



Singapore Exchange | July 2018 – June 2019

annual report

20^{YEARS}19

Corporate Information

Board of Directors

Chairman

Mr Kwa Chong Seng

Chief Executive Officer

Mr Loh Boon Chye

Members

Mr Thaddeus Beczak

Ms Chew Gek Khim

Ms Jane Diplock AO

Mr Kevin Kwok

Mr Liew Mun Leong

Mr Lim Chin Hu

Ms Lim Sok Hui (Mrs Chng Sok Hui)

Mr Ng Wai King

Appointed on 20 September 2018

Mr Subra Suresh

Appointed on 20 September 2018

Company Secretaries

Ms Ding Hui Yun

Mr Seah Kim Ming Glenn

Share Registrar

Boardroom Corporate & Advisory Services Pte. Ltd.

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Auditor

PricewaterhouseCoopers LLP

7 Straits View

Marina One East Tower

Level 12

Singapore 018936

t +65 6236 3388

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Partner-in-Charge

Ms Deborah Tan Yang Sock

(Mrs Deborah Ong)

Appointed on 1 July 2014

Board Committees

Audit Committee

Chairman

Mr Kevin Kwok

Members

Ms Jane Diplock AO

Mr Liew Mun Leong

Nominating & Governance Committee

Chairman

Mr Kwa Chong Seng

Members

Ms Chew Gek Khim

Mr Kevin Kwok

Mr Liew Mun Leong

Mr Lim Chin Hu

Appointed on 20 September 2018

Mr Subra Suresh

Appointed on 20 September 2018

Remuneration & Staff Development Committee

Chairman

Mr Kwa Chong Seng

Members

Ms Chew Gek Khim

Mr Liew Mun Leong

Mr Ng Wai King

Appointed on 20 September 2018

Risk Management Committee

Chairman

Ms Lim Sok Hui
(Mrs Chng Sok Hui)

Members

Mr Thaddeus Beczak

Ms Jane Diplock AO

Mr Kevin Kwok

Mr Lim Chin Hu

Registered Office

Singapore Exchange Limited

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Place of Incorporation

Singapore

Company Registration No.

199904940D

Date of Incorporation

21 August 1999

Investor Relations

For enquiries on SGX's business performance, contact the Investor Relations team at

e ir@sgx.com

Sustainability

e sustainability@sgx.com

Asia's Most International Exchange

Headquartered in AAA-rated Singapore, with offices in nine cities around the world, SGX is a global multi-asset exchange operating equity, fixed income, currency and commodity markets to the highest regulatory standards.



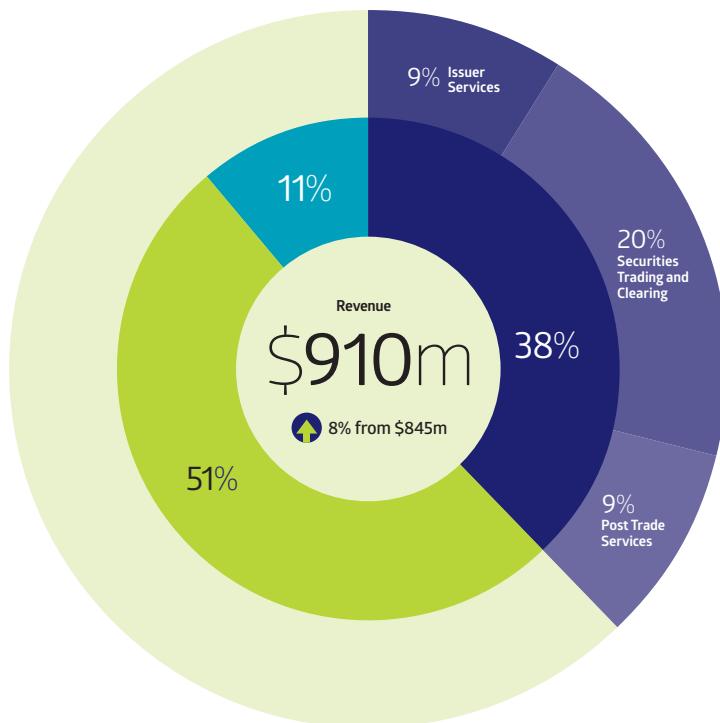


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Equities and Fixed Income



Issuer Services

\$79.7m



Securities Trading and Clearing

\$182.1m



Post Trade Services

\$85.7m

Derivatives



\$459.7m

Market Data and Connectivity



\$102.5m

12

Corporate Social Responsibility



SGX Bull Charge has raised

\$32m



Number of charities aided

50





16

Letter from the Chairman and the CEO

FY2019 was one of our best-performing years as we delivered a net profit of S\$391.1 million, our highest in 11 years. Revenue of S\$909.8 million was also the highest since our listing in 2000.

Our robust and resilient performance shows that we have taken the right strategy to serve the world as a trusted and efficient global multi-asset exchange, providing a single point of access into Asia.

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Online Annual Report

[http://investorrelations.sgx.com/
financial-information/annual-reports](http://investorrelations.sgx.com/financial-information/annual-reports)

Our International Network

01

02

03

Legend

- SGX Offices & Members
- SGX Offices
- SGX Members

11 Offices 17 Cities

SGX is Asia's most international and connected exchange, with established linkages across the world. We will continue to cement our position as a multi-asset exchange, while growing our international presence and widening our partnerships and networks.

01 San Francisco

4 Palo Alto Square
3000 El Camino Real, Suite 200
Palo Alto, CA 94306, USA



02 Chicago

155 North Wacker Drive
Suite 4250, Chicago
IL 60606, USA



03 New York

340 Madison Avenue, Suite 1919
New York 10173, USA



04 London

38 St Mary Axe
London EC3A 8BH



05 France

06 Switzerland

07 Germany

08 Netherlands

09 United Arab Emirates

**10 Mumbai**

9th Floor Platina (Regus)
G Block, Bandra Kurla Complex
Bandra (East)
Mumbai – 400 051, India

**11 Singapore**

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#02-02 SGX Centre 1
Singapore 068804

11 North Buona Vista Drive
#06–07 The Metropolis Tower 2
Singapore 138589

**12 Hong Kong**

Unit 12B, 12/F
No. 33 Des Voeux Road Central
Hong Kong

**13 Taiwan****14 Shanghai**

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**15 Beijing**

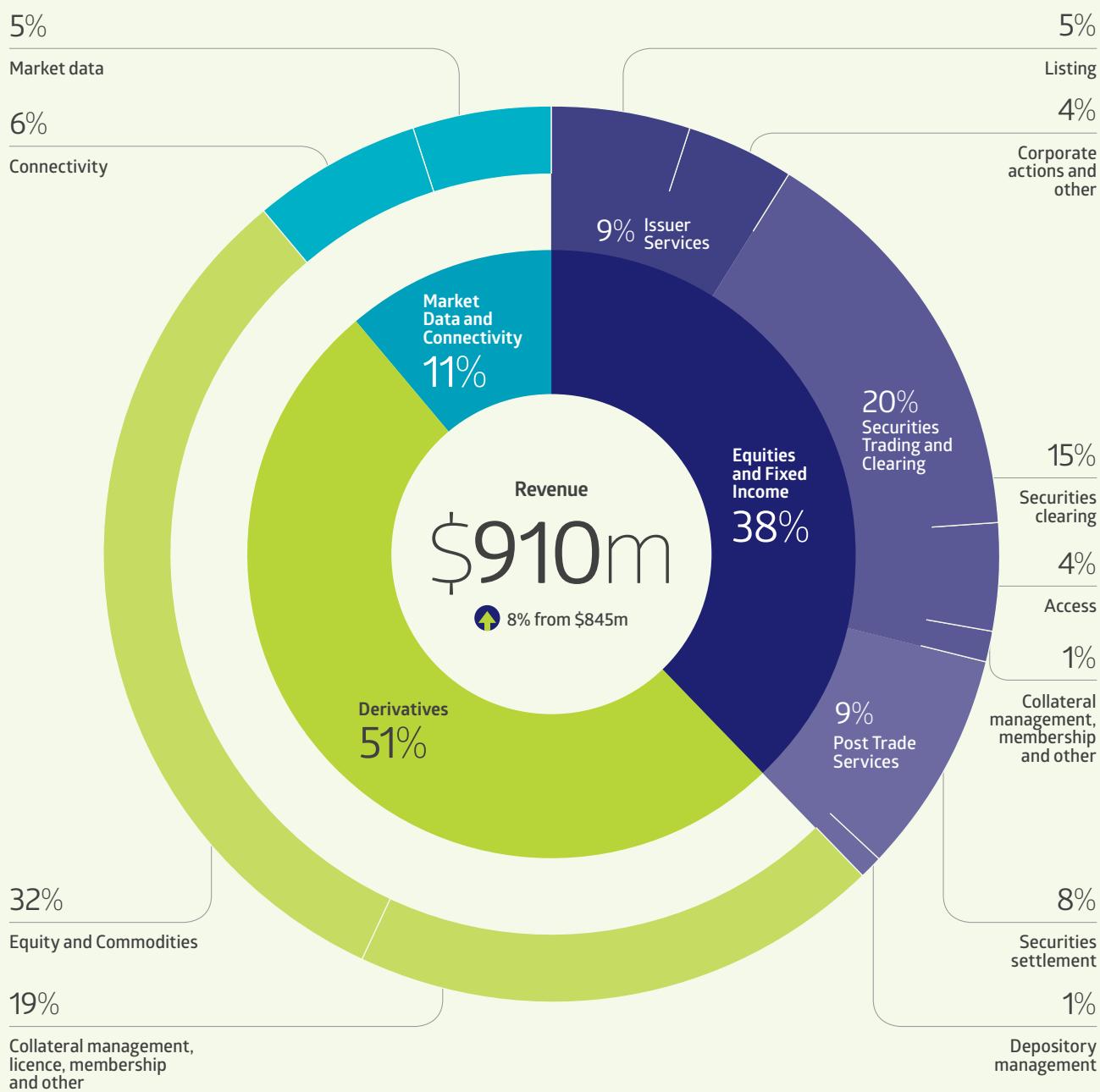
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Xicheng District
Beijing 100032, China

**16 South Korea**

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1-2-9 Nishi Shimabashi
Minato-ku, Tokyo
105-0003 Japan

**17 Tokyo**

Business at a Glance



Operating Profit

▲ 9% from \$425m

\$461m

Net Profit

▲ 8% from \$363m

\$391m

Earnings per Share

▲ 8% from 33.9¢

36.5¢

Dividend per Share

↔ Unchanged

30¢

Return on Equity

▲ 2% pts from 34%

36%

All comparatives are for the year earlier.

Financial Performance Summary

(\$million)	FY2015	FY2016	FY2017	FY2018	FY2019
Statement of Income					
Revenue	779	818	801	845	910
Expenses	377	409	399	420	449
Operating profit	402	409	402	425	461
Profit before tax and share of results of associated companies and joint venture	410	416	409	436	475
Net profit attributable to equity holders	349	349	340	363	391
Statement of Cash Flows					
Cash flows from operating activities	429	423	378	427	418
Statement of Financial Position					
Total assets	1,801	2,105	2,041	2,115	2,132
– Unrestricted cash and cash equivalents	633	598	520	550	446
– Committed for derivatives clearing fund	150	200	200	200	150
– Committed for securities clearing fund	60	60	60	60	60
– Committed for National Electricity Market of Singapore	7	8	16	22	11
Total liabilities	825	1,115	1,009	1,019	1,041
Total equity	976	990	1,032	1,096	1,091
– Includes proposed final dividend of	171	139	139	161	80
Capital expenditure	76	75	67	65	58
No. of shares issued (million)	1,072	1,072	1,072	1,072	1,072
No. of shares held as treasury shares (million)	1	2	2	2	2
Financial Indicators					
Revenue growth (%)	13.5	5.1	(2.1)	5.5	7.7
Operating profit margin (%)	51.6	50.0	50.2	50.3	50.7
Cost-to-income ratio (%)	48.4	50.0	49.8	49.7	49.3
Net gearing	NIL	NIL	NIL	NIL	NIL
Operating cash flow per share (cents)	40.1	39.6	35.3	39.9	39.0
Net asset value per ordinary share as at 30 June (dollars)	0.91	0.93	0.96	1.02	1.02
Based on net profit attributable to equity holders					
Net profit margin (%)	44.3	42.1	41.9	42.4	42.4
Return on equity (%)	36.7	35.5	33.6	34.1	35.8
Dividend payout ratio (%)	86.0	85.9	88.2	88.4	82.1
Basic earnings per share (cents)	32.6	32.6	31.7	33.9	36.5

Financial Highlights & Performance Review

Equities and Fixed Income



Issuer Services

Revenue decreased \$6.5 million or 7% to \$79.7 million (\$86.2 million), accounting for 9% (10%) of total revenue.

Contribution to total revenue: **9%**

Revenue 7% from \$86.2m

\$79.7m



Equities and Fixed Income revenue decreased \$59.1 million or 15% to \$347.5 million (\$406.6 million), accounting for 38% (48%) of total revenue.



Securities Trading and Clearing

Revenue decreased \$39.0 million or 18% to \$182.1 million (\$221.1 million), accounting for 20% (26%) of total revenue.

Contribution to total revenue: **20%**

Revenue 18% from \$221.1m

\$182.1m



Post Trade Services

Revenue decreased \$13.6 million or 14% to \$85.7 million (\$99.3 million), accounting for 9% (12%) of total revenue.

Contribution to total revenue: **9%**

Revenue 14% from \$99.3m

\$85.7m



Type of Revenue	\$m	% change
Listing	45.8	-11%
Corporate actions and other	34.0	-2%

Type of Revenue	\$m	% change
Securities clearing	138.9	-19%
Access	34.3	-16%
Collateral management, membership and other	9.0	-6%

Type of Revenue	\$m	% change
Securities settlement	76.6	-13%
Depository management	9.1	+10%

There were 1,066 bond listings raising \$451.7 billion, compared to 1,154 listings raising \$481.9 billion a year earlier. We recorded 20 new equity listings which raised \$1.7 billion, compared to 22 new equity listings raising \$6.2 billion a year earlier. Secondary equity funds raised were \$4.7 billion (\$6.4 billion).

Securities daily average traded value (SDAV) decreased 17% to \$1.04 billion (\$1.26 billion). Total traded value decreased 17% to \$259.5 billion (\$314.0 billion). This was made up of Equities¹, where traded value declined by 17% to \$241.4 billion (\$291.4 billion), and Other products², where traded value decreased 20% to \$18.1 billion (\$22.6 billion). There were 249 (250) trading days in the year.

Average clearing fees for Equities declined to 2.82 basis points (2.88 basis points) due to higher participation from market makers. Average clearing fee for Other products was comparable at 0.59 basis points (0.58 basis points). Overall turnover velocity for the year was 36% (40%).

Securities settlement revenue declined due to a downward re-pricing of our delivery-versus-payment guarantee fee from April 2018, and a decline in subsequent settlement activities.

Contract processing revenue has ceased as all brokers had migrated to their own back office systems by February 2018.

¹ Equities include ordinary shares, real-estate investment trusts and business trusts

² Other products include structured warrants, exchange-traded funds, daily leverage certificates, debt securities and American depository receipts

Derivatives



Revenue increased \$119.9 million or 35% to \$459.7 million (\$339.8 million), accounting for 51% (40%) of total revenue.

Contribution to total revenue: **51%**

Revenue 35% from \$339.8m

\$459.7m



Equity and Commodities	64%
Collateral management, licence, membership and other	36%

Type of Revenue	\$m	% change
Equity and Commodities	292.1	+23%
Collateral management, licence, membership and other	167.7	+63%

Equity and Commodities revenue grew as total volumes increased 21% to 240.3 million contracts (198.0 million contracts). This was mainly due to increased volumes in our SGX FTSE China A50, MSCI Taiwan, and Iron Ore derivatives contracts. In addition, volumes in FX and MSCI Net Total Return derivatives also saw significant increases. Average fee per contract was higher at \$1.09 (\$1.06) mainly due to an increase in number of full fee-paying customers.

Collateral management, licence, membership and other revenue increased mainly due to higher collateral management income. This is the result of higher margin balances on the back of record open interest, demonstrating increased usage of our derivatives contracts for portfolio risk management.

Market Data and Connectivity



Revenue increased \$4.3 million or 4% to \$102.5 million (\$98.3 million), accounting for 11% (12%) of total revenue.

Contribution to total revenue: **11%**

Revenue 4% from \$98.3m

\$102.5m



Market data	42%
Connectivity	58%

Type of Revenue	\$m	% change
Market data	43.0	+2%
Connectivity	59.5	+6%

SGX recorded an operating profit of \$461.0 million (\$424.9 million) and a net profit of \$391.1 million (\$363.2 million) in FY2019, with earnings per share of 36.5 cents (33.9 cents). This is the highest net profit in 11 years, mainly attributed to the strong performance of our derivatives business. The Board of Directors has proposed a final dividend of 7.5 cents (15 cents) per share, payable on 18 October 2019. This brings the total dividend for the year to 30 cents (30 cents) per share.

Total Revenue Contribution

Sub-Segment

Performance Highlights

Corporate Social Responsibility

A key part of SGX's corporate social responsibility efforts involves corporate philanthropy. It is our way of contributing to the community, whether it be strengthening financial literacy to empower investors or working alongside corporate sponsors to raise funds for the needy.



01



02

01 Our beneficiaries from AWWA enjoying the Charity Run and festive activities at the Float @ Marina Bay.

02 Minister Grace Fu was Guest-of-Honour for our Charity Run held on 30 November 2018 at the Float @ Marina Bay. Through the generous donations from our corporate sponsors, SGX Bull Charge 2018 raised more than \$3.3 million for our five adopted beneficiaries.

Fund Raising

Launched in 2004, SGX Bull Charge is the only corporate charity initiative that rallies Singapore's financial community and listed companies to support the needs of underprivileged children and families, persons with disabilities, as well as the elderly. With the commitment of many corporate sponsors, we have raised \$32 million for more than 50 charities over the past 15 years. The programme continues to grow as we come together for a good cause.

In 2018, SGX Bull Charge successfully raised \$3.3 million through our annual highlights such as Charity Golf, Charity Futsal and flagship Charity Run. Working alongside Community Chest, all proceeds were channelled to our adopted beneficiaries: AWWA Ltd., Autism Association (Singapore), Fei Yue Community Services, HCSA Community Services and Shared Services for Charities. We continue to support these organisations in 2019.



Outreach

Caring for our beneficiaries while engaging our employees – that is what SGX Cares aims to achieve. It is an initiative for SGX staff to come together to organise and participate in activities for our beneficiaries.

From the monthly “Fridays with AWWA”, hosting children with special needs at our “Bring Your Kids to Work Day”, bringing seniors out for excursions to places like Bollywood Veggies and our annual Season of Giving event, our beneficiaries have enjoyed the activities as much as our staff volunteers have enjoyed organising them. In 2018, we touched and warmed the hearts of 2,000 individuals from our beneficiaries, clocking a total of 1,400 volunteer hours.

03 As part of the SGX Bull Charge supported programme, our funds also provide transportation to enable education to students with special needs to AWWA School and AWWA Early Intervention Centre.

04 Our staff volunteers hosting children from Fei Yue Student Care Centre who enjoyed role-playing various occupations at KidsZania.

05 Football fun time with the children from Fei Yue Community Services as our staff joined as ‘football coaches’.

06 Ushering in the Lunar New Year with the seniors at AWWA Seniors Activity Centre.



Group Overview



An aerial photograph of the Shanghai skyline, featuring the Bund area in the foreground with the Oriental Pearl Tower and the Shanghai Museum, leading to the dense urban sprawl of Pudong. The Huangpu River flows through the center of the city. In the distance, the Yangtze River and the Nanpu Bridge are visible.

SGX established its Shanghai office in 2015, marking its expansion in China and underscoring its commitment to engage local stakeholders and partners. As the world's second-largest economy continues to internationalise, China will remain a focus of SGX's global growth strategy.

Letter from the Chairman and the CEO



Dear Shareholders

Growing Stronger as a Multi-Asset Exchange

FY2019 was one of our best-performing years as we delivered a net profit of S\$391.1 million, our highest in 11 years. Revenue of S\$909.8 million was also the highest since our listing in 2000.

With strong volume growth across our equity index, foreign exchange (FX), iron ore, freight and rubber derivative products, we set all-time records in our overall derivatives volumes and average open interest. Volumes in non-Asian hours were up 38% year-on-year (y-o-y), on the back of growing interest from international participants.

