value according to the levels of the fair value hierarchy defined in HKFRS 13: Fair Value Measurement, with the fair value of each financial asset and financial liability categorised based on the lowest level of input that is significant to that fair value measurement. The levels are defined as follows:

- Level 1: fair values measured using quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: fair values measured using valuation techniques in which all significant inputs other than quoted prices included within Level 1 are directly or indirectly based on observable market data.
- Level 3: fair values measured using valuation techniques in which any significant input is not based on observable market data.

50. Financial Risk Management (continued)

(d) Fair values of financial assets and financial liabilities (continued)

(i) Financial assets and financial liabilities carried at fair value (continued)

Recurring fair value measurements:	At 31 Dec 2018			At 31 Dec 2017		
	Level 1 \$m	Level 2 \$m	Total \$m	Level 1 \$m	Level 2 \$m	Total \$m
Financial assets						
Financial assets measured at fair value through profit or loss:						
– collective investment schemes	1,987	5,102	7,089	1,841	4,802	6,643
– debt securities	–	–	–	3,059	–	3,059
– base and precious metals futures and options contracts cleared through LME Clear	–	53,915	53,915	–	85,335	85,335
Financial assets measured at fair value through other comprehensive income:						
– debt securities	3,054	701	3,755	–	–	–
	5,041	59,718	64,759	4,900	90,137	95,037
Financial liabilities						
Financial liabilities at fair value through profit or loss:						
– base and precious metals futures and options contracts cleared through LME Clear	–	53,915	53,915	–	85,335	85,335
	–	53,915	53,915	–	85,335	85,335

During 2018 and 2017, there were no transfers of instruments between Level 1 and Level 2.

Level 2 fair values of debt securities, base and precious metals futures and options contracts and collective investment schemes have been determined based on quotes from market makers, funds administrators or alternative pricing sources supported by observable inputs. The most significant input are market interest rates, market prices of metals, net asset values and latest redemption prices or transaction prices of the respective collective investment schemes.

The Group's policy is to recognise transfers into and out of fair value hierarchy levels as of the date of the event or change in circumstances that caused the transfer.

50. Financial Risk Management (continued)

(d) Fair values of financial assets and financial liabilities (continued)

(ii) Fair values of financial assets and financial liabilities not reported at fair values

Summarised in the following table are the carrying amounts and fair values of financial assets and financial liabilities not presented in the consolidated statement of financial position at their fair values. These assets and liabilities were classified under Level 2 in the fair value hierarchy.

	At 31 Dec 2018		At 31 Dec 2017	
	Carrying amount in consolidated statement of financial position \$m	Fair value \$m	Carrying amount in consolidated statement of financial position \$m	Fair value \$m
Assets				
Financial assets measured at amortised cost:				
– debt securities maturing over one year ¹	301	301	–	–
– other financial assets maturing over one year ²	97	74	60	54
Liabilities				
Borrowings:				
– notes ³	753	753	1,533	1,537
– written put options to non-controlling interests ³	413	416	327	329
Financial guarantee to the Collector of Stamp Revenue ⁴	20	46	20	47

1 The fair values are provided by the custodian of the investments, a reputable independent third party custodian bank, or by the banks from whom the investments were purchased.

2 The fair values are based on cash flows discounted using Hong Kong Government bond rates of a tenor similar to the contractual maturity of the respective assets, adjusted by an estimated credit spread. The discount rates used ranged from 2.59 per cent to 2.74 per cent at 31 December 2018 (31 December 2017: 1.84 per cent to 2.56 per cent).

3 The fair values are based on cash flows discounted using the prevailing market interest rates for loans with similar credit rating and similar tenor of the respective loans. The discount rates used ranged from 3.03 per cent to 3.15 per cent at 31 December 2018 (31 December 2017: 2.26 per cent to 2.75 per cent).

4 The fair values are based on the fees charged by financial institutions for granting such guarantees discounted to perpetuity using a ten-year Hong Kong Government bond rate, adjusted by an estimated credit spread, but capped at the maximum exposure of the financial guarantee. The discount rate used was 3.51 per cent at 31 December 2018 (31 December 2017: 3.30 per cent).

The carrying amounts of short-term financial assets and receivables (eg, accounts receivable, financial assets measured at amortised cost and cash and cash equivalents) and short-term payables (eg, accounts payable and other liabilities) approximated their fair values, and accordingly no disclosure of the fair values of these items is presented.