Our robust and resilient performance shows that we have taken the right strategy to serve the world as a trusted and efficient global multi-asset exchange, providing a single point of access into Asia. During the year, we

expanded our geographical reach with new offices in New York and San Francisco, and extended our network through collaborations. We also expanded our offerings across asset classes, broadening capabilities in products and platforms.

Macro Trends Fuelling Our Growth

We have made significant progress in executing our strategic priorities, supported by macro trends that will continue to play out in the medium to long term.

We expect Asia to lead in global growth, which will accelerate the rebalancing of global markets towards emerging Asia. Emerging Asian markets also continue to internationalise.

Even as global investors actively manage their portfolios of Asian assets, passive investing in Asia is growing and leading to increased demand for equity

index products on exchanges. In addition, regulatory changes in financial markets continue to drive central clearing of over-the-counter (OTC) derivatives as market participants seek greater capital efficiencies.

Viewed against a backdrop of a persistently low interest rate environment, and continued geopolitical and market uncertainties, what these macro trends mean is that Asian-centric risk and wealth-management solutions are increasingly critical for global investors. We see more international clients coming to SGX for help to manage risks, seek new investment opportunities and tap Asian capital.

It is for these reasons that we have to stay focused on our multi-asset strategy, and ensure that our clients have seamless access to our products and platforms, while trading confidently with SGX as a central counterparty.

**Revenue**

8% from \$845m

\$910m

Operating Profit

9% from \$425m

\$461m

Access to Products Across Asset Classes

Our growth trajectory is largely due to our efforts to enhance our existing products and develop new ones to meet our clients' needs.

An example is our growing suite of SGX MSCI Net Total Return (NTR) futures contracts based on regional and single-country equity indices. Investors tell us they appreciate this exchange-listed solution over OTC equity index swaps, which comes with capital efficiencies if they concurrently trade our flagship products such as SGX FTSE China A50 futures and SGX Nikkei 225 futures. Hence, we launched an additional nine contracts in FY2019 in response to client feedback. As of the end of June 2019, the SGX MSCI NTR product suite had US\$32 billion in notional open interest, more than double of last year's.

In May this year, we pioneered interest rate derivatives on Japan repo with the launch of Asia's first Total Return Futures, based on the Nikkei 225 Index. This is a first-in-Asia innovation that builds on the success of our NTR offering. In June, we also became the first exchange in Asia to extend a portfolio compression service from OTC products to listed derivatives, specifically for the Nikkei suite of contracts.

To cater to different investor profiles, we listed 56 new daily leverage certificates (DLCs) on local and regional stocks, offering individual traders more avenues to gain exposure to key Asian indices and large-cap stocks. Outstanding value of DLCs grew five times y-o-y to S\$15 million as of end-FY2019, amid growing interest.

Two of our fast-growing asset classes – FX and Commodities – delivered commendable results in FY2019. FX growth has been exceptional, with a 46% y-o-y gain in the volumes of our FX futures suite to 20.8 million contracts and total notional rising 73% to US\$1.1 trillion. The strong momentum led to new records, consolidating our position as Asia's biggest exchange for FX derivatives.

As mentioned in last year's letter, we are capitalising on the trend of FX markets moving towards central clearing. In July 2018, we launched SGX FlexC which enables bilateral trades with tailored expiration dates to be cleared like a standard FX futures contract. Since then, we have successfully executed pilot trades and onboarding of customers is gathering pace.

Our commodities business similarly saw significant growth in FY2019, as we drove the financialisation of iron ore and other commodities. By incubating commodity derivatives in close collaboration with physical market participants based in Singapore, we create value for wholesale participants as well as financial investors who manage 'vertically' between physical and paper, as well as 'horizontally' in the steel value chain. Today, over 25% of SGX's 1.7 billion metric tonnes iron ore derivatives volume comes from buy-side institutions and funds.

Leveraging China's pursuit of environmentally friendly growth, in December 2018 we launched the world's first high-grade 65% iron ore contract to complement our benchmark 62% iron ore contract. In May, we also introduced the industry's first options contract based on the global rubber benchmark SGX SICOM TSR 20 contract. SGX SICOM rubber derivatives are integral to the physical marketplace, with volumes increasing 14% y-o-y.

Through the Baltic Exchange, we are launching a number of LNG freight indices in response to the changing energy landscape. In freight derivatives, our efforts in promoting freight price risk management to the physical shipping community in Asia are paying off, as our global market share for clearing freight forward agreements grew to 59%, up from 46% a year ago.

Access to Global Capital

While regional equity markets faced a fairly challenging year with bouts of volatility, companies continued to raise public funds, albeit at a slower pace. We saw cross-border listings originating from newer markets such as Europe and the US.

Letter from the Chairman and the CEO

Our reputation as Asia's largest international REIT platform attracted the three biggest IPOs in ASEAN, and three of the top 10 IPOs in Asia Pacific by funds raised (from January to July 2019). ARA US Hospitality Trust, Eagle Hospitality Trust and Prime US REIT – all pure-play US REITs – added to the depth and breadth of our REITs sector. Our REITs sector remained an outperformer in FY2019, contributing about 18% of our overall securities daily average value in FY2019.

Companies looking to raise funds do not just look at equity, but also at debt. Our debt capital market is another attractive platform for companies. As Asia's largest listing venue for international bonds, we have had more than 5,000 listed debt securities issued by over 1,500 issuers from over 50 countries, in more than 20 currencies with more than US\$2 trillion issued to date.

Besides expanding our market coverage beyond Asia, our platform supports innovative solutions that not only offer issuers more financing opportunities, but also widens investor access to more investible asset classes. Among others, we welcomed the listing of Asia's first infrastructure project finance securitisation notes and continue to support growing momentum in the sustainability bond space. In the retail bond market, we welcomed the listing of Temasek's inaugural retail bond, as well as the second Astrea private equity (PE) bond that offered retail investors access to PE fund investments through a fixed income structure.

Access to Data

Our market data and connectivity business is growing steadily, with revenues crossing the S\$100 million mark this year for the first time, mainly due to the increased uptake of colocation services and connectivity subscriptions.

We want to drive greater growth for our data and index business. Our bespoke index calculation service had a successful start in London, following the expansion of our team there. The majority of our new index calculations were from Europe.

We will build on this momentum and expand value-added offerings to further support our clients. With the rise of sustainability, factor and thematic investing strategies shaping the investment landscape, particularly in Asia, we will leverage technology and data analytics to develop more sophisticated and differentiated index-based solutions.

Access to Asian Markets

Today, SGX's comprehensive portfolio of Asian access products covers 99% of Asia-Pacific's GDP.

We see ourselves as an important partner and conduit for institutional investors looking to tap Asia's fast-growing economies, of which China is key. With Singapore's strong financial linkages with China, we actively support the country's internationalisation efforts. SGX is recognised as the one-stop, multi-asset platform to trade Chinese assets and manage risk comprehensively across equities, currencies and commodities. This includes risk management tools covering MSCI EM Asia and MSCI China, as well as FTSE China A50 futures, USD/CNH futures and iron ore futures and options.

Another important Asian market for global investors is India. SGX and the National Stock Exchange of India (NSE) are working together on a proposed NSE International Financial Service Centre (IFSC)-SGX Connect, that aims to bring together the trading of Nifty products in Gujarat International Finance Tec-City (GIFT) and create a larger pool of liquidity comprising international and home market participants.

The Connect model, which is subject to further approvals from relevant local authorities, will enable SGX and NSE IFSC members to access Nifty products in GIFT while managing their exposures through their respective clearing corporations. SGX and NSE will work with all key stakeholders to make the Connect operational before the end of 2020, subject to members' readiness and receiving all relevant approvals. Both exchanges are also working to discontinue related arbitration proceedings.

Enhancing Access via Innovative Platforms

With the lines between products and platforms merging, our clients are progressively viewing both collectively as one solution. To this end, we have invested in advanced platforms to accelerate our multi-asset strategy, link liquidity pools across multiple venues, and develop a broader universe of global participants. Ultimately, we want to deliver greater liquidity and a better customer experience.

To address the rising convergence of OTC and listed FX and commodity markets, as well as prepare for the future of fundraising, some of our recent investments include:

- **Trumid**, a US-based fintech company and electronic trading platform for corporate bonds. Given the importance of Asian investor participation in US corporate credit markets, Trumid will tap SGX's network in Asia to deliver global access to US dollar credit products.
- **BidFX**, a specialised trading platform for global FX markets. With this investment, we are looking to offer our suite of Asian FX futures alongside the OTC products offered on the BidFX platform.
- **Freightos**, a digital freight platform and data firm, is transforming the global freight industry into a real-time, transparent and digital industry. Our strength in Asian commodities and freight derivatives will enable us to potentially develop risk management tools which bridge the physical and financial markets.
- **CapBridge**, a global investment syndication platform for private opportunities which operates 1exchange (1X), the world's first regulated private securities exchange built on a public blockchain. To help companies raise funds at different stages of their growth, we are working with CapBridge to create an ecosystem of capital flow catering to companies in the mid-to-late pre-IPO stage.

At the same time, we continue to improve our existing platforms and grow them organically:

- **SGX Bond Pro**, our fixed income platform for institutional investors, will be augmented by our investment in Trumid. As bond markets shift towards electronic trading, activity on Bond Pro has indicated that our investor base is ready to adopt new trading protocols. Given our existing 40% market share for listed G3 APAC bonds, our ambition is to extend that to secondary trading by developing Bond Pro into a leading G3 Asian bond trading platform.
- **Titan OTC Pro** is our proprietary broker-assisted OTC order management and information platform, which digitalises workflows such as straight-through processing from execution to clearing. We are progressively adding new features and launching more products on this platform.
- We launched a new post-trade system which enabled a shorter securities settlement cycle of two days (T+2), simultaneous settlement of money and securities, streamlined CDP notifications and a broker-linked balance functionality to provide brokers the ability to offer more personalised products and services to their clients. We also upgraded our securities market trading engine, and along with it introduced the Trade-at-Close session state that allows investors to trade at the closing price of the security after the closing auction.
- For a smooth retail customer experience, we rolled out a paperless CDP account opening service and allowed Singapore citizens and residents to use MyInfo, a government digital service, for the opening of CDP accounts and managing personal data.

Forging Ahead on Our Digitalisation Journey

Some of the initiatives described above are part of the digitalisation journey we are on to transform our

businesses and customer experience. In the longer term, we are exploring how new technologies such as distributed ledger technology, artificial intelligence and machine learning, powered by big data, can improve how we operate and add greater value for our customers.

We have, for instance, successfully developed Delivery versus Payment capabilities for the settlement of tokenised assets across different blockchain platforms, as part of Project Ubin led by the Monetary Authority of Singapore. This will help simplify post-trade processes and shorten settlement cycles. Based on the unique methodology to enable real-world interoperability of platforms, as well as the simultaneous exchange of digital tokens and securities, we applied for our first-ever technology patent.

Next 20 Years

This year marks SGX's 20th anniversary since the exchange was formed through the merger of the Stock Exchange of Singapore and the Singapore International Monetary Exchange in December 1999. Our track record over the past 20 years has given us a strong and deep foundation. Looking ahead at the next 20 years, our ambition is to grow both the organisation and the ecosystem in a sustainable manner, while remaining firmly anchored to this foundation.

Embarking on a reorganisation reflects this intent and purpose, as we gear ourselves for growth. To help us to build scale, capture the opportunities across multiple asset classes, and serve our clients' needs more holistically, we have reorganised ourselves into four business and client units – Fixed Income, Currencies and Commodities; Equities; Data, Connectivity and Indices; and Global Sales and Origination. More than ever, we also see the need to harness technology, develop fit-for-purpose rules and involve all our stakeholders in our next lap.

Board Stewardship

As stewards of SGX, the Board is confident that SGX's strategic priorities, including its multi-asset strategy, will grow the long-term value of the company. The Board has proposed a final dividend of 7.5 cents per share, bringing the total dividend for the year to 30 cents per share. We aim to pay a sustainable and growing dividend over time, consistent with SGX's long-term growth prospects.

At this juncture, we would like to acknowledge two new Non-Executive and Independent Directors whom you elected at our last Annual General Meeting (AGM). Mr Ng Wai King, Managing Partner of WongPartnership, brings with him extensive experience in law, mergers and acquisitions, and private equity. Mr Subra Suresh is an eminent scientist, engineer and entrepreneur with decades of leadership in academia, industry and government. Mr Ng and Mr Suresh have proven to be valuable additions to the Board.

We would also like to express our deepest appreciation to Mr Liew Mun Leong who will be retiring at the coming AGM, after having served nine years on the Board. He has contributed significantly during his tenure, and we have benefited from his insights and experience.

We are immensely proud to work alongside a dedicated Board and to count on the talents of more than 800 employees across the world. As we look forward to the tremendous opportunities ahead of us, we would like to thank all our clients, members, partners and shareholders for your unwavering confidence in us, and for journeying along with us.

Kwa Chong Seng

Chairman

Loh Boon Chye

Chief Executive Officer

Board of Directors



11

02



03



05



06



08



09

- 01** Mr Kwa Chong Seng
- 02** Mr Loh Boon Chye
- 03** Mr Thaddeus Beczak
- 04** Ms Chew Gek Khim
- 05** Ms Jane Diplock AO
- 06** Mr Kevin Kwok

- 07** Mr Liew Mun Leong
- 08** Mr Lim Chin Hu
- 09** Ms Lim Sok Hui
(Mrs Chng Sok Hui)
- 10** Mr Ng Wai King
- 11** Mr Subra Suresh

Board of Directors

Mr Kwa Chong Seng

Chairman
Non-Executive and Independent Director

Date of first appointment as a director
20 September 2012

Date of appointment as Chairman
22 September 2016

Date of last re-election as a director
21 September 2017

**Length of service as a director
(as at 30 June 2019)**
6 years 9 months

SGX Board Committee Membership
NGC (Chairman) **RSDC** (Chairman)

Academic & Professional Qualification
▪ Bachelor of Engineering (Mechanical),
National University of Singapore

**Present Directorship other than SGX
(as at 30 June 2019)**

Listed company
▪ Singapore Technologies Engineering Ltd
(Chairman)

Others (non-listed company)
▪ Seatown Holdings Pte Ltd

Major Appointment (other than Directorship)

- Advisory Committee of Dymon Asia Capital Ltd (Chairman)
- Defence Science and Technology Agency
- Public Service Commission (Deputy Chairman)

**Past Directorship other than SGX held over the preceding three years
(from 30 June 2016 to 29 June 2019)**

- Delta Topco Limited
- Neptune Orient Lines Limited¹ (Chairman)
- Olam International Limited (Chairman)

¹ Including its subsidiaries, namely APL (Bermuda) Ltd (Chairman), APL Co. Pte Ltd (Chairman), APL Limited (Chairman), Automar (Bermuda) Ltd (Chairman) and NOL Liner (Pte) Ltd. (Chairman).

Mr Loh Boon Chye

Chief Executive Officer
Executive and Non-Independent Director

Date of first appointment as a director
20 July 2015

Date of last re-election as a director
20 September 2018

**Length of service as a director
(as at 30 June 2019)**
3 years 11 months

SGX Board Committee Membership
Nil

Academic & Professional Qualification

- Bachelor of Engineering (Mechanical),
National University of Singapore

**Present Directorship other than SGX
(as at 30 June 2019)**

Listed company

Nil

Others (non-listed company)

- BC Capital Ltd
- BC Capital Properties, LLC
- BC Capital Properties Holdings LLC
- GIC Private Limited
- Gym & Sports Pte. Ltd. (Chairman)
- SBF Holdings Pte. Ltd.
- SGX Bond Trading Pte. Ltd.
- Singapore Exchange Derivatives Clearing Limited
- Singapore Exchange Derivatives Trading Limited
- Singapore Exchange Securities Trading Limited
- The Central Depository (Pte) Limited

Major Appointment (other than Directorship)

- Commodities Intelligence Centre Pte. Ltd.
(Senior Advisor)
- Council of Board Diversity (Co-Chairman)
- Economic Development Board (Board Member)
- Economic Development Board Finance Committee (Chairman)
- MAS Financial Centre Advisory Panel (Member)
- MAS Securities Industry Council (Member)
- Sim Kee Boon Institute for Financial Economics Advisory Board at Singapore Management University (Member)
- Singapore Business Federation Council (Member & Honorary Secretary)
- Singapore Business Federation Appointments and Remuneration Committee (Member)
- Singapore Business Federation Nominations Committee (Member)
- The Institute of Banking and Finance (Council Member)
- The Institute of Banking and Finance Investment Committee (Member)
- World Federation of Exchanges (Board Member)

**Past Directorship other than SGX held over the preceding three years
(from 30 June 2016 to 29 June 2019)**

Nil

Mr Thaddeus Beczak

Non-Executive and Independent Director

Date of first appointment as a director
7 October 2010

Date of last re-election as a director
21 September 2017

**Length of service as a director
(as at 30 June 2019)**
8 years 9 months

SGX Board Committee Membership
RMC (Member)

Academic & Professional Qualification

- Bachelor of Science (Foreign Service International Affairs), Georgetown University
- Master of Business Administration, Columbia University

**Present Directorship other than SGX
(as at 30 June 2019)**

Listed company

- Pacific Online Limited
- Phoenix Media Investment Holdings Limited

Others (non-listed company)

- Arnhold Holdings Limited
- Chumleigh Limited¹
- Derbyshire Limited¹
- MUFG Securities Asia Limited
- MUFG Securities Asia (Singapore) Limited
- Old Peak Investments Limited¹
- Value Scale Investments Limited¹
- White Tiger Group Limited¹

Major Appointment (other than Directorship)

- Huaxing Capital Partners
(Investment Committee Member)
- International Advisory Committee of the China Securities Regulatory Commission (Member)
- The Association of Hong Kong Forum Limited (Board Member)

**Past Directorship other than SGX held over the preceding three years
(from 30 June 2016 to 29 June 2019)**

- China Minsheng Financial Holding Corporation Limited
- Goldic Limited¹
- Jade China International Limited¹

¹ Personal family related investment holding companies.

Committee Membership Key

AC Audit

NGC Nominating & Governance

RSDC Remuneration & Staff Development

RMC Risk Management

Ms Chew Gek Khim

Non-Executive and Independent Director

Date of first appointment as a director
1 December 2013**Date of last re-election as a director**
22 September 2016**Length of service as a director
(as at 30 June 2019)**
5 years 7 months**SGX Board Committee Membership**
NGC (Member) **RSDC** (Member)**Academic & Professional Qualification**

- LL.B (Honours), National University of Singapore

**Present Directorship other than SGX
(as at 30 June 2019)**Listed company

- ARA Trust Management (Suntec) Limited (Non-Executive Chairman)
- Malaysia Smelting Corporation Berhad (Non-Independent and Non-Executive Chairman)
- The Straits Trading Company Limited (Executive Chairman)

Others (non-listed company)

- ARA Asset Management Holdings Pte. Ltd.
- Rahman Hydraulic Tin Sdn Bhd
- Straits Real Estate Pte. Ltd.
- Tan Chin Tuan Pte. Ltd¹ (Deputy Executive Chairman)
- Tocity Pte Ltd² (Executive Chairman)

Major Appointment (other than Directorship)

- Honour (Singapore) Ltd (Member)
- RSIS Board of Governors (Member)
- MAS Securities Industry Council (Member)
- The Tan Chin Tuan Foundation (Deputy Executive Chairman)
- The Tan Sri Tan Foundation (*undergoing liquidation*) (Chairman)

**Past Directorship other than SGX
held over the preceding three years
(from 30 June 2016 to 29 June 2019)**

- Amalgamated Holdings Private Limited
- ARA Asset Management Limited (Non-Executive Deputy Chairman)
- Cairnhill Rock Pte. Ltd.
- Morriston Pte. Ltd.
- Selected Properties Pte. Ltd.

¹ Including its subsidiaries & associates, namely Consultants Services (Private) Limited (Executive Chairman), Tocity Management Pte. Ltd. (Executive Chairman), Grange Investments Holdings Private Limited, Kambau Pte. Ltd. (Executive Chairman), Tiong Cheng Pte Ltd (Deputy Executive Chairman), Amberlight Limited, Siong Lim Private Limited (Executive Chairman), Choice Equities Pte Ltd, Integrated Holdings Private Limited (Executive Chairman) Nexford Holdings Pte Ltd, Aequitas Pte. Ltd., Raffles Investments Private Limited, Raffles Investments (1993) Pte Ltd, Sigford Pte. Ltd.

² Including its subsidiaries & associates, namely Ho Peng Holdings Private Limited, Selected Holdings Private Limited, Mellford Pte. Ltd. and The Cairns Pte. Ltd.

Ms Jane Diplock AO

Non-Executive and Independent Director

Date of first appointment as a director
25 July 2011**Date of next re-election as a director**
3 October 2019**Length of service as a director
(as at 30 June 2019)**
7 years 11 months**SGX Board Committee Membership**
AC (Member) **RMC** (Member)**Academic & Professional Qualification**

- Bachelor of Arts (Honours), LL.B, Dip Ed., Sydney University
- Dip. Int. Law, Australian National University
- Chartered Fellow of the New Zealand Institute of Directors
- Fellow of the Australian Institute of Company Directors

**Present Directorship other than SGX
(as at 30 June 2019)**Listed company

Nil

Others (non-listed company)

- Australian Financial Services Group Pty Limited
- Singapore Exchange Regulation Pte. Ltd.

Major Appointment (other than Directorship)

- Abu Dhabi Global Market Regulatory Committee (Chairman)
- International Advisory Board of the Securities and Exchange Board of India (Member)
- International Advisory Committee of the China Securities Regulatory Commission (Member)
- International Integrated Reporting Council (Chairman Governance and Nominations Committee)
- Public Interest Oversight Board (Member)

**Past Directorship other than SGX
held over the preceding three years
(from 30 June 2016 to 29 June 2019)**

- International Integrated Reporting Council Board (Deputy Chairman & Lead Independent Director)

Mr Kevin Kwok

Non-Executive and Independent Director

Date of first appointment as a director
20 September 2012**Date of last re-election as a director**
20 September 2018**Length of service as a director
(as at 30 June 2019)**
6 years 9 months**SGX Board Committee Membership**
AC (Member) **NGC** (Member)
RMC (Member)**Academic & Professional Qualification**

- Bachelor of Arts (Honours), University of Sheffield
- ACA – Associate, Institute of Chartered Accountants in England & Wales
- FCA – Fellow, Institute of Singapore Chartered Accountants
- FSID – Fellow, Singapore Institute of Directors

**Present Directorship other than SGX
(as at 30 June 2019)**Listed company

- Mapletree North Asia Commercial Trust Management Ltd

Others (non-listed company)

Nil

Major Appointment (other than Directorship)

- Accounting Standards Council (Chairman)

**Past Directorship other than SGX
held over the preceding three years
(from 30 June 2016 to 29 June 2019)**

- Keppel Offshore & Marine Ltd
- Singapore Institute of Directors
- Wheelock Properties (Singapore) Limited

Board of Directors

Mr Liew Mun Leong

Non-Executive and Independent Director

Date of first appointment as a director
1 July 2009

Date of last re-election as a director
21 September 2017

**Length of service as a director
(as at 30 June 2019)**
10 years

SGX Board Committee Membership
AC (Member) NGC (Member)
RSDC (Member)

Academic & Professional Qualification

- Bachelor of Engineering (Civil), University of Singapore
- Registered Professional Engineer

**Present Directorship other than SGX
(as at 30 June 2019)**

Listed company
Nil

Others (non-listed company)

- Changi Airport Group (Singapore) Pte Ltd (Chairman)
- China Club Investment Pte Ltd (Chairman)
- Singapore-China Foundation Ltd
- Surbana Jurong Private Limited (Chairman)
- Temasek Foundation Nurtures CLG Limited (Chairman)

Major Appointment (other than Directorship)

- Chinese Development Assistance Council (Member, Board of Trustees)
- Lee Kuan Yew School of Public Policy (Provost's Chair Professor (Practice) Pro Bono)
- NUS Business School (Advisory Board Member)
- NUS Business School (Provost's Chair Professor (Practice) Pro Bono)
- NUS Faculty of Engineering (Provost's Chair Professor (Practice) Pro Bono)
- NUS Ridge View Residential College (Rector)
- NUS School of Continuing and Lifelong Education (SCALE) Industry Advisory Board (Chairman)

**Past Directorship other than SGX held over the preceding three years
(from 30 June 2016 to 29 June 2019)**

- CapitalLand Hope Foundation
- Dymon Asia Real Estate Limited (Chairman)
- Human Capital Leadership Institute
- Lotus Mentoring Leadership Pte. Ltd

Mr Lim Chin Hu

Non-Executive and Non-Independent Director

Date of appointment as a director
21 September 2017

**Length of service as a director
(as at 30 June 2019)**
2 years

SGX Board Committee Membership
RMC (Member) NGC (Member)

Academic & Professional Qualification

- Bachelor of Applied Science, La Trobe University, Australia
- FSID – Fellow, Singapore Institute of Directors

**Present Directorship other than SGX
(on 30 June 2019)**

Listed company

- Kulicke & Soffa Incorporated (Listed on Nasdaq)
- Singapore Technologies Engineering Ltd ("STEngg")

Others (non-listed company)

- Citibank Singapore Limited
- G-Able Thailand Ltd
- Heliconia Capital Management Pte Ltd ("Heliconia")
- Vanda 1 Investments Pte. Ltd.
(Subsidiary of Heliconia)
- Singapore Health Services Pte. Ltd.
(SingHealth)
- Aescapplus Holdings Pte Ltd
(Subsidiary of SingHealth)
- Alps Pte. Ltd.
(Subsidiary of SingHealth)
- Integrated Health Information Systems Pte. Ltd.
(Subsidiary of Ministry of Health Holdings)
- SP Telecommunications Pte Ltd
(Subsidiary of STEngg)

Major Appointment (other than Directorship)

- Stream Global Pte Ltd (Partner)

**Past Directorship other than SGX held over the preceding three years
(from 30 June 2016 to 29 June 2019)**

- Changi General Hospital Pte Ltd
- Eastern Health Alliance Pte. Ltd.
- Keppel DC REIT Management Pte. Ltd.
- Personal Data Protection Commission (IMDA)
- Telstra Ltd (Listed on ASX)

Ms Lim Sok Hui (Mrs Chng Sok Hui)

Non-Executive and Non-Independent Director

Date of first appointment as a director
1 December 2015

Date of next re-election as a director
3 October 2019

**Length of service as a director
(as at 30 June 2019)**
3 years 7 months

SGX Board Committee Membership
RMC (Chairman)

Academic & Professional Qualification

- Bachelor of Accountancy (Honours), National University of Singapore
- Chartered Financial Analyst (CFA)
- Certified Financial Risk Manager (FRM)
- Fellow Chartered Accountant of Singapore
- IBF Distinguished Fellow

**Present Directorship other than SGX
(as at 30 June 2019)**

Listed company
Nil

Others (non-listed company)

- Inland Revenue Authority of Singapore

Major Appointment (other than Directorship)

- DBS Group (Chief Financial Officer)
- DBS Bank India Ltd (Non-Executive Chairman)
- International Integrated Reporting (Council Member)
- International Women's Forum (Singapore) (Member)

**Past Directorship other than SGX held over the preceding three years
(from 30 June 2016 to 29 June 2019)**

Nil

Mr Ng Wai King

Non-Executive and Independent Director

Date of first appointment as a director
20 September 2018**Length of service as a director
(as at 30 June 2019)**
9 months**SGX Board Committee Membership**
RSDC (Member)**Academic & Professional Qualification**
■ LL.M., Columbia University School of Law, New York
■ LL.B. (Honours), National University of Singapore**Present Directorship other than SGX
(as at 30 June 2019)**Listed company
■ CapitaLand Commercial Trust Management LimitedOthers (non-listed company)

- National University of Singapore (Member of Board of Trustees)
- Singapore Institute of Directors (Member of Governing Council)
- Tricor WP Corporate Services Pte Ltd
- Wah Hin and Company Private Limited
- WongPartnership Myanmar Limited
- WPGrowth Ventures Pte Ltd

Major Appointment (other than Directorship)

- Lakeside Family Centre (Vice-Chairman)
- Member of Companies Act Working Group, established by ACRA
- Member of Monetary Authority of Singapore Financial Centre Advisory Panel
- WongPartnership LLP (Managing Partner)

Past Directorship other than SGX**held over the preceding three years
(from 30 June 2016 to 29 June 2019)**

- 89 Holdings Pte. Ltd
- Home Nursing Foundation

Mr Subra Suresh

Non-Executive and Independent Director

Date of first appointment as a director
20 September 2018**Length of service as a director
(as at 30 June 2019)**
9 months**SGX Board Committee Membership**
NGC (Member)**Academic & Professional Qualification**
■ Doctor of Science (Sc.D.), M.I.T., Cambridge, MA, USA
■ Master of Science (M.S.), Iowa State University, Ames, IA, USA
■ Bachelor of Technology (B.Tech.), Indian Institute of Technology, Madras**Present Directorship other than SGX
(as at 30 June 2019)**Listed company
NilOthers (non-listed company)
HP Inc., Palo Alto, CA, USA**Major Appointment (other than Directorship)**
■ Temasek International Pte Ltd., Singapore (Senior Advisor)**Past Directorship other than SGX
held over the preceding three years
(from 30 June 2016 to 29 June 2019)**

- Battelle Memorial Institute, Columbus, OH, USA
- The Dietrich Foundation, Pittsburgh, PA, USA

Executive Management Committee



from left:

Mr Tan Boon Gin
Ms Tinku Gupta
Mr Chew Sutat
Mr Loh Boon Chye
Mr Chng Lay Chew
Mr Michael Syn
Mr Muthukrishnan Ramaswami
Mr Arulraj Devadoss
Ms Agnes Koh



Performance Overview

Group Overview

Value Creation & Sustainability

Governance

Financials

Others

Executive Management Committee

Mr Loh Boon Chye

Chief Executive Officer

Mr Loh Boon Chye joined SGX as CEO on 14 July 2015. He is also an Executive and Non-Independent Director on the SGX Board.

With a career in the financial industry that spans close to 30 years, Mr Loh was most recently Deputy President and Head of Asia Pacific Global Markets at Bank of America-Merrill Lynch from December 2012 to May 2015. He was also the bank's Country Executive for Singapore and Southeast Asia and a member of its Asia Pacific Executive Committee.

Mr Loh began his career as an Investment Officer with the Monetary Authority of Singapore in 1989. He joined the Singapore branch of Morgan Guaranty Trust Co. of New York in 1992, managing its Southeast Asia fixed-income and derivatives business. From 1995 to 2012, he was with Deutsche Bank AG, where he held various leadership roles including Head of Corporate & Investment Banking for Asia Pacific and Head of Global Markets for Asia.

Over the years, Mr Loh has played a key role in the development of Southeast Asia's capital markets, having held a number of senior advisory positions. Apart from his directorship on the SGX Board from 2003 to 2012, he has also been on the Boards of GIC Pte Ltd since November 2012, Economic Development Board Singapore since February 2017 and the World Federation of Exchanges since September 2017.

He was also previously Chairman of the Singapore Foreign Exchange Market Committee, as well as Deputy President of ACI Singapore.

Mr Loh is a council member and Distinguished Fellow at the Institute of Banking & Finance Singapore and was awarded for Outstanding Contribution to Financial Markets in Asia in the Euromoney Awards for Excellence in 2010. He was also presented the International Financial Law Review (IFLR) Market Reform Award 2017.

Mr Loh holds a Bachelor of Engineering degree from the National University of Singapore.

Mr Muthukrishnan Ramaswami

President

As President, Mr Muthukrishnan Ramaswami (Ramu) is responsible for operational aspects of SGX. He directly oversees SGX's Membership &

International Coverage including all of SGX's overseas offices, Market Data and Connectivity and Operations & Technology functions. These units support SGX's Derivatives, and Equities and Fixed Income businesses. Immediately prior to this, he oversaw all the product groups covering Securities, Fixed Income, Derivatives and Market Data & Access.

Mr Ramaswami joined SGX as Senior Executive Vice President and Chief Operations Officer on 1 July 2007, and was appointed Co-President in July 2010 and President in May 2012.

Mr Ramaswami joined SGX from Citigroup where he held senior positions across Operations, Technology and Transaction Banking in various locations including Mumbai, Singapore, Hong Kong, London and New York. He was most recently Chief Information Officer with the International Consumer Business of Citigroup's Global Consumer Bank, based in New York and over the years, held progressively senior executive positions in Citigroup's international and regional offices.

Mr Ramaswami serves on the board of GovTech Singapore and is Chairman of its Audit and Risk Committee. He is also on the board of the Energy Market Company, a wholly-owned subsidiary of SGX.

Mr Ramaswami holds a Master's Degree in Mathematics (Honours) from Birla Institute of Technology and Sciences, and a Post Graduate Diploma in Management Studies (Masters in Business Administration) from the Indian Institute of Management, Ahmedabad.

Mr Chng Lay Chew

Chief Financial Officer

Mr Chng Lay Chew is Chief Financial Officer of SGX where he oversees Finance, Corporate Treasury, Capital Management and Investor Relations. In his role, he also manages the Facilities Management and Central Procurement units.

Mr Chng has more than 30 years of experience in accounting and financial management, including leadership positions in leading local and international banks. In his previous role, he was responsible for the finance functions of DBS Group's operations in all countries outside Singapore. He was also previously CFO of the bank's Greater China business, supporting the integration and growth of its Hong Kong operations and the expansion into China. His earlier roles include senior finance positions in JP Morgan's Singapore, Tokyo and New York offices.

Mr Chng serves on the board of the Philippine Dealing System Holdings Corp and the Baltic Exchange. He is also a member of the Advisory Board of the School of Accountancy at the Singapore Management University and currently serves as President of the Singapore Division of CPA Australia.

Mr Chng is a member of the Chartered Accountants Australia and New Zealand, the Institute of Singapore Chartered Accountants and a Fellow member of CPA Australia. He holds a Bachelor of Commerce and Administration degree from New Zealand's Victoria University of Wellington.

Ms Agnes Koh

Chief Risk Officer

Ms Agnes Koh was appointed Chief Risk Officer of SGX from January 2014. She is responsible for championing and leading enterprise risk management activities across the organisation, formulating the risk framework and assessments for new products and business strategies, and managing the clearing risk of SGX's securities and derivatives clearing houses. Since September 2015, Ms Koh oversees the business continuity management of SGX. She is also appointed as Chairman of Energy Market Company (EMC), a wholly owned subsidiary of SGX which operates Singapore's wholesale electricity market from 1 October 2018. She is an Executive Committee member of CCP12, a global association for central counterparties that work together on issues of mutual interest and benefit to minimise global systemic risk and enhance the efficiency and effectiveness of international markets.

Ms Koh joined SGX on 1 December 2005 as Vice President in Risk Management and has worked through various roles within risk management. Prior to joining SGX, she had more than 11 years of experience in managing the foreign reserves of the Monetary Authority of Singapore and was also an auditor with a public accountancy firm.

Ms Koh was conferred the Distinguished Fellow award by the Institute of Banking and Finance Singapore (IBF) in 2016. The IBF Distinguished Fellow is a significant role model who serves as a beacon of excellence for the financial industry. She is a Certified Public Accountant from Institute of CPA and holds a Bachelor of Accountancy (Hons) from National University of Singapore.

Mr Tan Boon Gin

Chief Executive Officer
Singapore Exchange Regulation

Mr Tan Boon Gin joined SGX as Chief Regulatory Officer on 15 June 2015. He now heads Singapore Exchange Regulation, an independent regulatory subsidiary of SGX, which undertakes all front-line regulatory functions to promote a fair, orderly and transparent market.

Before joining SGX, Mr Tan was Director of the Commercial Affairs Department of the Singapore Police Force. Prior to this, Mr Tan held several appointments at the Monetary Authority of Singapore (MAS) including Director of the Enforcement Division, Director of the Corporate Finance Division and Executive Director of the Investment Intermediaries Department. Mr Tan was seconded to MAS after serving as a District Judge at Singapore's Subordinate Courts.

Mr Tan's earlier roles include serving as a Justice's Law Clerk at Singapore's Supreme Court and a Deputy Public Prosecutor at the Attorney General's Chamber, where he specialised in corruption and white collar crime, before leaving to practise at Messrs Sullivan & Cromwell in New York. He is a member of the Singapore Institute of Directors Council and serves on the Board of the Inland Revenue Authority of Singapore.

Mr Tan is an advocate and solicitor and holds degrees from the University of Cambridge and Harvard Law School. Mr Tan was awarded the Public Administration (Silver) Medal in 2010.

Mr Chew Sutat

Executive Vice President

Mr Chew Sutat, Head of Equities and Fixed Income, is responsible for the listing, trading and post-trade businesses for SGX. Mr Chew joined SGX in June 2007 and was appointed to the Executive Management Committee in May 2008. He is also the Chairman of SGX's Bull Charge CSR initiatives.

Prior to SGX, he was Group Head, Investment & Treasury Products at Standard Chartered Bank, responsible for the strategy and development of the bank's Wealth Management business globally.

Before Standard Chartered Bank, Mr Chew was with OCBC Securities, heading the development of non-traditional investment products and services, and the proprietary trading team. He began his career with DBS Bank in the Custody function, and held varying portfolios in strategic planning and

business development for institutional banking and private clients.

Mr Chew sits on the boards of CapBridge, a private capital platform, and ICHX Tech, a blockchain-based infrastructure company, both of which are supported by SGX. Outside of SGX, he is a Fellow of the Institute of Banking and Finance Singapore (IBF) and Chairman of IBF's Sub-Committee for Corporate Finance, Securities & Futures. He also serves as industry advisor for the Government Parliamentary Committee for Finance, Trade & Industry, as well as Chairman of Caregivers Alliance Limited (Charity) and Kaki Bukit Citizens' Consultative Committee.

Mr Chew graduated with a Bachelor of Arts (1st Class Honours) degree in Philosophy Politics & Economics (PPE) from Oxford University, Keble College in 1996. He also holds a Master of Arts degree from Oxford.

Mr Arulraj Devadoss

Executive Vice President

Mr Arulraj Devadoss joined SGX on 1 December 2011 as Head of Human Resources and was appointed to the Executive Management Committee in May 2012.

Mr Devadoss is an industry veteran with more than 30 years in human resources management, and comes with a rich global experience from the banking and financial industry.

In his 20 years with Standard Chartered Bank, he worked in roles across several businesses and spanning various aspects of human resources. In his last role, he was the Global Human Resources Head for the Client Relationship Business of Standard Chartered Bank.

Mr Devadoss graduated with a Bachelor of Arts Degree in Economics from University of Madras, India in 1982. He also holds a Honours Diploma in Personnel Management and Industrial Relations from Xavier Labour Relations Institute, Jamshedpur.

Mr Michael Syn

Executive Vice President

Mr Michael Syn is Head of Derivatives at SGX. Mr Syn has management responsibility for SGX's award-winning derivatives trading and clearing business, offering a full suite of derivatives products across Asian equity indices, commodities and foreign exchange. He oversees Energy Market Company (EMC) which operates Singapore's wholesale electricity market, as well as the Baltic Exchange based in London.

Mr Syn joined SGX on 1 March 2011 with a background in investment banking and investment management, having worked in both London and Singapore. Prior to SGX, he was Chief Operating Officer of DBS Asset Management, a subsidiary of DBS Bank.

Mr Syn serves on the boards of EMC and the Baltic Exchange. He also serves on the advisory board of The Centre for Asset Management Research & Investments (CAMRI) at the National University of Singapore, and the council of the Economic Society of Singapore.

Mr Syn graduated with Master of Arts and PhD degrees from Cambridge and attended the Harvard Advanced Management Program (AMP).