50. Financial Risk Management (continued)

(e) Offsetting financial assets and financial liabilities

Accounting Policy

Financial assets and liabilities are offset and the net amount reported in the consolidated statement of financial position when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the company or the counterparty.

For base and precious metals futures and options contracts cleared through LME Clear, the asset and liability positions of LME Clear arising through its activities as a central counterparty are matched. Therefore, the same amounts are recorded for both assets and liabilities with the fair value gains and losses recognised, but offset, in the consolidated income statement.

The disclosures set out in the tables below include financial assets and financial liabilities that:

- are offset in the Group's consolidated statement of financial position; or
- are subject to an enforceable master netting arrangement or similar agreement that covers similar financial instruments, irrespective of whether they are offset in the consolidated statement of financial position.

(i) Financial assets and financial liabilities subject to offsetting, enforceable master netting arrangements or similar agreements

At 31 Dec 2018

Type of financial instruments	Gross amount \$m	Gross amount offset in the consolidated statement of financial position \$m	Net amount presented in the consolidated statement of financial position³ \$m	Related amounts not offset in the consolidated statement of financial position		
				Amounts subject to master netting arrangements \$m	Cash collateral \$m	Net amount \$m
Financial assets:						
CNS money obligations receivable ¹	172,937	(159,466)	13,471	(3,412)	(4,399)	5,660
Base and precious metals futures and options contracts cleared through LME Clear ²	1,288,531	(1,234,616)	53,915	(26,992)	(26,923)	-
Other accounts receivable from Participants, ChinaClear, information vendors and hosting services customers, net of provision for impairment losses	3,533	-	3,533	(2,541)	(89)	903
Total	1,465,001	(1,394,082)	70,919	(32,945)	(31,411)	6,563
Financial liabilities:						
CNS money obligations payable ¹	175,745	(159,466)	16,279	(5,953)	-	10,326
Base and precious metals futures and options contracts cleared through LME Clear ²	1,288,531	(1,234,616)	53,915	(26,992)	-	26,923
Total	1,464,276	(1,394,082)	70,194	(32,945)	-	37,249

50. Financial Risk Management (continued)

(e) Offsetting financial assets and financial liabilities (continued)

(i) Financial assets and financial liabilities subject to offsetting, enforceable master netting arrangements or similar agreements (continued)

Type of financial instruments	At 31 Dec 2017				
	Gross amount \$m	Gross amount offset in the consolidated statement of financial position \$m	Net amount presented in the consolidated statement of financial position ³ \$m	Related amounts not offset in the consolidated statement of financial position	Net amount \$m
Financial assets:					
CNS money obligations receivable ¹	141,775	(129,260)	12,515	(2,042)	(3,006) 7,467
Base and precious metals futures and options contracts cleared through LME Clear ²	1,572,390	(1,487,055)	85,335	(43,037)	(42,298) -
Other accounts receivable from Participants, ChinaClear, information vendors and hosting services customers, net of provision for impairment losses	2,888	-	2,888	(171)	(203) 2,514
Total	1,717,053	(1,616,315)	100,738	(45,250)	(45,507) 9,981
Financial liabilities:					
CNS money obligations payable ¹	143,464	(129,260)	14,204	(2,213)	- 11,991
Base and precious metals futures and options contracts cleared through LME Clear ²	1,572,390	(1,487,055)	85,335	(43,037)	- 42,298
Total	1,715,854	(1,616,315)	99,539	(45,250)	- 54,289

1 HKSCC currently has a legally enforceable right to set off certain CNS money obligations receivable and payable relating to the same Clearing Participant and it intends to settle on a net basis.

2 LME Clear has a legally enforceable right to set off open positions of certain contracts within an individual member's account for those contracts settling on the same date and it intends to settle on a net basis.

3 For the net amounts of CNS money obligations receivable or payable and net fair value of base and precious metals futures and options contracts (ie, after set-off) and other accounts receivable due from customers, they do not meet the criteria for offsetting in the consolidated statement of financial position since the right of set-off of the recognised amounts is only enforceable following an event of default of the customers. In addition, the Group does not intend to settle the balances on a net basis.

50. Financial Risk Management (continued)

(e) Offsetting financial assets and financial liabilities (continued)

- (ii) The tables below reconcile the “net amounts of financial assets and financial liabilities presented in the consolidated statement of financial position”, as set out above, to the “accounts receivable, prepayments and deposits”, “accounts payable, accruals and other liabilities”, “financial assets measured at fair value through profit or loss” and “financial liabilities at fair value through profit or loss” presented in the consolidated statement of financial position.