Ms Tinku Gupta

Executive Vice President

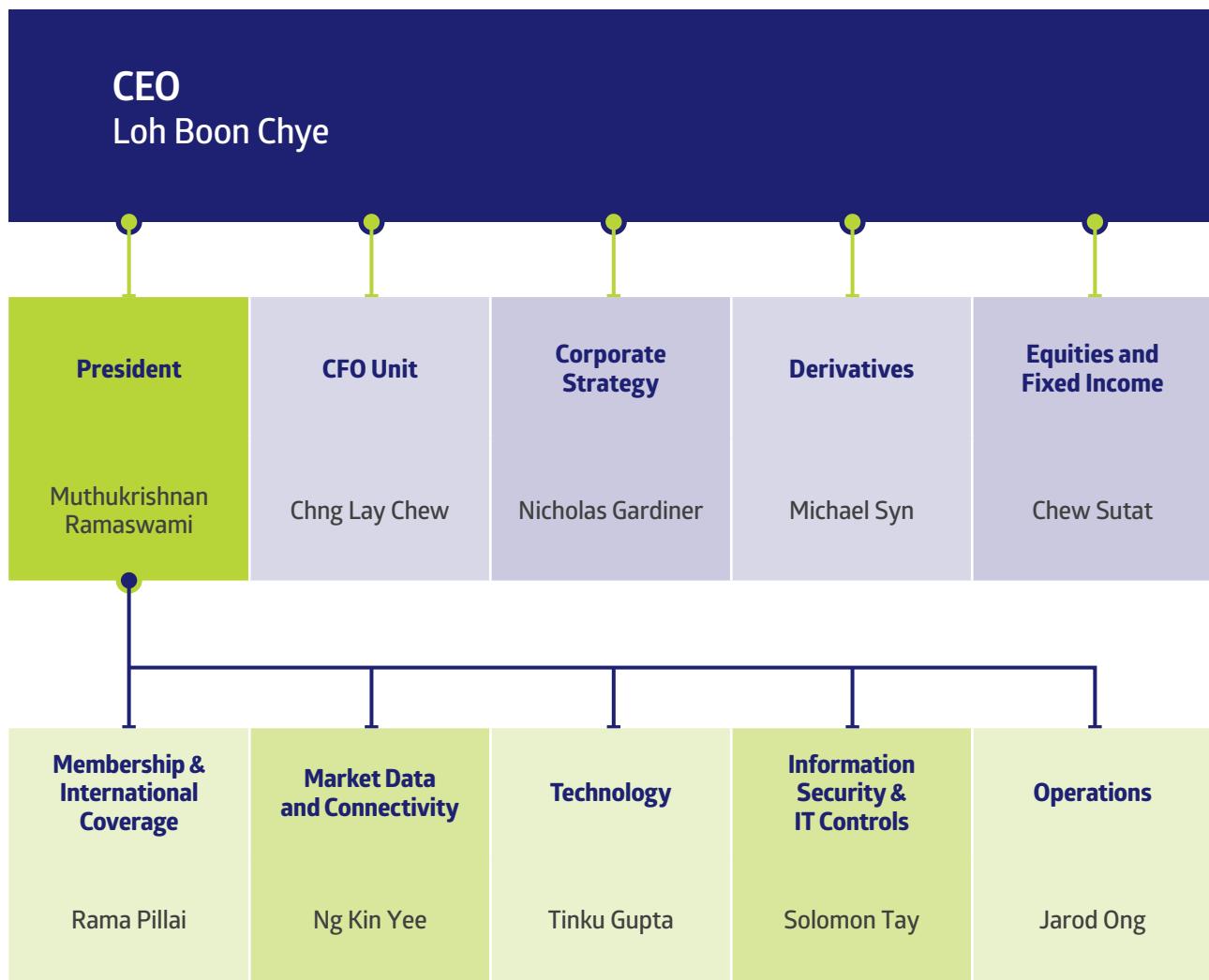
Ms Tinku Gupta is Head of Technology, where she is responsible for the overall planning, development and implementation of the company's technology-related strategies and initiatives, as well as operations of SGX Technology environment. She was appointed as a member of the SGX Executive Management Committee on 1 May 2017.

Ms Gupta joined SGX in October 1996, in what was then known as SIMEX, as a software developer in the Technology team. Over the past 20 years, she has worked in a variety of roles, gaining exposure in many aspects of SGX's business and Technology functions. Amongst her various job rotations, she successfully led the Business Integration and Programme Management function in SGX through a period of significant change and worked on implementing the current Securities and Derivatives platforms on NASDAQ applications. She also headed the Market Data and Connectivity business, successfully establishing the colocation services business and launching the index business, before returning to head the Technology unit in November 2015.

Under her Technology leadership, SGX is steadily strengthening its software development capabilities and building differentiated platforms to support its multi-asset class strategy. Steering experimentation on emerging technologies to enable transformation and innovation excites her to be a technologist in capital markets in this technology-led economy.

Ms Gupta holds a Masters' degree in Electronics and Telecommunications Engineering.

Organisation



Number of Employees¹



834

¹ Permanent headcount including EMC and Baltic Exchange but excluding employees on no pay leave.

Average Length of Service



8 years

Employees Retention

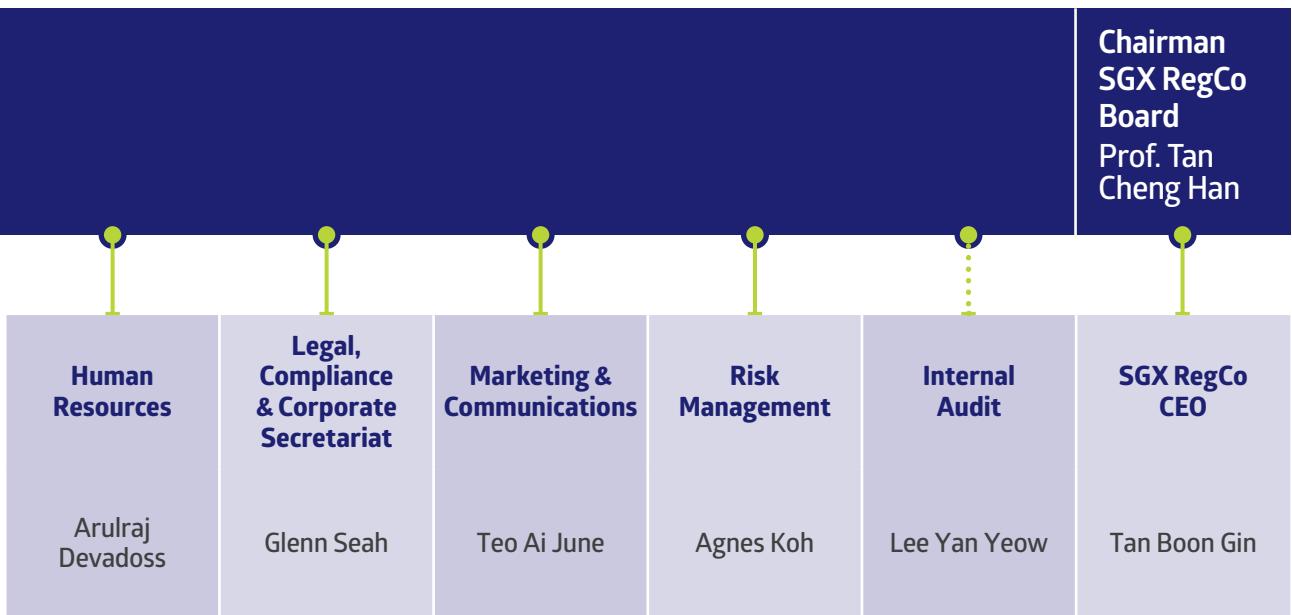


88%

Average Training Hours per Employee



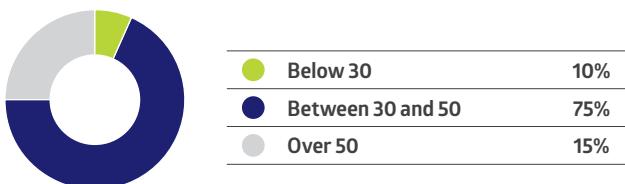
45 hours



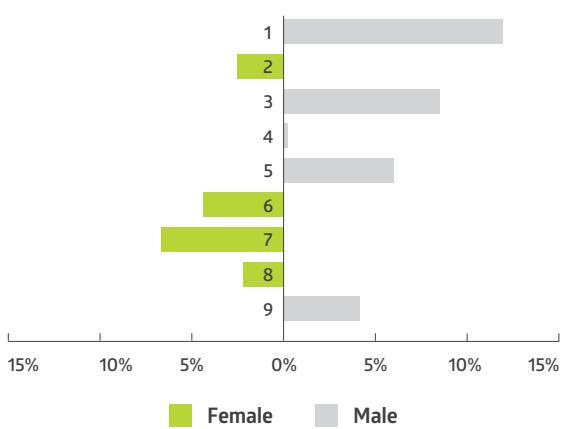
Gender Diversity



Age Diversity



Gender Pay Gap (across employment categories)



Note: 1 to 9 are job grades (where 1 is most senior): a band on the right indicates males are paid higher, while a band on the left indicates females are paid higher.

Value Creation & Sustainability





SGX has been present in London since 2010, servicing and supporting its customers across European time zones. As the multi-asset marketplace of choice, SGX is strengthening connectivity for global institutions seeking to tap opportunities in Asia's growth.

How We Create Value

Singapore Exchange (SGX) is committed to maintaining a sustainable business that generates long-term value for our stakeholders. This integrated report describes how we formulate our strategic priorities from identified trends, risks, and factors that are material to maintaining organisational sustainability. It also describes how we continue to invest in our commitment to be a leading centre for capital raising, risk management and price discovery.

Forms of Capital

SGX's ability to create value is dependent on the effective deployment of our financial, human, intellectual and social capital.

01 Financial Capital

Our share capital and retained profits. Our financial capital is used to recruit and retain staff, invest in best-in-class technology and infrastructure, capitalise our two clearing houses and acquire assets in support of our growth strategy.

02 Human Capital

Our staff's experience and expertise. Our highly-skilled staff ensure operational resilience, innovative product and business development, and assurance of a fair, orderly, and transparent marketplace.

03 Intellectual Capital

Our institutionalised knowledge base. This is made up of our policies, procedures and processes, knowledge-based intangible assets, software, proprietary rights to our market data, indices, and our brand. We embrace new technology to increase our knowledge base.

04 Social Capital

Our collaborative relationships with various stakeholders, including our investors, partners, clients, regulators, market participants and the communities in which we operate. We also leverage on being headquartered in the only Asian economy that is AAA-rated by major credit rating agencies.

Key Trends



Macroeconomic Environment



Developments in Financial Markets



Global Regulatory Landscape

Sustainable Business Model



Key Risks



Business Risks



Credit & Liquidity Risks



Operational Risks

- For further details on our Key Risks
→ Go to pages **36 to 37** and pages **40 to 45**

- For further details on our Strategic Priorities
→ Go to pages **38 to 39**

- For further details on Economic Performance, Socioeconomic Impacts, Governance and People
→ Go to pages **47 to 53**

SGX is a global, diversified, multi-asset exchange group that runs key market infrastructures including the Singapore securities market and a pan-Asian derivatives exchange covering all major asset classes.

Our securities market offers a platform for businesses to gain access to capital, and for investors to be a part of Asia's economic growth. International customers participate in our derivatives market which is the world's only pan-Asian derivatives exchange offering single point access into major Asian markets.

As a self-regulatory organisation (SRO), SGX has dual and equally important roles as a front-line market regulator and a commercial organisation. We ensure that listed companies meet their ongoing obligations to investors, and that participation in our markets is carried out in a fair, orderly and transparent manner.



For further details on our Corporate Governance practices
Go to pages **58 to 83**

For further details on our role as a Self-Regulatory Organisation
Go to pages **84 to 90**

Our Awards

Financial Metals Service Provider of the Year by S&P Global Platts

Exchange of the Year – Derivatives by FOW Asia Capital Markets Awards

Best FX Exchange in Asia and Best FX Clearing House in Asia by FX Week

Asia-Pacific Derivatives Exchange of the Year by GlobalCapital (fifth consecutive year)

Derivatives Exchange of the Year by Asia Risk (fifth consecutive year)

Exchange of the Year by Energy Risk Asia (third consecutive year)

Outcomes for Stakeholders

01 We are the venue of choice for raising capital

We operate the largest stock market in Southeast Asia. With a market capitalisation of almost S\$1 trillion, we are an international listing venue where almost half of our equity market capitalisation comes from non-Singapore companies. We are also the largest exchange in Asia Pacific for the listing of international bonds with over 5,000 debt securities listed, including Masala, Komodo and Green bonds, and securitised products.

02 We are a trusted pan-Asian multi-asset risk management centre

We are the world's most liquid offshore market for equity index derivatives covering major Asian economies, and a global commodities risk management and price discovery centre. Through our innovative approach to the Asia-centric steel value chain, we lead the way in risk and pricing solutions for iron ore, coking coal, steel and freight. We also offer a growing portfolio of FX futures contracts for investors to manage Asian currency exposure.

We have robust risk management systems and processes that are aligned with global standards, and we continue to be recognised by global regulators such as the Commodity Futures Trading Commission (CFTC) and the European Securities and Markets Authority (ESMA).

03 We return value to our shareholders

In the last 10 years, we have returned value to our shareholders through annual dividend payouts of between 26 cents to 30 cents per share, representing a payout ratio of above 80% of net profits. Dividends are paid to shareholders on a quarterly basis.

04 We are a systemically important financial infrastructure to the Singapore financial ecosystem

We meet the highest governance and regulatory standards in support of Singapore's status as a global financial centre.

Key Trends



Macroeconomic Environment

A key factor influencing our business performance is the level of market activity.

Our business performance is influenced by the level of activity in our securities and derivatives markets. Developments in global macroeconomic policies and geopolitical climate will have an impact on the performance of Singapore and regional companies. The anticipated performance of these companies will further influence the amount of transactions by the investment community, which directly contributes to the level of activity in our market. Companies also seek capital to fund growth opportunities, and increased demand for capital raising is key to generating market activity in our securities market.

In an environment where there is volatility in underlying equities, currencies and commodities markets, investors will demand for tools to hedge their portfolio risks. This will result in the increased use of SGX's suite of Asian risk management solutions in asset classes such as equities, currencies, and commodities, leading to higher activity on our derivatives market.

In the past year, our markets were significantly influenced by the manner in which investors reacted to expected policy changes in benchmark interest rates, a slowing global economy, and the trade war between US and China. Amidst these developments, SGX's multi-asset business, which offers a broad range of products, has established us as an ideal marketplace to meet the increased need for financial risk management and access to Asian markets.

SGX's continued success in creating long-term stakeholder value is largely influenced by a number of key trends. Our management has reviewed and identified six key trends. They encompass developments in macroeconomic environment, financial markets, global regulatory landscape, environment



Developments in Financial Markets

Rising interest in Asia and growth of passive investing will fuel demand for access and portfolio risk management solutions.

Asia is expected to continue to lead global economic growth. According to the OECD Development Centre, average global economic growth is expected to be between 3.3% and 3.4% over 2019 and 2023, while Emerging Asia (Southeast Asia economies, China, and India) will grow at an average of 6.1% over the same period. Fueling Asia's growth will be China's journey to liberalise its financial markets. In the past year, capital flows to Asia grew as China stepped-up its internationalisation efforts by progressively opening its equities, debt and currency markets to foreign participation. China's A-shares have been added to major global indices, as seen in the inclusion of A-shares in the MSCI global benchmark indices in 2018 and subsequent increased weightage in May 2019. The weightage of A-shares is expected to rise further, which may lead to additional foreign fund inflows to Asia.

Another trend driving financial markets is the growth of passive investing. In Asia Pacific, PwC¹ expects passive investing to grow by more than 10% annually to US\$5 trillion in 2025. The growth of passive investing will lead to higher demand for portfolio risk management solutions using equity index products on exchanges.

SGX is well positioned to address investors' varied demands. Our comprehensive suite of multi-asset Asian products, which addresses 99% of Asia-Pacific's GDP, offers investors the ability to participate in Asia's growth prospects as well as manage investment portfolio risks.



Global Regulatory Landscape

From post-crisis reforms to navigating a transforming regulatory landscape.

As financial markets evolve following the 2008 Global Financial Crisis, regulators worldwide have been focusing on the challenges presented by technological innovation and evolving business models. SGX is attuned to these complexities and works closely with both regulators and market participants to thrive in this dynamic environment.

SGX offers trading and clearing services to participants in line with international standards. We are regulated by the Monetary Authority of Singapore, the US Commodity Futures Trading Commission, and the Hong Kong Securities and Futures Commission. We are also recognised by the European Securities and Markets Authority and the UK Financial Conduct Authority in various capacities. Our ability to meet standards on a cross-border basis is a competitive advantage that enables us to achieve our growth objectives.

Financial institutions have taken to new digital tools to facilitate their services, such as artificial intelligence and distributed ledger technology (DLT). Non-traditional entrants such as crypto-assets and robo-advisers, are becoming more prevalent. This brings about new risks and twists on regulatory issues. Policymakers globally are now adapting their post-crisis regulatory frameworks to fit this rapidly developing landscape. In this regard, SGX has collaborated with the MAS and other partners to explore the use of DLT. SGX will continue to keep abreast of developments, harness new technologies to improve our service offerings and engage with stakeholders in the formulation of appropriate regulatory responses.

¹ Asset & Wealth Management 2025: The Asian Awakening Report, PwC (2019).

for fund raising, competition, and technology. Each key trend brings unique risks and opportunities to the organisation, and is a major consideration in our approach to the formulation of our strategic priorities. We regularly review these key trends to assess their impact on our business model over the near, medium and long-term future.



Environment for Fund Raising

Private markets compete more with public equities.

Numerous sources of funding are now available to companies, which is delaying their need to tap the public markets.

With global capital flow and the search for “unicorns”, or large technology-oriented start-ups worth more than \$1 billion, private capital in the form of venture capital is readily available and actively seeking to deploy funds to this high growth industry. As Singapore becomes a global technology hub, more venture capitalists have based themselves in Singapore and the region. With such competitive capital, Singapore and regional companies could remain private and tap the private markets for a longer time. While the need for a liquidity event remains, there is no longer any urgency. As such, companies are delaying their IPO until private funding dries up, or until they reach a significant size.

SGX's approach is to extend its presence in the private markets, with the goal of creating a catchment area for future IPOs. One initiative is our investment in CapBridge, a private capital-raising platform. CapBridge recently received approval from the Monetary Authority of Singapore for its associated entity, CapBridge Platform, to operate a securities exchange as a recognised market operator in Singapore. CapBridge's affiliate 1exchange (1X) private exchange structure is designed to catalyse liquidity for private companies, prior to an IPO or M&A. Its aim is to build a healthy IPO pipeline of emerging growth companies.



Competition

SGX faces competition from global exchanges.

Due to the attractiveness of Asian markets, exchanges globally have been focusing on being a part of Asia's growth. In the near to medium term, we remain confident that we can compete favourably with existing and new competitors. Our strength lies in being a diversified multi-asset exchange, our reliable platform for capital raising, our robust regulatory system, and our unique value proposition as the only exchange offering single-point access into key Asian markets. We also operate well-capitalised clearing houses that meet the highest global regulatory standards, instilling trust and confidence in our participants.

As the only securities market operator in Singapore, we pride ourselves to be the most international stock market where almost half of our market capitalisation is from companies that are domiciled outside Singapore.

Our derivatives business remains uniquely pan-Asian, offering Asian access and risk management solutions to investors in asset classes such as equities, currencies, and commodities. Potential competitive threats could come from other exchanges developing similar platforms. We believe our broad range of Asian risk management solutions in multiple asset classes, and our cross-margining benefits that result in lower cost of capital for clients, will enable us to compete favourably.

SGX continues to explore inorganic opportunities that will offer synergies and growth potential, and expand our partnerships and networks to develop mutual commercial benefit. During the year, SGX made strategic investments in Freightos, Trumid and BidFX to complement our existing businesses.



Technology Developments

Technology continues to be both a key enabler as well as a potential source of significant disruption to our business model in the long run.

SGX relies on technology across all aspects of business and operations. We focus on enhancing operational resilience, while seeking to future-proof our infrastructure for the longer term by making investments in emerging technologies. We continue our digitalisation journey with customer-focused, data-centric and innovative initiatives. This is crucial to ensuring long-term sustainability of our organisation.

As a critical infrastructure provider in the Singapore financial system, we contribute to the industry development of security standards to address global cybersecurity risks. We are also progressively investing in new technology capabilities to improve our ability to anticipate, assess and manage these risks.

The long-term trend is for exchanges to become integrated platforms where a broad range of products are seamlessly listed and traded, including products traditionally traded over-the-counter. SGX is progressing along this trend, supported by innovations in trading platforms, connectivity, as well as the continued enhancements of capabilities to meet industry needs.

Disruptive technologies are poised to change the landscape of our industry over time. To remain relevant as a centre for capital raising, price discovery and risk management, we have focused on engineering innovation, building intellectual property with emerging technologies, and establishing key partnerships with leading technology companies and universities. This has culminated in SGX filing its first ever technology patent on distributed ledger technologies. We will continue to build up our software development, cybersecurity and data science capabilities to empower current and future business models.

Strategic Priorities

Our long-term priority is to be a global multi-asset exchange both horizontally and vertically integrated, covering all major asset classes across time zones. During the year, we made progress in this area and will continue to pursue this long-term priority. Our priorities also include growing our international presence, and expanding our network and partnerships.



Build a Multi-Asset Exchange

Widen our product offering and increase our trading and clearing activities



Grow International Presence

Build up capabilities in our overseas offices, acquire new clients and deepen client engagement



Expand Network and Partnerships

Strengthen cross-border flows through collaboration with other markets

Fixed Income

Grow our bond listings and establish SGX Bond Pro as a leading offshore G3 Asian bond trading platform.

Currencies

Strengthen our market position in Asian currencies by capitalising on Singapore's position as the largest FX centre in Asia Pacific.

Commodities

Increase our futures volume with a focus on our bulk commodity offering.

Equity and Debt Listings

Grow the number of listings, and develop Technology as a key equity listing sector.

Market Participation

Increase international trading and clearing activity, and grow our subscription and licensing services.

Members and Clients

Acquire new members to enhance our distribution channels, and expand our client base across all segments.

Market Infrastructures

Collaborate with market infrastructures and market operators to grow cross-border flows.

Platforms

Develop platform partnerships to enhance service capabilities.



Business Priorities

Fixed Income, Currencies and Commodities

Fixed Income

Bond Pro's General Central Counterparty services and new features in FY2019 set the stage for significant growth in our client network. We will continue to develop electronic trading and settlement solutions that deliver client value and empower and connect sell-side and buy-side firms across the credit spectrum. Our clients can also access deeper liquidity in a broader range of bonds as our relationship with Trumid and its partners deepens.

Currencies

We will continue to grow our FX franchise by bridging over-the-counter (OTC) and listed markets. Our innovative FlexC FX futures product offering brings together the flexibility of OTC FX with the capital efficiency and surety of centrally cleared futures. We will also focus on developing our FX futures franchise by growing market share and enhancing the distribution of key futures products in Asian currencies. Our recent investment in BidFX enabled the trading of Asian FX futures alongside the OTC products offered on the BidFX platform, bringing together both pools of liquidity.

Commodities

We will leverage our market-leading position to grow volume in our bulk commodities suite of iron ore, coking coal, and forward freight agreement (FFA), and continue to drive synergies between global trade and transport marketplaces. Key areas of development are:

- 01 Driving greater adoption of our Titan OTC Pro platform, which offers more efficient workflow and transparency in OTC commodities trading.
- 02 Targeted distribution of our commodities suite to support the increasing financialisation of iron ore and maritime indices, which are key macro proxies for Asia and China.
- 03 Incubating market opportunities in seaborne and offshore China-related commodities, while continuing to nurture fast-growing products in our commodities suite.

Equities

Cash Equities

We will continue to enhance our market structure and policies to create a vibrant and robust securities market. We remain committed to expanding our pool of market participants to deepen liquidity in our market, and strengthening the research ecosystem of our listed companies and sectors. SGX will further educate and grow our retail investor base, and work towards expanding our suite of Structured Warrants, Funds and Daily Leverage Certificates to encourage liquidity and market participation.

Equity Derivatives

Our focus will be the continued development of a comprehensive Asian suite of products and services, which addresses 99% of Asia-Pacific's GDP in the investible Developed Markets and Emerging Markets. Our key growth levers are:

- 01 Increasing the international distribution of SGX's unique pan-Asian equity derivatives offering, while reinforcing our position as the leading Asian risk management venue and an operator of electronic markets with deep screen-based liquidity.
- 02 Continuing development of our OTC Asian equities block futures platform, as well as emergent innovations like the Nikkei 225 Total Return Futures and Nikkei 225 Options compression service that were launched in FY2019.

Post Trade Services

With the successful implementation of our New Post Trade System (New PTS) in December, we aligned our settlement framework with international standards and best practices, including shortening the securities settlement cycle to T+2 days. Since April, New PTS further enhanced our retail investors' experience through the launch of the new online CDP Account Opening service using MyInfo, the Singapore government's database service that contains information from public agencies' records. This new service considerably improved efficiency for investors through a full online account opening capability.

Data, Connectivity and Indices

Our priority is to drive sustained growth for our data, connectivity and index business. In FY2019, SGX became the first exchange outside of China to redistribute the China Foreign Exchange Trade System – Bank of China (CFETS-BOC) Bond Indices to promote the development and investor awareness of the Chinese bond market. We will continue to collaborate on market data distribution partnerships to promote investor awareness of SGX and other international markets. For our connectivity business, we continue to see

more take up of colocation services and will expand value-added offerings to support our market participants.

Our bespoke index calculation service had a successful start in London and Asia Pacific in FY2019 and we will build on the momentum and expand resources to support demands from leading investment banks. We will expand our suite of SGX proprietary indices and increase our efforts in promoting Index Edge to international clients.

Global Sales and Origination

In FY2020, we will better serve our global Equity Capital Market and Debt Capital Market customers with a broader overseas footprint. About 45% of new equity listings and 90% of bond listings originated from offshore in FY2019. We will enable more transactions from a broader range of global issuers by attracting capital and liquidity from international investors. Our variety of capital raising platforms, which possesses the fluidity to support businesses in different stages of growth, offers investment opportunities for international investors.

There are opportunities in Southeast Asia, China and the US. With a broader partnership and professional network, we expect to grow equity listings prospects and deepen our pipeline in key emerging global sectors including real estate, healthcare, consumer and technology. We will facilitate the completion of listing mandates with targeted investor outreach through our global presence.

Our share of fixed income listings continues to grow within Asia as we make inroads globally. Global bond issuers

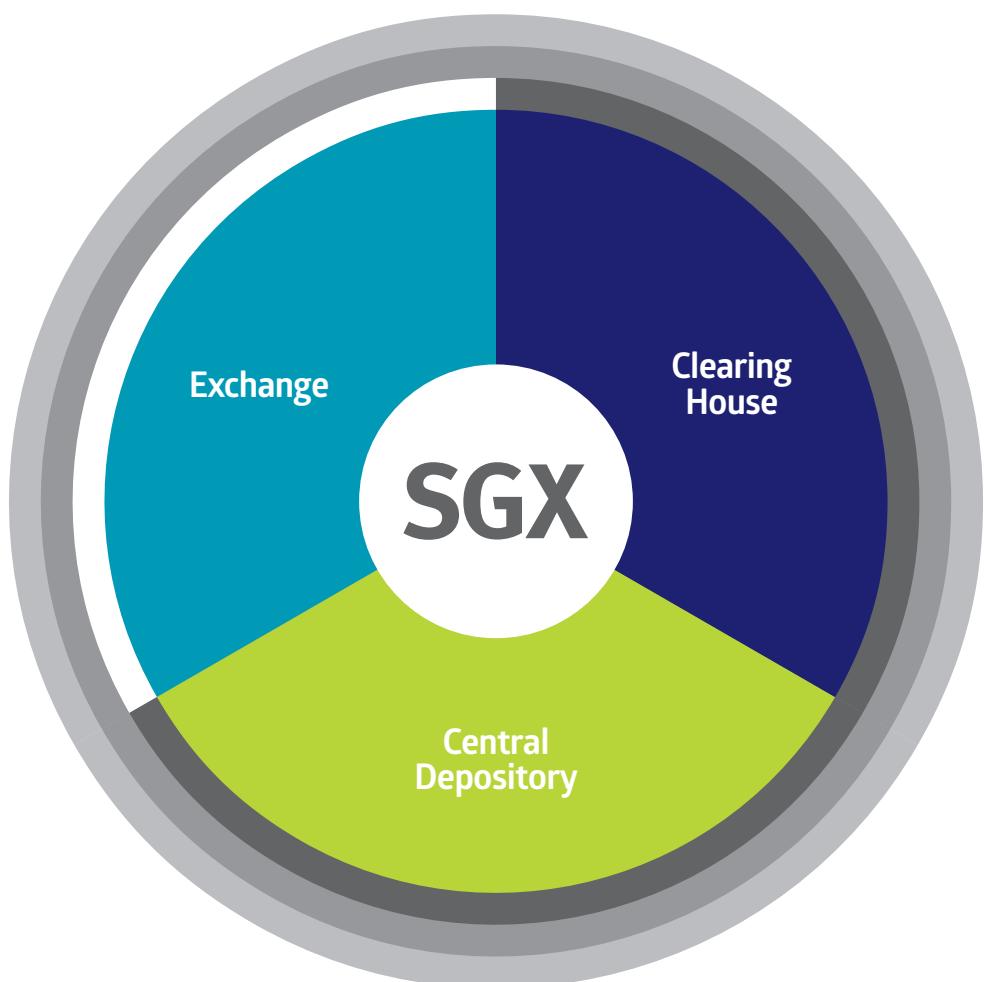
recognise that our platform enhances the profile of investors, facilitates investors' access, and offers efficient and consistent service. We will widen distribution through growing our network of international listing agents, and further building on our leading position in green & sustainable bonds and regional structured bonds.

We expanded our presence in the US with the opening of two additional offices (New York and San Francisco), and built-up our global sales teams so that we can better serve our clients and grow the footprint of prospects and opportunities. This has allowed us to see greater participation from the US in our after-hours session (T+1) in derivatives trading, and increase interest in our spectrum of multi-asset product and platforms. Going forward our focus will be to expand our pool of institutional "Buy Side" clients by adopting a more targeted client management strategy and sales effort. We will engage global market makers to support new product launches, and enable overseas brokers as SGX members to channel international clients' business to Singapore.

Risk Management

As a key financial market infrastructure that operates Trading, Clearing, Settlement and Depository activities, SGX faces several key risks. These risks are in the areas of Credit, Liquidity, Operational, Regulatory and Reputation. SGX strives to actively manage these risks. In this regard, SGX fully meets the PFMI¹ on global best practices for risk management.

Key Risks Faced by SGX



Credit & Liquidity Risks

Our risk management is performed to the highest standards to address the potential risks of default of a participant.

Operational Risks

We are fully committed to operational resilience against technology risks, cyber risks, data risks, risks from outsourcing and risks to business continuity.

Regulatory and Reputation Risks

We have zero tolerance towards events that could impact the operation of a fair, orderly, transparent and efficient marketplace.

¹ Principles for Financial Market Infrastructures (PFMI) as recommended by the Committee on Payments and Market Infrastructures-International Organization of Securities Commissions (CPMI-IOSCO)

Risk Description for SGX

01 Credit Risks

Risks arising from potential default of a participant

SGX is a financial market infrastructure and its business model is different from that of most financial institutions. As an exchange, SGX matches buyers with sellers. As a clearing house, SGX removes counterparty risk by serving as the central counterparty in every trade – SGX becomes a buyer to every seller and a seller to every buyer. In so doing, SGX plays the vital role as the risk management hub, and limits contagion and the transfer of credit risk across the financial ecosystem.

Investors access SGX through our members, who are required to meet payment obligations in a timely manner. SGX collects margin from its members multiple times daily to reduce credit risk.

In this business model, SGX is put at risk only in the rare instance that a member defaults. Should this happen, our clearing house will need to manage, transfer and close-out the open positions of the defaulted firm. SGX and other members may need to absorb the losses from the resulting market risk.

02 Liquidity Risks

Risks arising from potential default of a participant

In the rare event of a member default, SGX may need liquidity in honoring payment obligations to other members. This is because it will no longer receive payments from the defaulted member.

In addition, in facilitating day-to-day settlement of payments and safekeeping of customer monies, the clearing house uses commercial banks. A counterparty default of such a commercial bank, though highly unlikely, will expose SGX to liquidity risks.

What Are We Doing About It?

01 Credit Risks

SGX has established layers of defense to safeguard its clearing house against members' credit risk.

Good quality members are screened at admission. Their credit standing and internal risk management capability are reviewed regularly as part of ongoing supervision.

Active monitoring of members' positions and acute awareness of market conditions and political events enable pre-emptive mitigating actions to be taken by SGX. This ensures that risk does not concentrate on any particular member and remains manageable. Margin requirements for trade exposures are regularly reviewed for adequacy and margins are collected promptly.

The increased use of data analytics and process automation have improved our agility and responsiveness to changing market conditions.

SGX and its members contribute resources to a default fund that is strong enough to withstand multiple member defaults. The resources to manage a potential credit event have been stress tested to cover multiple extreme and plausible scenarios. SGX contributes at least 25% of the default fund using its own capital, one of the highest "skin in the game" among global clearing houses.

A robust default management protocol is set up to effectively respond and manage fallout in the rare event of a member default, and can preserve market continuity for others. Furthermore, to protect investors in a default, customer monies are segregated and held in trust. New auction tools for the Derivatives market will also be implemented to strengthen default management capabilities.

SGX sets aside resources to cover liquidity risks. To provide sufficient headroom, we perform regular "liquidity stress tests" which simulate a variety of hypothetical default scenarios under severe stress conditions involving members and commercial banks. This practice ensures that even under such extreme but plausible scenarios, SGX will have sufficient cash resources and credit lines, for the markets to continue to operate.

SGX actively manages counterparty risk exposure to commercial banks by using only financially strong banks and limiting the amount of exposure to each bank.

In Securities Clearing, the move to a T+2 settlement cycle and the use of Central Bank payment systems (MEPS+) for SGD money settlement instead of commercial banks has significantly reduced settlement and liquidity risks in the market.

In Derivatives Clearing, an enhanced margin methodology has been introduced to meet more prescriptive regulatory requirements. SGX-DC has achieved more responsive risk-coverage to safeguard the clearing house. Settlement risk has also been greatly reduced with the implementation of same-day monies collection for intra-day margin calls.

Risk Management

Risk Description for SGX	What Are We Doing About It?
03 Operational Risks	
Operational resilience is paramount to our business success As a financial market infrastructure, operational resilience is key to our business as well as its continued success. SGX is fully committed to operational resilience against technology risks, cyber risks, data risks, risks from outsourcing and risks to business continuity.	SGX has a thorough process for self-assessment of our capabilities, using both our own past experiences and those of our global peers to drive continuous improvements that will provide greater operational resiliency.
Technology SGX is heavily reliant on technology. We are committed to ensuring that our trading, clearing and depository systems adhere to high standards of latency, volume capacity, and service availability. Any service interruption could lead to reputational risk and potential loss of revenue.	Our systems are constantly monitored and required to meet specific performance criteria such as predictable response times for critical business transactions, latency, capacity and expected current, future and peak load. SGX technology and operations personnel work from two locations supported by dual data centres as a fail-safe design. The backup systems are designed to be running all the time in active or fault tolerant conditions and have recovery time objectives (RTO) in line with PFMI standards.
Increasing threat of cyber-attacks Singapore is a target for cyber criminals, with increasing cyber-attacks experienced by various organisations. Similar to other financial institutions, SGX has experienced a rise in such activities compared to previous years.	SGX is vigilant in monitoring the cyber threat environment to ensure that cyber risk is managed and the regulatory requirements are met. We continually strengthen our defences and have also focused our efforts on recovery and response. In addition, SGX RegCo has conducted several initiatives such as organising regular member engagements and inviting cybersecurity experts and industry practitioners to create a forum for greater sharing of best practices and threat intelligence.
Data protection As a financial market infrastructure, SGX holds market, client and customer data. We view protecting the confidentiality and integrity of this data seriously.	SGX has a data protection regime to help safeguard market, client and customer data. These include policies and processes around data protection and treatment, in areas such as data encryption, segregation of duties and roles for data management.
Outsourcing risks SGX utilises third party and vendors for services in various areas. This exposes SGX to risks arising from failure of a service provider in providing the service, breaches in security, or the institution's inability to comply with legal and regulatory requirements.	SGX has a robust practice of assessing, managing and monitoring its vendors. These are in line and comply with the Monetary Authority of Singapore (MAS) guidelines.

Risk Description for SGX

What Are We Doing About It?

03 Operational Risks (con't)

Business continuity

SGX's business continuity can be impacted by technology, financial, physical security and pandemic disruptions.

SGX regularly reviews the business impact analysis of the various services we provide. We run various business continuity exercises addressing technology, financial, physical security and pandemic scenarios to test our level of preparedness and ability to recover and respond in a timely manner.

Operational resilience is required across the entire ecosystem. SGX has actively engaged industry participants to improve their preparedness and readiness to deal with potential business disruptions. During the year, we successfully tested SGX and participants' recovery protocols for financial, physical security and technology disruptions. There is greater emphasis on recovery and response due to cyber disruptions.

04 Regulatory Risks and Reputation Risks

Risk of not maintaining the highest regulatory standards

As a regulator of the Singapore marketplace and public companies, SGX RegCo has to maintain the highest reputation for supervision and for adherence to regulation. A loss in confidence in the quality of our marketplace could have serious impact on SGX's competitiveness.

SGX RegCo strives for high regulatory standards in the oversight of listed companies and member firms to enable the operation of a fair, orderly, transparent and efficient marketplace.

SGX RegCo admission and listing requirements are benchmarked to be comparable with established jurisdiction standards and to address risks arising from changes in the business landscape and global environment.

Our market surveillance system detects trading irregularities. Where appropriate, SGX RegCo issues public alerts to investors.

In operating a disclosure based regime, transparency is crucial to maintaining trust in our markets. This includes transparency on the part of the regulator. SGX RegCo therefore seeks to provide a high level of transparency regarding its regulatory philosophy and actions. Where necessary, SGX RegCo will diligently exercise its administrative powers for listed companies and product issuers to address major disclosure failings. Market participants are similarly subject to high levels of transparency. This promotes a well-educated and informed market.

05 Market Risks

Low market risk

As a financial market infrastructure, SGX follows strict regulatory requirements in managing its resources and maintaining capital adequacy. The company maintains a strong balance sheet. Our assets are primarily cash resources with minimal investments in marketable securities.

Under our investment framework, our monies are prudently placed as term deposits across multiple commercial banks in Singapore. This ensures SGX's resources are liquid and of the highest quality.

A small amount is invested in a fund comprising marketable securities.

Creating Sustainable Value

Board Statement

The Board is committed towards building a sustainable business at SGX. To us, sustainability is about ensuring long-term value for our stakeholders and creating a positive, lasting impact on society. This is our eleventh sustainability report, which aims to help stakeholders better understand our approach to creating long-term value.

SGX continues to be Asia's leading and trusted market infrastructure. We remain committed to operating at the highest international regulatory standards, adopting sustainable business practices, and advocating sustainable reporting by SGX-listed companies. We believe this will build trust and contribute to long-term value for our stakeholders.

The SGX Board, supported by the Risk Management Committee and the Executive Management Committee (EMCO), looks at sustainability issues as part of its strategic formulation, determines the Environmental, Social and Governance (ESG) material factors, and oversees the management and monitoring of these factors.

We continue our journey of developing and promoting sustainability practices in our markets as a Partner Exchange of the United Nations Sustainable Stock Exchange (UN SSE) Initiative, and a member of the World Federation of Exchanges (WFE) sustainability working group.

Acknowledging that the success of our business hinges on the development and effective deployment of our key forms of capital, we focused on the following areas during the year:

- Continued to develop a holistic talent strategy with an emphasis on career growth and development planning, to build our human capital;
- Enhanced our operational resilience of our technology infrastructure and processes to ensure sustained market continuity;

- Built our product and platform capabilities to maintain our position as a premier access and risk management venue;
- Engaged regularly with stakeholders to foster collaborative social relationships that are integral in identifying, prioritising and addressing material issues;
- Promoted financial literacy, sustainable development and responsible investment amongst others through ongoing investor and stakeholder educational programmes; and
- Implemented initiatives to minimise our environmental footprint.

SGX will continue to drive our sustainability agenda by advocating transparency and accountability. These continue to be the fundamental aspects required to build trust with our stakeholders.

Report at a Glance

This report summarises our approach towards sustainability and our progress to date, with a focus on addressing SGX's material ESG issues.

Our Scope

The report covers the performance of our consolidated entities from 1 July 2018 to 30 June 2019 (FY2019). We have included the historical data for the previous two years of FY2017 and FY2018 for comparison, where available. There has not been any restatement of figures for data disclosed in previous years.

Our Approach to Sustainability

Similar to the last two financial years, we have elected to produce our FY2019 report in accordance with Global Reporting Initiative (GRI) Standards (2016) – “Core”. We have chosen the GRI Standards due to its longstanding universal application and robust guidance, which allows for comparability of our performance against peers. The report is also prepared in accordance with SGX-ST Listing Rules (711A and 711B) – Sustainability Reporting.

We welcome feedback on this report and any aspect of our sustainability performance. Comments or feedback can be sent to sustainability@sgx.com.

Sustainability Pillars

Sustainability remains core to the long-term viability of our organisation. We have identified four material factors that are important to the sustainability of our organisation. They are Economic Performance, Socioeconomic Impacts, Governance, and People. Our business practices, developed with these material factors as a foundation, will enable us to deliver long-term value to our stakeholders. At the same time, we remain vigilant in mitigating the risks that may come with changes in our external environment.

At SGX, we integrate sustainability within our business strategy through efficient allocation and deployment of our four forms of capital, namely Financial Capital, Human Capital, Intellectual Capital, and Social Capital. Our holistic talent management strategy seeks to develop our human capital. By recognising and addressing the risks and opportunities that arise from changes in global economic, regulatory, competitive, and technological trends, we are able to continually generate business value for SGX and our stakeholders. These risks and opportunities have been elaborated in pages 36 to 37 and pages 40 to 45.