	Accounts receivable, prepayments and deposits		Financial assets measured at fair value through profit or loss	
	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m

Net amount of financial assets after offsetting as stated above:				
– CNS money obligations receivable	13,471	12,515	–	–
– Other accounts receivable from Participants, ChinaClear, information vendors and hosting services customers, net of provision for impairment losses	3,533	2,888	–	–
– Base and precious metals futures and options contracts cleared through LME Clear	–	–	53,915	85,335
Financial assets not in scope of offsetting disclosures	1,242	1,078	7,089	9,702
Prepayments	116	104	–	–
Amounts presented in the consolidated statement of financial position	18,362	16,585	61,004	95,037

	Accounts payable, accruals and other liabilities		Financial liabilities at fair value through profit or loss	
	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m	At 31 Dec 2018 \$m	At 31 Dec 2017 \$m

Net amount of financial liabilities after offsetting as stated above:				
– CNS money obligations payable	16,279	14,204	–	–
– Base and precious metals futures and options contracts cleared through LME Clear	–	–	53,915	85,335
Financial liabilities not in scope of offsetting disclosures	2,037	1,955	–	–
Non-financial liabilities	53	51	–	–
Amounts presented in the consolidated statement of financial position	18,369	16,210	53,915	85,335

51. Events Occurring after the Reporting Period

On 20 February 2019, the Group signed a letter of intent to acquire a 51 per cent stake in Shenzhen Ronghui Tongjin Technology Co. Ltd., a subsidiary of Shenzhen Kingdom Sci-Tech Co. Ltd., which is a technology services provider that specialises in financial exchanges, regulation technologies and data applications. The transaction is subject to the signing of binding agreements and is expected to complete in the second quarter of 2019.

52. Statement of Financial Position and Reserve Movements of HKEX

Accounting Policy

In HKEX's statement of financial position, investments in subsidiaries are stated at cost less impairment losses, if necessary. The results of subsidiaries are accounted for by HKEX on the basis of dividends received and receivable.

Investment in a subsidiary is tested for impairment upon receiving a dividend from that subsidiary if the dividend exceeds the total comprehensive income of the subsidiary concerned in the period the dividend is declared or if the carrying amount of the subsidiary in HKEX's statement of financial position exceeds the carrying amount of the subsidiary's net assets.

The financial statements of the controlled special purpose entity, The HKEX Employees' Share Award Scheme, are included in HKEX's financial statements.

Written put options to non-controlling interests initially recognised at fair value are accounted for as investments in subsidiaries with a corresponding credit to financial liabilities at fair value through profit or loss. Subsequent changes in fair value of the financial liabilities are recognised in HKEX's income statement. Written put options to non-controlling interests are included under financial liabilities at fair value through profit or loss on the statement of financial position.

52. Statement of Financial Position and Reserve Movements of HKEX (continued)

Statement of Financial Position of HKEX

	At 31 Dec 2018			At 31 Dec 2017		
	Current \$m	Non- current \$m	Total \$m	Current \$m	Non- current \$m	Total \$m
Assets						
Cash and cash equivalents	3,530	-	3,530	5,715	-	5,715
Financial assets measured at fair value through profit or loss	7,089	-	7,089	6,643	-	6,643
Financial assets measured at amortised cost	2,216	303	2,519	1	1	2
Accounts receivable, prepayments and deposits	428	21	449	45	21	66
Amounts due from subsidiaries	948	11,700	12,648	1,123	12,908	14,031
Interests in joint ventures	-	114	114	-	114	114
Intangible assets	-	181	181	-	129	129
Fixed assets	-	436	436	-	250	250
Investments in subsidiaries	-	14,766	14,766	-	12,115	12,115
Total assets	14,211	27,521	41,732	13,527	25,538	39,065
Liabilities and equity						
Liabilities						
Financial liabilities at fair value through profit or loss	327	-	327	278	-	278
Accounts payable, accruals and other liabilities	513	-	513	389	-	389
Amounts due to subsidiaries	284	-	284	422	-	422
Taxation payable	78	-	78	5	-	5
Other financial liabilities	11	-	11	11	-	11
Borrowings	753	-	753	782	751	1,533
Provisions	74	1	75	67	1	68
Deferred tax liabilities	-	41	41	-	18	18
Total liabilities	2,040	42	2,082	1,954	770	2,724
Equity						
Share capital						25,141
Shares held for Share Award Scheme			27,750	(682)		(606)
Employee share-based compensation reserve			218			222
Merger reserve			694			694
Retained earnings			11,670			10,890
Equity attributable to shareholders of HKEX			39,650			36,341
Total liabilities and equity			41,732			39,065
Net current assets			12,171			11,573