SGX is a component of the following ESG indices:

Bloomberg ESG Data Index

FTSE4Good Index

iSTOXX Global ESG Select 100 Index

iEdge SG ESG Leaders Index

In line with our approach of integrating sustainability in our operations, we leverage on our stakeholder engagements and materiality assessment processes to identify sustainability risks and opportunities. We also take reference from our robust enterprise risk management system to identify and assess ESG risks. This approach ensures that material ESG risks are considered in the context of SGX's overall risk environment, and undergo a structured process of management and monitoring by our EMCO. More information on our risk management framework can be found under our Risk Management Report (pages 40 to 43).

Our ESG Risks and Opportunities

Where we have assessed the impact of our ESG risks and opportunities to be material, we have addressed them below:



Human Resource Risks

People are our key asset. Talent attraction and retention are crucial in Singapore's highly competitive financial market. Our talent strategy ensures SGX remains an attractive place to work.



Technology Risks

Ensuring that we provide reliable technological platforms is critical to business continuity. Any technology-related disruption will not only cripple our operations, but may also sustain a wider negative social impact, particularly to the investment community. To address this, we continuously review and enhance our recovery capabilities, processes and procedures to manage any crisis. In today's digital society, the risk of disruptions due to cyber-attacks is a reality. SGX is committed to putting in place safeguards to predict and prevent cyber-attacks on our platforms.



Climate Change Risks

As a small island state, Singapore is vulnerable to rising sea levels and other features of climate change. The Singapore government's Public Sector Sustainability Plan and Climate Action Plan have laid out the nation's strategy to reduce emission levels, increase energy efficiency, and address climate change. Although SGX's environmental footprint is small, we manage it prudently in the light of national policy actions, guided by our Environmental Policy.

Risks

&

Opportunities



Sustainability-related Products & Services

Non-financial risks and governance are becoming increasingly important among investors. This represents an opportunity for us. Our SGX Sustainability Indices, which comprise liquid SGX-listed stocks screened in accordance with ESG criteria, provide a transparent way for investors to assess the sustainability practices of our listed companies. SGX also provides a platform for the listing of green, social and sustainability bonds.



Diversity of Our Workforce

The gender, age, ethnicity and national diversity of our workforce are part and parcel of our corporate culture, which embraces varied and unique perspectives. In this way, our workforce diversity represents an opportunity for us to lead by example.



Sustainability Culture

Compliance with sustainability practices creates opportunities for us to build a corporate culture of transparency, and develop a sustainability mindset in executing our strategic priorities. If effectively applied, this will build trust with our stakeholders. Sustainable thinking also creates opportunities for the digitalisation of traditional practices to increase productivity and foster the development of new customer services.

Creating Sustainable Value

Stakeholder Engagement

At SGX, we recognise that stakeholder engagement is important in helping us make informed commercial and policy decisions. Our role as a front-line regulator further reinforces this importance as the implementation of our policy decisions may have significant influence on shaping the Singapore capital markets. We engage our key stakeholders through various platforms and channels, and their feedback is carefully considered to ensure decisions contribute to the overall good of our stakeholders.

The table below summarises our approach to stakeholder engagement:

Key Stakeholders	Engagement Methods	Interests and Concerns
Employees	Town-halls, focus group discussions, employee surveys, workshops, trainings and seminars, corporate events and the Connects intranet platform.	<ul style="list-style-type: none"> ▪ Opportunities for career growth and development
Regulators and Government	Dialogue, feedback sessions and jointly organised events.	<ul style="list-style-type: none"> ▪ Employee engagement, wellness and work environment
Issuers	Dialogue, workshops, promotional roadshows and seminars.	<ul style="list-style-type: none"> ▪ Operational efficiency
Intermediaries	Dialogue, feedback sessions, training, and jointly organised exercises and events.	<ul style="list-style-type: none"> ▪ Market structure and policies
Investors	Investor Perception Study, education and advocacy programmes via the SGX Academy, and various roadshows.	<ul style="list-style-type: none"> ▪ Corporate governance
Public and Communities	Public consultations, educational workshops, seminars and programmes, scholarship and internship programmes, fundraising and corporate activities.	<ul style="list-style-type: none"> ▪ Infrastructure updates and business continuity planning ▪ Regulatory policies and practices ▪ Financial literacy and investment education

Some engagements with stakeholders:

Annual Institutional Investor Perception Study

Since FY2015, SGX has engaged an independent third-party service provider to conduct a perception study to understand the investment community's sentiment on our strategy, management team, investment case, capital allocation, investor communications and corporate governance. In-depth interviews were conducted with past, current and potential shareholders, followed by a comprehensive analysis of the results.

Key findings from the Investor Perception Study are as follow:

- SGX's Corporate governance practices
 - SGX's corporate governance practices as a company continue to be viewed positively when compared to global peers.
 - Investors highlight that SGX has a solid governance structure, appropriate management compensation and incentives, strong capital management, a consistent dividend policy, and transparent disclosure practices.
- SGX's role as a Self-Regulatory Organisation
 - SGX remains highly regarded as a Self-Regulatory Organisation (SRO) that upholds market fairness, order, and transparency.
 - The investment community states that SGX has a solid reputation for regulating its market fairly, promoting trading efficiency and liquidity, and conforming to global best practices. SGX is praised for maintaining robust listing requirements and seeking partnerships and new initiatives to enhance market quality.
 - Some investors also believe that SGX's strong regulation allows investors, traders, and issuers to confidently and reliably participate in the marketplace, leading to greater liquidity and economic value of the business.
 - Ensuring the market is transparent and fair is a key priority for investors, for SGX to remain competitive.
 - A few investors cited concerns about some SGX-listed companies that exhibit corporate governance issues.

Public Consultations

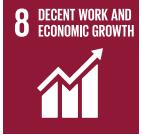
In FY2019, SGX held five public consultations to obtain feedback on possible amendments to our rules. Recognising the value of public input, SGX consulted the public on enhancements to the default management capabilities of our clearing houses, amendments to the voluntary delisting regime, regulation of issue managers, and changes to the listing review process.

Materiality Assessment

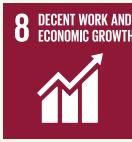
Our materiality definition is guided by the GRI Standards (2016). Material sustainability factors are defined as those that:

- 01 Reflect the reporting organisation's significant economic, environmental, and social impacts; or
- 02 Substantively influence the assessments and decisions of stakeholders; and
- 03 Align to specific UN Sustainable Development Goals (SDGs).

For FY2019, our material factors remain the same as the previous reporting period:

Material Factors	GRI Disclosures	Read more in our:	Relevant UN Sustainable Development Goals Targets
Economic Performance Our financial performance, economic value creation, distribution, and retention for shareholders.	Economic performance	<ul style="list-style-type: none"> ▪ Financial Statements, pages 98 to 182. 	<ul style="list-style-type: none"> ▪ 8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors 
Socioeconomic Impacts Our external impacts through our role as a market operator and regulator.	Indirect economic performance	<ul style="list-style-type: none"> ▪ Socioeconomic Impacts, Sustainability Report, pages 49 to 50. 	<ul style="list-style-type: none"> ▪ 8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all 

Creating Sustainable Value

Material Factors (continued)	GRI Disclosures	Read more in our:	Relevant UN Sustainable Development Goals Targets
Governance Our governance structure, ethics and integrity, anti-corruption and compliance policies.	Anti-corruption Socioeconomic Compliance	<ul style="list-style-type: none"> ▪ Governance, Sustainability Report, page 51; ▪ Corporate Governance Report, pages 58 to 83; ▪ Self-Regulatory Organisation Governance Report, pages 84 to 90; and ▪ Sustainability Website – Anti-corruption, Gifts and Entertainment Policy Statement. 	<p>■ 10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard</p> <p>■ 16.6 Develop effective, accountable and transparent institutions at all levels</p>  
People Our talent management and responsible employment practices.	Employment Labour Relations Training and Education Diversity and equal opportunity Non-discrimination	<ul style="list-style-type: none"> ▪ People, Sustainability Report, pages 52 to 53; and ▪ Sustainability Website – Employee Recruitment Statement. 	<p>■ 5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life</p> <p>■ 8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors</p> <p>■ 10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality</p>   
Non-Material Factor	GRI Disclosures	Read more in our:	Relevant UN Sustainable Development Goals Targets
Environment Our role in mitigating climate change.	Energy	<ul style="list-style-type: none"> ▪ Environment, Sustainability Report, pages 54 to 55; and ▪ Sustainability Website – Environmental Policy. 	<p>■ 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix</p> <p>■ 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource use efficiency and greater adoption of clean and environmentally-sound technologies and industrial processes, all countries taking action in accordance with their respective capabilities</p> <p>■ 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse</p>   

Socioeconomic Impacts

SGX contributes to the development of Singapore's financial market by providing a platform for issuers to raise capital whilst enabling investors to participate in Asia's economic growth and manage their Asian portfolio risks. As a front-line regulator, we ensure that issuers meet their ongoing obligations to investors, and participation in our markets is carried out in a fair, orderly and transparent manner. SGX is also a provider of connectivity solutions and is a trusted and secure counterparty for trade settlement.

SGX has identified two other areas that impact the broad socioeconomic environment. They are:

- Stakeholders' Education: Initiatives within the realms of investor education; and
- Operational Resilience: Resiliency of our trading & clearing infrastructure, and our recovery processes.

Stakeholders' Education

The SGX Academy oversees education and training efforts for investors and traders on investment knowledge. Our programmes have been specially designed to educate, engage and enable our stakeholders to make informed and responsible investment decisions.

In this financial year, more than 300 face-to-face education events were conducted and over 297,000 investors of different age groups and investment aptitude have accessed our education assets and content through the face-to-face seminars, training courses, e-tutorials and digital platforms to aid them in their investment decisions. Through our interaction with our stakeholders, the SGX Academy is able to contribute to SGX's overall responsiveness to market needs.

Furthering our agenda to promote responsible investing, SGX and DBS launched a 3-year Financial Literacy for You (FLY) initiative in July 2018 to help the 'savers' base understand more about the importance of investing and to take on a more active approach towards

securing their financial future. This partnership has enabled a large outreach where FLY seminars, webinars and on-line education content have benefited an estimated 200,000 members of the public in this financial year.

Notable education campaigns conducted also include the Supplemental Retirement Scheme (SRS) education campaign launched in December 2018 and the Regular Shares Savings Plan (RSSP) campaign launched in January 2019. The former aims to help Singaporeans step up in their retirement planning efforts through SRS and is themed "Plan and invest your SRS funds to secure your dream retirement" where SGX curated easy-to-understand SRS information and illustrations on sgxacademy.com/srs. The RSSP campaign on the other hand targeted the younger investor base to encourage them to make small but regular investments via a disciplined and diversified approach through exchange-traded funds. Regular RSSP events are being conducted and on-line content can be found at sgxacademy.com/rssp. For both of these education campaigns, prominent social media influencers have been helping to propagate the content to benefit a larger base of investors.

SGX is now a regular contributor to the World Investors Week Singapore (WIW), an initiative led by International Organization of Securities Commissions (IOSCO) as a coordinated campaign by securities regulators to raise public awareness about the importance of investor education. SGX Academy provides the education hosting platform for all members of the public to take part in WIW forums. WIW 2019 was successfully held from 4-12 October 2018 with the attendance of over 1,000 investors. WIW was featured on Channel News Asia to share the investor education content to a larger audience.

Aligning our education thrust with the issuance of Temasek Bonds, SGX Academy worked closely with Temasek to help Singaporeans to learn about the bonds. SGX took the

opportunity to ramp up bond education with our own "Fundamentals to Bond Investing" seminars which benefited many Singaporeans.

Operational Resilience

As a market operator, operational resilience of our infrastructure is critical in ensuring business continuity. In FY2019, SGX conducted Business Continuity and IT Disaster Recovery tests with participants to test industry-wide preparedness in the event of a crisis. We have also added data recovery exercises as part of conformance testing.

Demonstrating the resolve to minimise adverse impact from a market disruption, SGX has to-date implemented all six recommendations proposed by the Securities Industry Working Group (IWG):

- 01 Data Corruption and Restoration – A Master Record as the authoritative source of data in the event of a complex malfunction.
- 02 Market Closure and Resumption – The timing and principles for market closure and resumption during a market-wide incident.
- 03 Trade Assumption – A clear protocol for trade assumption.
- 04 Market Recovery Procedures – Attestation from members that they have appropriate recovery plans in place, is in progress.
- 05 Incident Communication – A centralised communication portal for coordinated distribution of information during an incident has been implemented and used during our Business Continuity and Disaster Recovery tests.
- 06 Business Continuity testing and support – Going forward SGX will also conduct industry-wide data recovery exercises to test data loss and reconciliation capabilities along with the market participants.

We will continue to leverage the Enterprise Command Centre to improve monitoring and provide a better line of sight into the health, status and availability of our infrastructure.

Creating Sustainable Value

Research Leaders' Insights Series

In FY2019, we looked towards deeper collaboration with partners to drive knowledge-based investor education. A key highlight is the ST-SGX Research Leaders' Insights Series (RLS) where SGX and SPH embarked on a year-long initiative to empower Singaporeans with the knowledge to understand and use research reports to make effective investing decisions. Featuring 10 Singapore-based Research Leaders, the public now has easy access to information on how to use research reports on The Sunday Times. In addition, four RLS forums have been scheduled to create opportunity for the investing public to engage the leaders for closer interaction and all RLS-related education content is hosted on sgxacademy.com/rls for investors to access.

Targets and Performance Scoreboard:

Socioeconomic Targets for FY2019

Target	Our Performance / Initiatives
Stakeholder Education Number of retail investor participation at educational or developmental programmes	<ul style="list-style-type: none"> ● We reached out to over 297,000 retail investors through our various education and developmental programmes (see page 49 for details).
Operational Resilience Number of Business Continuity and IT Disaster Recovery exercises conducted	<ul style="list-style-type: none"> ● We conducted 13 Business Continuity and IT Disaster Recovery exercises in FY2019 of which four exercises involved industry participants.
Effective Regulation To help listed companies improve their Singapore Governance and Transparency Index (SGTI) scores by: <ul style="list-style-type: none"> ■ Developing regulatory initiatives and processes that support good governance practices; and ■ Continuing our ongoing stakeholders' engagement efforts 	<ul style="list-style-type: none"> ● In January 2019, we entered into an MOU with Institute of Valuers and Appraisers of Singapore (IVAS) for us to make referrals to and collaborate on business valuation issues with the IVAS technical committee. The collaboration is intended to raise the standards of governance in valuation reporting by professionals and disclosures by listed companies. ■ In May 2019, we conducted our annual Catalyst Sponsor's Dialogue session and communicated our expectations and stance on capital fund raising activities of some of the sponsored-issuers and updated the Catalyst Sponsors on upcoming collaborations with other professional bodies as part of our ongoing collaboration with industry professionals to improve existing standards. ■ SGX introduced amendments to the Listing Rules following revisions to the Code of Corporate Governance (CG Code). We subsequently provided funding and support for the training sessions conducted by the Singapore Institute of Directors (SID) for senior management and board of directors of our issuers as well as guides launched by SID on the revised CG Code. This included a jointly organised "Listed Entity Director Programme (Mandarin)", an interactive Mandarin-based Programme held in May in Beijing, China for China-based senior management and board of directors of our issuers. ■ We collaborated with Securities Investors Association (Singapore) and the SID in developing the Guide on Best Practices for Shareholder Meetings of Listed Companies. The guide was launched on 26 March 2019 with a key objective of fostering a conducive environment for robust and open discussions between the board and shareholders during shareholder meetings of listed companies.
Effective Risk Management Observance of all relevant Principles for Financial Market Infrastructures (PFMI)	<ul style="list-style-type: none"> ● Our two clearing houses The Central Depository (CDP) and SGX Derivatives Clearing (SGX-DC) observed all the relevant Principles for Financial Market Infrastructures (PFMI). We are in the process of enhancing the clearing houses' credit stress testing and liquidity stress testing framework, to be in compliance with the further guidance on the PFMI.

Socioeconomic Targets for FY2020

Target
Stakeholder Education
<ul style="list-style-type: none"> ■ Conduct three large scale (more than 500 participants) public investor education events ■ Conduct more than 250 face-to-face investor education seminars and courses
Operational Resilience
Number of Business Continuity and IT Disaster Recovery exercises conducted
Effective Regulation
To help listed companies improve their Singapore Governance and Transparency Index (SGTI) scores by: <ul style="list-style-type: none"> ■ Developing regulatory initiatives and processes that support good governance practices; and ■ Continuing our ongoing stakeholders' engagement efforts.
Robust Risk Management
Observance of all relevant Principles for Financial Market Infrastructures (PFMI)

Governance

SGX prides itself as being a leader in corporate governance so as to cultivate trust and confidence in our markets and in the services we provide. We therefore set high standards of corporate governance and business ethics for companies listed on our exchange to support the building of an enduring and sustainable marketplace.

At SGX, we lead by example and adhere to the highest standards of corporate governance practices as guided by the Code of Corporate Governance. Further information can be found in our Corporate Governance Report and our SRO Governance Report.

Sustainability Governance

The Executive Management Committee (EMCO) oversees sustainability at SGX. The EMCO is chaired by the Chief Executive Officer and comprises senior leadership across the organisation. It is therefore well placed to set the tone-at-the-top and allows for an integrated business and sustainability strategy. The EMCO approves sustainability strategies

and reviews sustainability performance. It also reviews and evaluates SGX's sustainability approach, management policies and practices, sets targets, and measures performance against the targets.

Our Code of Conduct and Ethics Policy

At SGX, we advocate the highest level of conduct and ethical standards to maintain high standards of governance. The SGX Conduct and Ethics Policy, the Staff Dealing Policy, the Regulatory Conflicts Handbook and the Regulatory Conflicts Code and Information Barrier Policy are essential in guiding the behaviour of our employees. All employees are required to undergo rigorous training to familiarise themselves with these policies which provide guidance on appropriate conduct for common ethical issues, such as conflicts of interest, bribery and corruption, confidential information, and compliance among others. We also educate all our employees on our whistleblowing policy, which is publicly posted on our website, to facilitate the reporting of suspected and actual cases of improper,

unethical or fraudulent conduct. SGX also publicly discloses the purpose, scope, reporting and communication channels of our whistleblowing policy on our website. The Board and EMCO take a firm stance on the ethics and integrity of employees at SGX and a serious view towards non-compliance. In line with internal policies, all employees have to undergo annual compliance and independence training.

In FY2019, we received one whistleblowing report concerning SGX, which has since been reviewed and resolved. Another 23 whistleblowing cases were filed through our whistleblowing channel, of which 21 cases were related to companies listed on SGX, and two were related to SGX trading members. These cases were referred to SGX RegCo for review.

There were no cases of bribery or corruption, anti-competitive behavior and no fines for non-compliance with the law during the year. We continue to strive to uphold the highest standards of corporate governance with respect to our stringent governance framework.

Targets and Performance Scoreboard: Governance Targets for FY2019

Target	Our Performance / Initiatives
Disclosure on the number of incidents of corruption and actions taken	<ul style="list-style-type: none"> ● ▪ There were no incidents of corruption and actions taken in FY2019.
Disclosure on the number of material non-compliance with laws and regulations in the social and economic area	<ul style="list-style-type: none"> ● ▪ There were no material non-compliance with laws and regulation in the social and economic areas in FY2019.

Governance Targets for FY2020

Target
Disclosure on the number of incidents of corruption and actions taken
Disclosure on the number of material non-compliance with laws and regulations in the social and economic area

Creating Sustainable Value

People

SGX recognises that our ability to remain commercially viable and competitive hinges on our continued success in attracting and retaining talent. At SGX, we care for our employees' growth and career development. We are committed to maintaining a positive workplace that values integrity, diversity, collaboration and communication whilst taking care of the well-being of our employees.

Talent Management and Retention

Our Head of Human Resources oversees our labour practices, talent strategy, human resource policies and processes, as well as cares for the 834 employed in SGX during the year. In FY2019, there were 129 new hires and 98 resignations. As a specialised industry, we are keenly aware that the talent and expertise we need are not readily transferrable from the wider financial services industry. We have thus taken steps to actively manage this.

At SGX, we continually invest in a holistic talent strategy to build our internal capabilities and talent pool. Through regular employee engagement activities, SGX strives to foster employee commitment by improving employee benefits and overall welfare in the organisation. We support our employees in balancing their professional life with domestic responsibilities by introducing initiatives such as flexible working schemes for female employees after childbirth.

In FY2019, SGX was one of seven participating financial institutions partnering the Institute of Banking & Finance (IBF) in launching the Technology in Finance Immersion Programme (TFIP) on 23 April 2019. TFIP aims to help individuals gain experience in new technology areas, such as Cloud Computing,

Cybersecurity, Data Analytics and Full Stack Development, within the financial services sector.

Nurturing Our Staff

A highly-skilled talent pool is essential to maintaining SGX's position as a leading securities and derivatives exchange. We rely heavily on the skills and capabilities of our employees to ensure the quality of our product and service offerings. At SGX, we subscribe to the policy of lifelong learning, to encourage our employees to further their potential, while equipping them with skills and knowledge that go beyond the required expertise of their current roles.

We strive to cultivate a learning culture by providing structured programmes to support learning and development. To achieve this, we provide employees with a variety of training, professional memberships, continuing education scheme, study leave, and internal job rotation opportunities. Our employees' professional learning and development is also supplemented by programmes that seek to nurture soft skills and other transferrable expertise. These holistic initiatives serve to develop highly-skilled and well-rounded employees who would be an asset to any organisation.

Given that SGX operates in a highly specialised industry, we maintain a line of sight for high potential internal candidates, proactively providing them with development opportunities to raise their level of readiness.

Leadership development is an area of focus where we continue to develop and enhance our line managers' leadership capabilities from first-level line managers up to our senior leaders, in partnerships with reputable and

established best-in-class training programme providers.

We have enabled our employees to take greater ownership of their own learning agenda through the provision of Digital Learning platforms, aimed at providing easier accessibility to learning opportunities at their convenience via notable market-leading digital platforms.

In addition, we have continued to offer our SGX Growth Xcelerator series of brownbag learning sessions, aimed at inculcating a stronger learning culture within SGX and providing the platform for greater social learning and building communities of practice. The range of topics covered during these lunchtime talks include leadership, professional development, digital competencies and employee well-being.

Diversity and Equal Opportunity

SGX embraces diversity within our workforce. We recognise that diversity in the workplace broadens the depth and breadth of our collective skills and perspectives. Cultivating a diverse and collaborative environment that drives innovation is thus a priority at SGX. We hire based on merit, and provide a competitive and fair compensation and benefits package with "equal pay for equal work", engendered by our Non-discrimination Policy. This allows us to leverage on our gender, age, and cultural diversity to drive growth and maximise SGX's full potential. The talent strategy also emphasises equal opportunity in a non-discriminatory work environment.

27% of our Board is represented by female directors, which contributes to the diversity of views and perspectives at senior levels. We have had zero reported incidents of discrimination at SGX.

Targets and Performance Scoreboard:

People Targets for FY2019

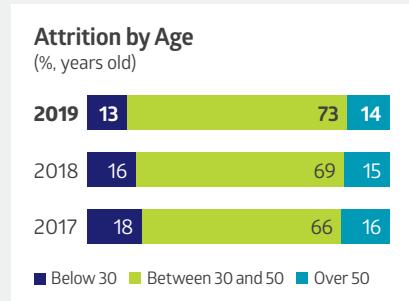
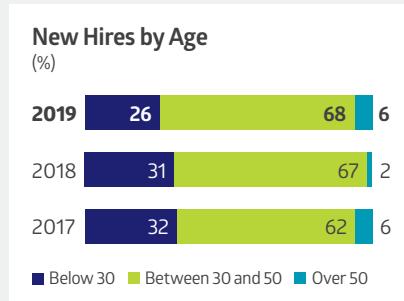
Target	Our Performance / Initiatives
Implement programmes for upgrading employee skills & transition assistance programmes	<ul style="list-style-type: none"> We ran programmes on growth mindsets, as well as introduced a digital learning and development platform to encourage employees to adopt continuous learning practices. We worked on building in-house technical capabilities through design and development of digital learning courses. We implemented innovation-benchmarking workshops for employees to create awareness of disruptive socioeconomic trends. We ran leadership development programmes for senior managers to build on our leadership capabilities. We implemented our enhanced Management Associate programme to build on our junior talent pipeline.
Achieve 35 training hours per employee per year	<ul style="list-style-type: none"> Employees engaged in an average of 45 hours of training during the year.

People Targets for FY2020

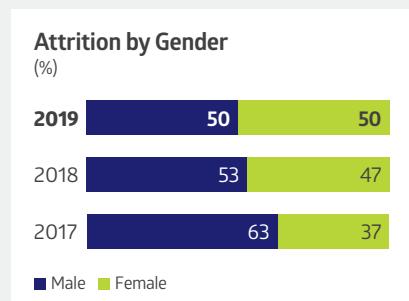
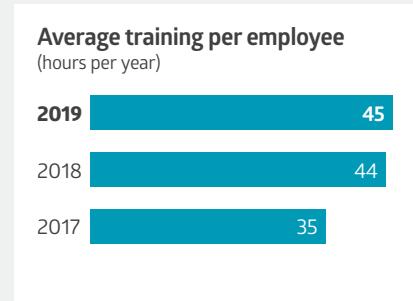
Target
Implement programmes for upgrading employee skills & transition assistance programmes
Achieve 35 training hours per employee per year

Inclusive Workforce

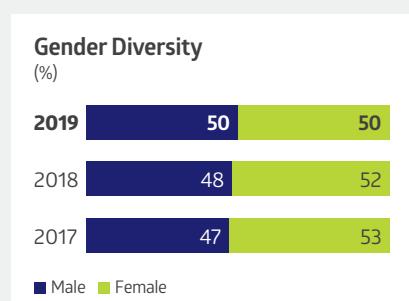
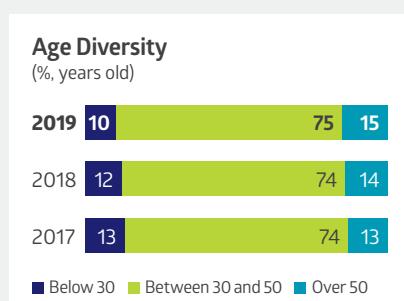
Employment



Training and Education



Diversity and Equal Opportunity



Creating Sustainable Value

Environment (non-material factor)

SGX is doing its part to minimise our environmental footprint whilst managing our commercial needs.

Since the formalisation of the Environmental Policy in FY2016, which encompasses both our direct and indirect impacts on energy consumption and other natural resources, SGX has continually undertaken initiatives to promote environmental responsibility and reduce our environmental footprint.

Since FY2017, SGX has ceased mailing out CDs for our annual report and will write to shareholders to explain that the same information is available on our website. Physical copies of our

annual report will be made available only upon request.

In FY2019, SGX continues its mission on environmental awareness campaign to encourage staff to care for the environment. The Earth Hour movement was once again observed as a symbol of commitment to lower energy consumption. In addition, all printed papers used in SGX are 100% recycled paper from sources who embrace and are committed to zero deforestation. Furthermore, employees are discouraged from printing unless it is absolutely necessary.

To reduce the use of plastics, SGX will replace serving plastic bottled water to visitors with glassware from FY2020.

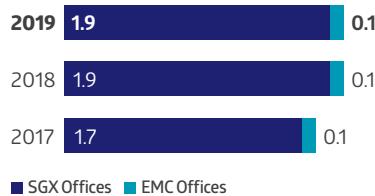
Our primary data centre was awarded the Standard 564 (SS564) certification for Green Data Centre – Energy & Environmental Management Systems. SS564 was developed by the IDA in partnership with various government agencies to set a Singapore Standard for Green Data Centres. Our secondary data centre was awarded the BCA Green Mark Platinum certification for excellence in Energy and Environmental Design of the Building.

We continue to measure our progress against targets, and drive improvements for environmentally-friendly resource usage.

SGX also encourages and supports the development of sustainable financing.

Energy Consumption

Energy Consumption in Offices (GWh)



Energy Intensity in Offices (MWh/employee)



Note: Energy consumption and intensity only reflect operations in Singapore (SGX and EMC).

Targets and Performance Scoreboard:

Environment Targets for FY2019

Material Factors	Our Performance / Initiatives
Undertake further initiatives to promote environmental responsibility	<ul style="list-style-type: none"> ● Continue to encourage shareholders to opt for the use of electronic transmission of shareholder documents. ■ Encourage employees to care for the environment through various initiatives ■ All print papers are 100% recycled paper ■ Staff are discouraged from printing unless absolutely necessary ■ Implemented motion-activated light sensors to reduce electricity consumption in all meeting rooms.
Analyse and monitor energy usage	<ul style="list-style-type: none"> ● The electricity consumption at SGX offices decreased by 1%.

Environment Targets for FY2020

Target
Undertake further initiatives to promote environmental responsibility
Analyse and monitor energy usage

Sustainability Development

SGX remains committed to playing our part in the sustainability agenda, recognising our role as a marketplace to bring together investors, issuers and intermediaries. We seek to promote the sustainability of the financial system, as encapsulated by the WFE Sustainability Principles. SGX RegCo is a founding member of the Advisory Group for the Asia Sustainable Finance Initiative (ASFI), a multi-stakeholder forum based in Singapore that aims to create resilient economies. We have hosted seminars and conferences to develop the landscape in collaboration with partners such as the Securities Association of Singapore (SAS), the National University of Singapore's Centre for Governance, Institutions and Organisations (CGIO), the Principles for Responsible Investment (PRI), the CFA Institute, the World Business Council for Sustainable Development (WBCSD) and the Official Monetary and Financial Institutions Forum (OMFIF). Besides facilitating capability building of our listed companies in sustainability reporting, we will continue to engage and support them and other stakeholders in deriving value from the sustainability reporting process.

Global Reporting Initiative (GRI) Standards (2016) – “Core” Content Index can be found at:

investorrelations.sgx.com/sustainability

Governance





SGX opened its first US office in Chicago in October 2017. Since then, the exchange has expanded its footprint to New York and San Francisco, enabling more investors in North America to count on it as a trusted partner offering unmatched access to Asia across diverse asset classes.

Corporate Governance Report

Compliance with the Code of Corporate Governance 2018

Singapore Exchange (SGX) is fully committed to upholding the highest standards of corporate governance, business integrity and professionalism in all activities in the SGX Group.

Throughout the financial year ended 30 June 2019, SGX has complied with the provisions of the Code of Corporate Governance 2018 issued in August 2018 (CCG 2018), as well as the Securities and Futures (Corporate Governance of Approved Exchanges, Approved Clearing Houses and Approved Holding Companies) Regulations 2005 (SFR 2005). This Corporate Governance Report sets out SGX's corporate governance practices with reference to the CCG 2018. We provide a summary disclosure on our compliance with the CCG 2018 on page 83.

Self-Regulatory Organisation Governance

Singapore Exchange Regulation (SGX RegCo) was established by SGX as an independently governed subsidiary to undertake all regulatory functions for SGX and its regulated subsidiaries. This move further enhances the governance of SGX as a self-regulatory organisation (SRO) by making more explicit the segregation of SGX's regulatory functions from its commercial and operating activities.

This Corporate Governance Report is to be read in conjunction with the SRO Governance Report, which sets out SGX's corporate governance as a self-regulatory organisation.

Corporate Governance Framework



Highlights



Awards & Accolades

Derivatives Exchange of the Year 2014-2019 at Asia Risk Awards

Exchange of the Year 2018 at Regulation Asia Awards for Excellence

Best Index Provider 2018 at Structured Retail Products (SRP) Asia-Pacific Awards

Best FX Exchange in Asia and Best Clearing House in Asia 2018-2019 by FX Week

Financial Metals Service Provider of the Year 2019 at Platts Global Metals Awards

Exchange of the Year 2019 by Global Investor Group

Exchange of the Year – Commodities 2019 by Global Investor Group

Exchange of the Year – Derivatives 2018 by Global Investor Group

Asia-Pacific Derivatives Exchange of the Year 2014-2019 by GlobalCapital

Exchange of the Year 2016-2018 at Energy Risk Asia Awards

Ranked 4th in the Singapore Governance and Transparency Index 2019



Transparency

Daily updates on SGX's website of volumes and values of securities and derivatives traded or cleared by SGX

Monthly publications on volumes and values of key products traded

Quarterly financial reports

Quarterly briefings to analysts and media webcasts



Strong Risk Management

Board-endorsed risk appetite statement, driving balanced approach to strategy development, within defined risk boundaries. Please refer to section on "Risk Management Report".



Corporate Governance Report

Board Matters

The Board's Conduct of Affairs

Principle 1

Principal Duties of the Board

The Board oversees the conduct of the SGX Group's affairs, works with Management and is accountable to shareholders for the long-term performance and financial soundness of the SGX Group. In this regard, the Board supervises the achievements of Management's performance targets, which include (1) strategic and non-financial priorities, (2) earnings per share, and (3) a comparison of SGX's total shareholder return against selected peer exchanges and Straits Times Index companies. This aligns the interests of the Board and Management with that of the shareholders, whilst balancing the interest of all stakeholders. The Board also sets the tone for the SGX Group in respect of ethics, values and desired organisational culture, and also ensures proper accountability within the SGX Group.

In addition to its statutory duties, the Board reserves the following key matters for its decision:

- (a) the appointment of the SGX CEO and Directors, appointments on Board committees and Board succession and appointments on the board of SGX RegCo;
- (b) the appointment of key Management personnel and succession planning as an on-going process;
- (c) approving broad policies, strategies and objectives. The SGX Board provides guidance and leadership to Management and ensures that adequate resources are available to meet its objectives;
- (d) approving annual budgets, major funding proposals, investment and divestment proposals, material acquisition and disposal of assets, corporate or financial restructuring, and any investments or expenditures exceeding \$15 million in total;

- (e) the adequacy of internal controls, risk management, financial reporting and compliance;
- (f) the assessment of Management performance;
- (g) the assumption of corporate governance responsibilities;
- (h) matters involving a conflict of interest for a substantial shareholder or a director;
- (i) share issuances, interim dividends and other returns to shareholders; and
- (j) matters which require the SGX Board's approval as specified under SGX's interested person transaction policy.

Independent Judgement

All Directors exercise due diligence and independent judgement and make decisions objectively in the best interests of SGX. SGX adheres to the requirements under the CCG 2018 and SFR 2005. In determining the independence of its directors, please refer to "Board Independence" under Principle 2 in this Corporate Governance Report.

Delegation by the Board

Board committees, namely the Audit Committee (AC), Nominating & Governance Committee (NGC), Remuneration & Staff Development Committee (RSDC) and Risk Management Committee (RMC), have been constituted to assist the Board in the discharge of specific responsibilities. Clear terms of

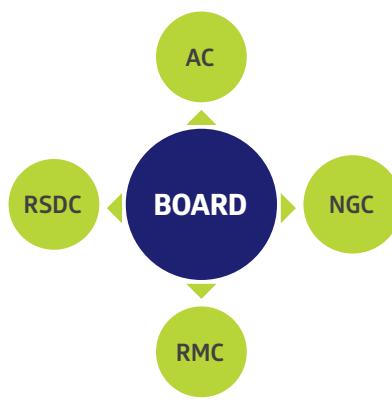
reference (TOR) set out the duties, authority and accountabilities of each Board committee as well as qualifications for Board committee membership, in line with the CCG 2018 and SFR 2005, where applicable. The TORs are reviewed on a regular basis, along with the Board committee structures and membership, to ensure their continued relevance. The detailed TORs of the Board committees are available on SGX's website.

Please refer to the Principles in this Corporate Governance Report, for further information on the activities of the NGC, RSDC, RMC and AC.

Key Features of Board Processes

The Board meets regularly and sets aside time at each scheduled meeting to meet without the presence of Management. Board meetings may include presentations by senior executives and/or external advisers/consultants/experts on strategic issues, the developing business and regulatory landscape or risk management issues (including cybersecurity risk).

The schedule of all Board and Board committee meetings and the Annual General Meeting (AGM) for the next 3 calendar years is planned in advance, in consultation with the Board. The Board meets at least 4 times a year at regular intervals. Besides the scheduled Board meetings, the Board meets on an ad-hoc basis as warranted by particular circumstances. Participation by telephone and video conference at Board and Board committee meetings is allowed under the SGX's Constitution. The Board and Board committees may also make decisions by way of circulating resolutions. There were 6 scheduled Board meetings in FY2019. Key matters discussed at these meetings included financial performance, annual budget, corporate and risk strategy, business plans, regulation, significant operational matters, capital-related matters and organic and inorganic strategic opportunities. In the interest of



allocating more time for the Board to deliberate on issues of a strategic nature, and to focus on particular themes for each Board meeting, submissions which are straightforward in content as well as those that are for information only, were compiled and circulated in between Board meetings. The Board held 2 strategy meetings and also dedicated time at each quarterly Board meeting, to interact with senior management executives and have in-depth discussions on SGX's strategic direction. These strategy meetings were held in October 2018 and January 2019. Periodic information papers and Board briefings on the latest market developments and trends, and key business initiatives are also provided to the Board.

A record of the Directors' attendance at Board and Board committee meetings during the financial year ended 30 June 2019 is set out in the table under Principle 2.

Board Approval

SGX has documented internal guidelines for matters that require Board approval.

For expenditures of S\$15 million and below, SGX has internal guidelines which set out the authorisation limits granted to management for approval of capital and operating expenditures, specified financial transactions and supplementary budgets.

While matters relating to SGX's objectives, strategies and policies require the Board's direction and approval, the Executive Management Committee (EMCO) comprising key management personnel and senior management executives is responsible for overseeing the management of the SGX Group and implementing the Board-approved strategic policies.

Pursuant to the Directors' Conflicts of Interest Policy, Directors must avoid situations in which their own personal or business interests directly or indirectly conflict or potentially conflict, with the interest of the SGX Group. Where a Director has a conflict or

potential conflict of interest in relation to any matter, he/she will immediately declare his/her interest at the meeting of the Directors or send a written notice to the Chairman and/or Company Secretaries, setting out the details of his/her interest and the conflict and recuse himself/herself from any discussions on the matter and abstain from participating in any Board decision.

Directors' Orientation and Training

Each new director will, upon his appointment, receive a manual containing Board and SGX policies relating to the disclosure of interests in securities, disclosure of conflicts of interest in transactions involving SGX, restrictions on dealings in SGX's securities and the disclosure of price-sensitive information.

SGX conducts a comprehensive orientation programme to familiarise new directors with its business and governance practices. The orientation programmes are conducted by the CEO and senior management executives and provide directors an understanding of SGX's businesses, operations and regulatory environment, to enable them to assimilate into their new roles. The programmes also allow the new director to get acquainted with senior management executives, thereby facilitating board interaction and independent access to senior management executives.

During the financial year:

- The external auditor, PricewaterhouseCoopers LLP, regularly briefs AC members on developments in accounting and governance standards.
- The CEO updates the Board at each meeting on business and strategic developments in the global exchange and clearing house industry.
- The Board was briefed on cybersecurity resilience, and apprised of SGX's standards against best practices.
- The Board was updated on the revision to the Code of Corporate Governance and the related changes to the Listing Rules.

- The Board and senior management executives met in 2 strategy meetings and each quarterly Board meeting for in-depth discussions on the strategic issues and direction of the SGX Group.

Directors can request for further information on any aspect of the SGX Group's operations or business from Management.

Access to Information

Complete, Adequate and Timely Information

Management recognises that the flow of complete, adequate and timely information on an ongoing basis to the Board is essential to the Board's effective and efficient discharge of its duties. To allow Directors sufficient time to prepare for the meetings, all scheduled Board and Board committee papers are distributed to Directors not less than a week in advance of the meeting. This allows Directors to focus on questions or raise issues which they may have at the meetings. Any additional material or information requested by the Directors is promptly furnished. As part of its sustainability efforts, SGX has abolished the provision of hard copy Board and Board committee papers to Directors and, instead, Directors are provided with tablet devices to enable them to access and read Board and Board committee papers.

Management's proposals to the Board for approval provide background and explanatory information such as facts, resources needed, risk analysis and mitigation strategies, financial impact, expected outcomes, conclusions and recommendations. Any material variance between any projections and the actual results of budgets is disclosed and explained to the Board. Employees who can provide additional insight into matters to be discussed, will be present at the relevant time during the Board and Board committee meetings.

To facilitate direct and independent access to key management personnel and senior management, Directors are

Corporate Governance Report

also provided with their names and contact details. Draft agendas for Board and Board committee meetings are circulated to EMCO (including key management personnel) and Chairmen of the Board and Board committees, in advance, for them to suggest items for the agenda and/or review the usefulness of the items in the proposed agenda.

For the AC and the RMC to liaise closely and have a clear understanding of each other's work and plan their work on the same risk framework, the finalised minutes of the respective committees are promptly circulated to the other committee. Arrangements are also in place for the AC and the RMC to share information on a regular basis, which includes having common directors on the AC and the RMC, and the Head of Internal Audit and Chief Risk Officer and Head of Legal, Compliance and Corporate Secretariat attending both the AC and the RMC meetings. These measures are in line with the recommendations of the Guidebook for Audit Committees in Singapore.