Approved by the Board of Directors on 27 February 2019

Laura M CHA
Director

LI Xiaojia, Charles
Director

52. Statement of Financial Position and Reserve Movements of HKEX (continued)

(a) Reserve movements of HKEX

	Employee share-based compensation reserve \$m	Merger reserve \$m	Retained earnings \$m
At 1 Jan 2017	226	694	9,249
Profit attributable to shareholders	–	–	7,255
2016 final dividend at \$2.04 per share	–	–	(2,491)
2017 first interim dividend at \$2.55 per share	–	–	(3,133)
Unclaimed HKEX dividends forfeited	–	–	26
Vesting of shares of Share Award Scheme	(224)	–	(16)
Employee share-based compensation benefits	220	–	–
 At 31 Dec 2017	 222	 694	 10,890
At 1 Jan 2018	222	694	10,890
Profit attributable to shareholders	–	–	8,825
2017 final dividend at \$2.85 per share	–	–	(3,525)
2018 first interim dividend at \$3.64 per share	–	–	(4,527)
Unclaimed HKEX dividends forfeited	–	–	23
Vesting of shares of Share Award Scheme	(230)	–	(16)
Employee share-based compensation benefits	226	–	–
 At 31 Dec 2018	 218	 694	 11,670

Shareholder Information

Financial Calendar 2019

Announce 2018 final results	27 February
2019 AGM	24 April
Announce 2019 first quarter results	May
Announce 2019 interim results	August
Announce 2019 third quarter results	November

For Shareholders to Attend and Vote at 2019 AGM

Latest time to lodge transfer documents for registration with HKEX's registrar	At 4:30 pm on 16 April 2019
Closure of HKEX's Register of Members	17 to 24 April 2019 (both dates inclusive)
Record date	24 April 2019

Dividend Policy

HKEX adopts a dividend policy of providing Shareholders with regular dividends. In general, HKEX will declare/propose dividends semi-annually when the Board approves the interim results and the annual results.

In determining the appropriate amount of dividend, the Group actively and regularly reviews and manages its capital structure to ensure an optimal capital structure and shareholder returns by considering:

- the expected capital requirements and capital efficiency;
- regulatory capital requirements of its regulated entities;
- prevailing and projected profitability;
- projected operating cash flows; and
- projected capital expenditures and strategic investment opportunities.

The normal target payout ratio is 90 per cent of the Group's profit attributable to Shareholders of the year. HKEX may also offer a scrip dividend alternative to Shareholders.

2018 Dividends

First interim dividend	\$3.64 per share
Second interim dividend	\$3.07 per share
Dividend payout ratio	90 per cent

The second interim dividend, in lieu of a final dividend, for 2018 will be payable in cash with a scrip alternative where a 3 per cent discount on the subscription price will be offered to Shareholders who elect to subscribe for shares. The scrip dividend alternative is conditional upon the SFC's granting the listing of, and permission to deal in, new shares of HKEX to be issued pursuant thereto. Details of the scrip dividend alternative will be set out in a circular to Shareholders.

Further information about HKEX's scrip dividend scheme and dividend history is available on the HKEX Group website [IR](#).

Key Dates for 2018 Second Interim Dividend

Ex-dividend date	12 March 2019
Latest time to lodge transfer documents for registration with HKEX's registrar	At 4:30 pm on 13 March 2019
Closure of HKEX's Register of Members	14 to 15 March 2019 (both dates inclusive)
Record date	15 March 2019
Despatch scrip dividend circular and election form	On or about 21 March 2019
Announce scrip share subscription price	On or about 27 March 2019
Despatch dividend warrants/definitive share certificates	15 April 2019

Share Information

HKEX shares are listed on the Stock Exchange and are eligible for Southbound Trading under Stock Connect. HKEX is currently a constituent stock of the HSI and a number of sustainability indices as disclosed on the HKEX Group website [CG](#).

Listing

As at 31 December 2018

- Number of issued shares 1,250,632,060 shares
- Market capitalisation \$283.4 billion
- Board lot size 100 shares

Stock Codes

Stock Exchange	388
Bloomberg	388 HK Equity
Reuters	0388.HK
ISIN	HK0388045442
SEDOL1	6267359 HK

American Depository Receipts

Ticker Symbol	HKXCY
CUSIP	43858F109

HKEX Share Price Performance vs HSI in 2018



Shareholding Distribution as at 31 December 2018 (based on HKEX's Register of Members)

Size of shareholding	Number of Shareholders	% of Shareholders ¹	Number of shares held ('000)	% of HKEX shares in issue
1 – 1,000	2,608	48.1	1,158,513	0.1
1,001 – 5,000	1,732	32.0	4,295,803	0.3
5,001 – 10,000	421	7.8	3,194,928	0.3
10,001 – 100,000	529	9.8	15,675,456	1.3
100,001 and above	129	2.4	1,226,307,360	98.0
Total	5,419	100.0	1,250,632,060	100.0

¹ Percentage is for reference only, and may not add up to the total due to rounding.

Details about Shareholders who are interested in 5 per cent or more of HKEX shares are disclosed in the Corporate Governance Report contained in this Annual Report.

Electronic Communication

This Annual Report is printed in English and Chinese, and is available in the Investor Relations (Regulatory Disclosure) section of the HKEX Group website [IR](#).

Shareholders are encouraged to access HKEX's corporate communications electronically via the HKEX Group website to help protect the environment. Shareholders may at any time change their choice of language or means of receiving HKEX's corporate communications free of charge by giving not less than seven days' notice in writing to HKEX's registrar.

Registration for News Alerts

Shareholders who would like to be notified when HKEX publishes its corporate communications on the HKEXnews website can register for the News Alerts service in the Market Data section of the HKEX Market website (www.hkex.com.hk). Further information about Shareholder communications can be found in the Corporate Governance Report contained in this Annual Report.

Feedback on Annual Report

HKEX values feedback on this Annual Report as well as its reporting of the Group's financial and governance performance. Shareholders may give their comments via the online form at www.hkexgroup.com/Investor-Relations/Regulatory-Disclosure/Regulatory-Reports or email at ssd@hkex.com.hk.

HKEX's Registrar – Hong Kong Registrars Limited

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Wan Chai, Hong Kong

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Glossary

2018 AGM	AGM held on 25 April 2018 at 4:30 pm at the HKEX Connect Hall on the 1st Floor, One and Two Exchange Square, Central, Hong Kong
2019 AGM	AGM to be held on 24 April 2019
ADT	Average daily turnover value
ADV	Average daily volume (in number of contracts/lots)
AGM(s)	HKEX's annual general meeting(s)
AHFT	After-Hours Futures Trading
AUM	Asset under management
Awarded Shares	Shares awarded under the Share Award Scheme
BBS	Bronze Bauhinia Star
BCCL	Bond Connect Company Limited
Board	HKEX's board of directors
Bond Connect	A mutual bond market access programme between Hong Kong and Mainland China, under which Northbound trading enables overseas investors to invest in the China Interbank Bond Market, and Southbound trading will be explored at a later stage
Cash Market	HKEX's securities related business excluding stock options
CBBCs	Callable Bull/Bear Contracts
CCASS	Central Clearing and Settlement System
CCP	Central counterparty
ChinaClear	China Securities Depository and Clearing Corporation Limited
CNH	Offshore RMB traded outside Mainland China
CNS	Continuous Net Settlement
CNY	Onshore RMB traded in Mainland China
Corporate Governance Code	Refer to Appendix 14 to the Main Board Listing Rules
CP(s)	Clearing Participant(s)
CSR	Corporate Social Responsibility
Derivatives Market	HKEX's derivatives related business including stock options
Director(s)	HKEX's director(s)
DWs	Derivative warrants
Elected Directors	Directors elected by the Shareholders at general meetings
EP(s)	Exchange Participant(s)
ESG	Environmental, Social and Governance
ETF(s)	Exchange Traded Fund(s)
EU	European Union
Euro	The official currency of the Eurozone
Exchange or SEHK or Stock Exchange	The Stock Exchange of Hong Kong Limited
FCA	Financial Conduct Authority
FIC	Fixed income and currency
Financial Secretary	Financial Secretary of the HKSAR
Fintech	Financial technology
Futures Exchange or HKFE	Hong Kong Futures Exchange Limited
GBM	Grand Bauhinia Medal
GBS	Gold Bauhinia Star
GEM Listing Rules	Rules Governing the Listing of Securities on GEM of The Stock Exchange of Hong Kong Limited

Government	HKSAR Government
Government Appointed Director(s)	Director(s) appointed by the Financial Secretary pursuant to Section 77 of the SFO
Group or HKEX Group	HKEX and its subsidiaries
HKCC	HKFE Clearing Corporation Limited
HKEX or the Company	Hong Kong Exchanges and Clearing Limited
HKEX's Articles	HKEX's Articles of Association
HKFRS(s)	Hong Kong Financial Reporting Standard(s)
HKICPA	Hong Kong Institute of Certified Public Accountants
HKSAR	Hong Kong Special Administrative Region of the People's Republic of China
HKSCC	Hong Kong Securities Clearing Company Limited
HSCEI	Hang Seng China Enterprises Index
HSI	Hang Seng Index
INED(s)	Independent Non-executive Director(s) of HKEX
IPO(s)	Initial Public Offering(s)
Iron Ore Futures	TSI Iron Ore Fines 62 per cent Fe CFR China Futures
IT	Information Technology
January 2003 MOU	Memorandum of Understanding Governing Listing Matters between the SFC and SEHK, dated 28 January 2003 (as supplemented by the addendum dated 9 March 2018)
JP	Justice of the Peace
Lehman	Lehman Brothers Securities Asia Limited
Listing Committee	Listing Committee of the Main Board and GEM
Listing Rule(s)	Main Board Listing Rules and GEM Listing Rules
LME	The London Metal Exchange
LME Clear	LME Clear Limited
LME Group	HKEX Investment (UK) Limited, LMEH, the LME and LME Clear
LMEH	LME Holdings Limited
LMEmercy	LME Clear's clearing system which enables its Members to view their risk positions in real time
London Metal Mini Futures	London Aluminium/Zinc/Copper/Nickel/Tin/Lead Mini Futures
Main Board Listing Rules	Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited
MiFID II	Markets in Financial Instruments Directive II
Model Code	Model Code for Securities Transactions by Directors of Listed Issuers, Appendix 10 to the Main Board Listing Rules
MOU	Memorandum of Understanding
MSCI	MSCI Inc.
Northbound Trading	Hong Kong and overseas investors trading in eligible securities that are listed on the Shanghai Stock Exchange or the Shenzhen Stock Exchange through Stock Connect
OECD	Organisation for Economic Co-operation and Development
OTC	Over-the-counter
OTC Clear	OTC Clearing Hong Kong Limited
PFMI	"Principles for financial market infrastructures" published by the Committee on Payment and Settlement Systems (now known as the Committee on Payments and Market Infrastructures) and the International Organization of Securities Commissions

Glossary

QME	Qianhai Mercantile Exchange Co., Ltd.
RMB	Renminbi
SBS	Silver Bauhinia Star
Senior Management	The Group's senior executives, and the list of Senior Management as at the date of this Annual Report is set out in the Board of Directors and Senior Management section of this Annual Report
SEOCH	The SEHK Options Clearing House Limited
SFC	Securities and Futures Commission
SFO	Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong)
Shanghai-Hong Kong Stock Connect or Shanghai Connect	A mutual market access programme that links the stock markets in Shanghai and Hong Kong, enabling investors in Hong Kong and Mainland China to trade and settle shares listed on the other market via the exchange and clearing house in their home market
Shareholder(s)	HKEX's shareholder(s)
Share Award Scheme or the Scheme	The Employees' Share Award Scheme adopted by the Board on 14 September 2005 which was subsequently amended on 16 August 2006, 13 May 2010, 17 December 2013 and 17 June 2015
Shenzhen-Hong Kong Stock Connect or Shenzhen Connect	A mutual market access programme that links the stock markets in Shenzhen and Hong Kong, enabling investors in Hong Kong and Mainland China to trade and settle shares listed on the other market via the exchange and clearing house in their home market
Southbound Trading	Mainland investors trading in eligible securities that are listed on the Stock Exchange through Stock Connect
Stock Connect	Shanghai-Hong Kong Stock Connect and Shenzhen-Hong Kong Stock Connect
UK	United Kingdom
UN	United Nations
US	United States of America
US\$/USD	United States dollar
\$/HK\$/HKD	Hong Kong dollar
\$bn/bn	Hong Kong dollar in billion/billion
\$m	Hong Kong dollar in million
£/GBP	Pound sterling



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