In order to keep Directors abreast of sell-side analysts' views on SGX Group's performance, the Board is updated annually on the market view which includes a summary of analysts' feedback and recommendations following the full-year results. A monthly financial performance report is also provided to the Board. This report includes the financial and management accounts, accompanied by an analysis of the SGX Group's performance and supporting data. It also contains operational metrics, audit findings, and a risk dashboard which provides an overview of the SGX Group's key risks. These risks include clearing and settlement risks, regulatory and compliance risks, technology and operations service availability, and other strategic risks.

The quarterly and year-end financial statements are reviewed and recommended by the AC to the Board for approval.

Role of the Company Secretaries

Directors have separate and independent access to the Company Secretaries at all times. The Company Secretaries are responsible for, among other things, ensuring that Board procedures are observed and that SGX's Constitution, relevant rules and regulations, including requirements of the Securities and Futures Act (SFA), Companies Act and Listing Manual, are complied with. The Company Secretaries also assist the Chairman and the Board to implement and strengthen corporate governance practices and processes, with a view to enhancing long-term shareholder value.

The Company Secretaries assist the Chairman to ensure good information flows within the Board and its Board committees and between Management and Non-Executive Directors (NEDs), as well as facilitating orientation and assisting with professional development as required. The Company Secretaries are responsible for designing and implementing a framework for Management's compliance with the Listing Rules, including training and advising Management to ensure that material information is disclosed on a prompt basis. The Company Secretaries attend all Board meetings and assist to ensure coordination and liaison between the Board, the Board committees and Management. The Company Secretaries assist the Chairman, the Chairman of each Board committee and Management in the development of the agendas for the various Board and Board committee meetings.

The Company Secretaries are legally trained, with experience in legal matters and company secretarial practices. The appointment and the removal of the Company Secretaries are subject to the Board's approval.

Independent Professional Advice

Directors, either individually or as a group, in the furtherance of their duties, may take independent professional advice, if necessary, at SGX's expense.

Board Matters

Board Composition and Guidance Principle 2

Board Independence

7 out of 11 SGX Directors are considered independent, based on the requirements under the CCG 2018 and the SFR 2005.

The Board, taking into account the views of the NGC, the nature and scope of SGX's businesses and the number of Board committees, considers that a board with a majority of members being independent is necessary.

Over the course of the year, the NGC assessed the independence of Board members in compliance with the requirements of the SFR 2005 and took into consideration the relevant provisions of the CCG 2018. With regard to Guideline 2.4 of the CCG 2012 (and Provision 2.1 of the CCG 2018) which requires that the independence of any director who has served on the Board beyond 9 years from the date of first appointment be subject to particularly rigorous review, the NGC decided that any independent director upon completing 9 consecutive years of service will thereafter be deemed a non-independent director, notwithstanding demonstrable independence of management, or business relationships with SGX or any substantial shareholder. The Board is in accord with the NGC's decision.

The Board, through the NGC, assessed the independence of each of the Directors in FY2019. Based on the declarations of independence provided by the Directors and taking into account the guidance in the CCG 2018 and SFR2005, Mr Liew Mun Leong, Ms Lim Sok Hui, Mr Lim Chin Hu and Mr Loh Boon Chye were determined to be non-independent Directors. Mr Liew is considered non-independent by virtue of having served beyond 9 years on the SGX Board. Ms Lim is considered non-independent by virtue of her employment as chief financial officer of DBS Bank Limited (DBS Ltd) and on account that DBS Ltd is a trading

member of SGX-DC (OTCF) and DBS Vickers Securities (Singapore) Pte. Ltd. is a trading and clearing member of SGX-ST, CDP, SGX-DT and SGX-DC. Mr Lim is considered a non-independent Director until 30 June 2019 due to his previous directorship on Keppel DC REIT Management Pte. Ltd., which effectively controls the negotiations and payments

for certain services rendered to SGX. With effect from 1 July 2019, Mr Lim has been re-designated as an independent Director. As the SGX Chief Executive Officer, Mr Loh is considered non-independent by virtue of his employment by SGX. Mr Kwa Chong Seng, Mr Thaddeus Beczak, Ms Chew Gek Khim, Ms Jane Diplock AO,

Mr Kevin Kwok, Mr Ng Wai King and Mr Subra Suresh are considered independent Directors. In line with the Directors' Conflicts of Interest Policy, each member of the NGC and the Board recused himself or herself from the NGC's and the Board's deliberations respectively on his or her own independence.

Directors' Details		Directors' Independence Status					Directors' Meeting Attendance Report						
		Names	Independence status under the CCG 2018	Independence status under the SFR 2005	Reg 3(1)(a) Independent from management relationship	Reg 3(1)(b) Independent from business relationship	Reg 4 Independent from substantial shareholder	AGM	Board	AC	NGC	RSDC	RMIC
No. of meeting held in FY2019								1	6	4	2	2	5
Mr Kwa Chong Seng	I NE	Yes	Yes	Yes	Yes	Yes	Yes	● 1/1	● 6/6	● 4/4	● 2/2	● 2/2	● 5/5
Mr Loh Boon Chye ¹	NI E	No	No	No	Yes	Yes	Yes	● 1/1	● 6/6	● 4/4	● 2/2	● 2/2	● 5/5
Mr Thaddeus Beczak	I NE	Yes	Yes	Yes	Yes	Yes	Yes	● 1/1	● 6/6	—	—	—	● 5/5
Ms Chew Gek Khim	I NE	Yes	Yes	Yes	Yes	Yes	Yes	● 1/1	● 6/6	—	● 2/2	● 2/2	—
Ms Jane Diplock AO	I NE	Yes	Yes	Yes	Yes	Yes	Yes	● 1/1	● 6/6	● 4/4	—	—	● 5/5
Mr Kevin Kwok	I NE	Yes	Yes	Yes	Yes	Yes	Yes	● 1/1	● 6/6	● 4/4	● 2/2	● 2/2	● 5/5
Mr Liew Mun Leong ²	NI NE	No	Yes	Yes	Yes	Yes	Yes	● 1/1	● 5/6	● 3/4	● 1/2	● 1/2	—
Mr Lim Chin Hu ³	NI NE	No	Yes	Yes	Yes	Yes	Yes	● 1/1	● 6/6	—	● 2/2	—	● 5/5
Ms Lim Sok Hui (Mrs Chng Sok Hui) ⁴	NI NE	Yes	No	Yes	No	Yes	Yes	● 1/1	● 6/6	—	—	—	● 5/5
Mr Ng Wai King ⁵	I NE	Yes	Yes	Yes	Yes	Yes	Yes	● 1/1	● 5/5	—	—	● 1/1	—
Mr Subra Suresh ⁶	I NE	Yes	Yes	Yes	Yes	Yes	Yes	● 1/1	● 4/5	—	● 1/2	—	—
Mr Ng Kok Song ⁷	I NE	Yes	Yes	Yes	Yes	Yes	Yes	● 1/1	● 1/1	—	—	—	—
● Independent (I) ● Non-Independent (NI) ● Executive (E) ● Non-Executive (NE)		Assessment of Independence of Individual Directors					● Chairman ● Member ● By Invitation						

¹ As CEO of SGX, Mr Loh Boon Chye is considered employed by SGX and deemed non-independent by virtue of Guideline 2.3(a) and Regulation 3(1)a.

² Mr Liew Mun Leong is deemed non-independent, solely on account of having completed 9 consecutive years of service as of the relevant date during the year of report pursuant to the NGC's decision on Guideline 2.4 of the CCG 2012 (Provision 2.1 of the CCG 2018).

³ Mr Lim Chin Hu is considered a non-independent Director until 30 June 2019 due to his previous directorship on Keppel DC REIT Management Pte. Ltd., which effectively controls the negotiations and payments for certain services rendered to SGX.

⁴ As chief financial officer of DBS Bank Limited (DBS Ltd) and on account that DBS Ltd is a trading member of SGX-DC (OTCF) and DBS Vickers Securities (Singapore) Pte Ltd is a trading and clearing member of SGX-ST, CDP, SGX-DT and SGX-DC, Ms Lim Sok Hui is deemed non-independent by virtue of Regulation 3(3)(d).

⁵ Mr Ng Wai King was appointed to SGX Board and a member of RSDC on 20 September 2018.

⁶ Mr Subra Suresh was appointed to SGX Board and a member of NGC on 20 September 2018.

⁷ Mr Ng Kok Song retired from SGX Board at the conclusion of the AGM on 20 September 2018.

Corporate Governance Report

Board Diversity

SGX has in place a Board Diversity Policy, which endorses the principle that its Board should have a balance of skill, knowledge, experience and diversity of perspectives appropriate to SGX's business to promote the inclusion of different perspectives and ideas, mitigate against group think and ensure that SGX has the opportunity to benefit from all available talent.

Each year, the NGC reviews the composition and size of the Board and each Board committee and takes into careful consideration a combination of factors when reviewing appointments to the Board and the continuation of those appointments. These factors include skills, core competencies, knowledge, professional experience, educational background, gender, age

and length of service. Core competencies, which are taken into account in the selection and appointment of Directors, include banking, finance, accounting, business acumen, management experience, exchange industry knowledge, technology expertise, familiarity with regulatory requirements and knowledge of risk management, audit and internal controls. The NGC also in its deliberations, takes into account gender and age diversity in relation to the composition of the Board. The Board, taking into account the views of the NGC, considers that its Directors meet the criteria under its Board Diversity Policy and possess the necessary competencies and knowledge to lead and govern SGX effectively. Details of the Board composition are as follows.

Board Guidance

An effective and robust Board, whose members engage in open and constructive debate and challenge Management on its assumptions and proposals, is fundamental to good corporate governance. A Board should also aid in the development of strategic proposals and oversee effective implementation by Management to achieve set objectives.

For this to happen, the Board, in particular its NEDs, must be kept well informed of SGX Group's businesses and be knowledgeable about the exchange industry. To ensure that NEDs are well supported by accurate, complete and timely information, NEDs have unrestricted access to Management. NEDs also receive periodic information papers and Board briefings on the latest market developments and trends, and key business initiatives. Regular informal meetings are held for Management to brief directors on prospective deals and potential developments in the early stages, before formal Board approval is sought. Board papers are provided to directors not less than a week in advance of the meeting to afford the directors sufficient time to review the Board papers prior to the meeting. If a director is unable to attend a Board or Board committee meeting, the director may nevertheless provide his/her comments to the Chairman or relevant Board committee Chairman separately.

Board Independence (as at 30 June 2019)



Directors' Length of Service (as at 30 June 2019)



Board Gender Diversity (as at 30 June 2019)



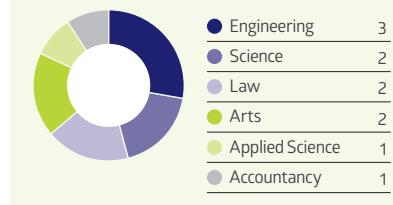
Director's Citizenship (as at 30 June 2019)



Director's Area of Expertise (as at 30 June 2019)



Directors' Educational Background (as at 30 June 2019)



Meeting of Directors without Management

Where necessary, the NEDs meet without the presence of Management or Executive Directors at each Board meeting.



Board Matters

Chairman and Chief Executive Officer

Principle 3

Separation of the Role of Chairman and the Chief Executive Officer (CEO)

The roles of Chairman of the Board and CEO are separate to ensure a clear division of responsibilities, increased accountability and greater capacity of the Board for independent decision-making. The Chairman and the CEO are not related. The division of responsibilities and functions between the two has been demarcated with the concurrence of the Board.

The Chairman provides leadership to the Board and CEO. He manages the business of the Board and monitors the translation of the Board's decisions and directions into executive action. He approves the agendas for the Board meetings and ensures sufficient allocation of time for thorough discussion of each agenda item. He promotes an open environment for debate, and ensures that NEDs are able to speak freely and contribute effectively. He exercises control over the quality and quantity of the information as well as the timeliness of the flow of information between the Board and Management. In addition, he provides close oversight, guidance, advice and leadership to the CEO and Management.

At AGMs and other shareholders' meetings, the Chairman plays a pivotal role in fostering constructive dialogue between shareholders, the Board and Management.

The CEO manages and develops the businesses of SGX and implements the Board's decisions. He chairs the EMCO, which comprises senior management executives. EMCO meets regularly to oversee the management of the SGX Group and implement the Board's strategic policies.

Board interaction with, and independent access to Management is encouraged. EMCO members and key management personnel are invited to attend all Board meetings, and relevant Board committee meetings.

Given that the roles of the Chairman and CEO are separate and the Chairman is independent, no Lead Independent Director is required to be appointed.

Board Membership

Principle 4

Continuous Board Renewal

The Board, in conjunction with the NGC, reviews the composition of the Board and Board committees annually, taking into account the performance and contribution of each individual director. Board composition is also evaluated to ensure that diversity of skills, core competencies, knowledge, professional experience, educational background, gender, age and length of service as prescribed under the Board Diversity Policy is maintained within the Board and Board committees.

Based on the NGC's assessment of the independence of each individual director and his/her relevant expertise, and with the aim of ensuring compliance with the requirements of the CCG 2018 and SFR 2005, the Board reviews, and

reconstitutes as appropriate, the membership of the Board committees.

The Constitution, in compliance with the Listing Manual, provides that at each AGM, one-third of the directors, including the CEO who also serves on the Board (or, if their number is not a multiple of three, the number nearest to but not less than one-third) shall retire from office by rotation. Effectively, this results in all directors having to retire at least once every 3 years or even earlier. Directors appointed by the Board during the financial year, to fill a casual vacancy or appointed as an additional director, may only hold office until the next AGM and thereafter be eligible for re-election by shareholders at the next AGM. Shareholders will be provided with relevant information on the candidates for election or re-election.

Retiring by rotation at 2019 AGM

Messrs Chew Gek Khim, Jane Diplock AO, Lim Sok Hui and Liew Mun Leong will be retiring by rotation under Article 97 of the SGX Constitution. Messrs Chew, Diplock and Lim have respectively given their consent to stand for re-election at the AGM. Ms Diplock will, upon re-election, continue to serve as a member of the Audit Committee and Risk Management Committee. Ms Chew will, upon re-election, continue to serve as a member of the Nominating & Governance Committee and Remuneration & Staff Development Committee. Ms Lim will, upon re-election, continue to serve as the Chairman of the Risk Management Committee. Mr Liew has decided not to offer himself for re-election.

Corporate Governance Report

NGC Composition

The NGC comprises 6 directors namely:



The NGC is responsible for SGX's corporate governance framework, the Board's succession plan and reviewing relevant local and international developments in the area of corporate governance (including changes in applicable laws, regulations and listing rules).

Nomination and Selection of Directors

SGX adopts a comprehensive and detailed process in the selection of new Directors. The NGC is responsible for identifying candidates and reviewing all nominations for the appointment, re-appointment or termination of Directors and Board committee members, taking into account the Monetary Authority of Singapore's (MAS) fit and proper criteria for such appointments, the Director's independence status, his/her participation and contributions during and outside Board meetings, the factors prescribed under the Board Diversity

Policy and other relevant factors as may be determined by the NGC. Where the need to appoint a new Director arises, the NGC will review the composition and range of knowledge, expertise, skills and attributes of the Board and Board committees. The NGC identifies SGX's needs and prepares a shortlist of candidates with the appropriate profile for nomination before sourcing for candidates through an extensive network of contacts. Candidates are identified based on the needs of SGX and the relevant expertise required. After the NGC Chairman, the Chairman of the Board and the other NGC members have interviewed the candidates, the candidates are shortlisted for the NGC's formal consideration for appointment to the Board.

When reviewing a nomination for a proposed Board appointment, the NGC complies with SFR 2005 criteria as follows:

- a determination of the candidate's independence;
- whether his/her appointment will result in non-compliance with any of the SFR 2005 composition requirements for the Board and its Board committees; and
- whether the candidate fulfils the fit and proper criteria under the MAS' fit and proper guidelines which include, honesty, integrity, reputation, competence and capability, and financial soundness.

All directors of SGX are approved by the MAS, based on its fit and proper criteria, before they are appointed by the Board or at the AGM (as the case may be).

Continuous Review of Directors' Independence

The NGC conducts an annual review of each director's independence in accordance with the SFR 2005 requirements and takes into consideration the relevant provisions in the CCG 2018. SGX has procedures in place to ensure continuous monitoring of SGX directors' independence. The NGC has ascertained that, save for

Messrs Liew Mun Leong, Lim Chin Hu, Lim Sok Hui and Loh Boon Chye, all Directors are considered independent according to these criteria. If at any time the MAS is not satisfied that a director is independent, notwithstanding any determination by the NGC, MAS may direct SGX to rectify the composition of the Board or Board committees (as the case may be).

SGX has in place a policy whereby Directors must consult both the Chairman of the Board and the NGC Chairman prior to accepting new director appointments. Directors must also immediately report any changes in their external appointments, including any corporate developments relating to their external appointments, which may affect their independence. This ensures Directors continually meet the stringent requirements of independence under the SFR 2005.

Directors' Time Commitments

The NGC assesses the effectiveness of the Board as a whole and takes into account each Director's contribution and devotion of time and attention to SGX. The NGC also assesses nominees identified for recommendation to the Board, on their individual credentials and their ability to devote appropriate time and attention to SGX.

The NGC is of the view that the effectiveness of each of the Directors is best assessed by a qualitative assessment of the Director's contributions as well as by taking into account each Director's listed company board directorships, and any other relevant time commitments. While having a numerical limit on the number of directorships may be considered by some other companies to be suitable for their circumstances, at present SGX considers the assessment as described above to be more effective for its purposes. SGX also does not wish to omit from consideration outstanding individuals who, despite the demands on their time, have the capacity to participate and contribute as new members of the Board.

For now, the NGC believes that SGX's qualitative assessment and the existing practice, which requires each Director to confirm annually to the NGC his/her ability to devote sufficient time and attention to SGX's affairs, having regard to his/her other commitments, are effective.

SGX will continue to disclose each Director's listed company board directorships and principal commitments which may be found in the 'Board of Directors' section in the Annual Report.

The Directors standing for re-election this year have attended all Board and Board committee (of which they are a member of) meetings in FY2019.

The Board is satisfied that all Directors have discharged their duties adequately in FY2019. The Board also expects that the Directors (including any directors who are newly appointed) will continue to (or will) discharge their duties adequately in FY2019.

Alternate Directors

SGX has no alternate directors on its Board.

Succession Planning for the Board

Succession planning is an important part of the governance process. The NGC will seek to refresh the Board membership progressively and in an orderly manner, to avoid losing institutional memory.

Key Information on Directors

The profile of the Directors and key information are set out under "Board of Directors" section in this Annual Report. The Notice of AGM sets out the Directors proposed for re-election or re-appointment at the AGM. Key information on Directors are also available on SGX's website.

Board Matters

Board Performance

Principle 5

Board Evaluation Policy

The Board has implemented a process carried out by the NGC, for assessing the effectiveness of the Board as a whole and its Board committees, and for assessing the contribution by each individual Director to the effectiveness of the Board. The Board Evaluation Policy is available on SGX's website.

Annually, the NGC undertakes a process to assess the effectiveness of the Board as a whole and its Board committees. The NGC will ascertain the key areas for improvement and requisite follow-up actions. Once every 2 years, independent consultants will be appointed to assist in the evaluation process of the Board and Board committees. The Board believes that the use of an external independent consultant greatly enhances the quality and objectivity of the evaluation. This process includes a questionnaire designed to assess the performance of the Board and its Board committees and enhance the overall effectiveness of Directors and the Board and its Board committees' performance will be evaluated by each Director and each EMCO member.

During FY2019, the Corporate Secretariat assisted the NGC in the evaluation process. Questionnaires were sent by the Corporate Secretariat to the Directors for the evaluation of the Board and its Board committees. Factors which were evaluated included board composition, information management, board processes, corporate integrity and social responsibility, management of the Company's performance, board committee effectiveness, CEO performance and succession planning, director development and management, risk management, audit and internal controls and overall perception of the Board. A section on the Chairman of the Board and his interactions with the Board was also introduced. The findings from this evaluation were presented to the

NGC and the Board to facilitate improvements to the Board's practices.

Board Performance Criteria

The Board reviews its performance annually.

The Board oversees the affairs of the SGX Group and is accountable to shareholders for the long-term performance and financial soundness of the SGX Group. In this regard, the Board supervises the achievement of Management's performance targets namely (a) strategic and non-financial priorities; (b) earnings per share; and (c) a comparison of SGX's total shareholder return against selected peer exchanges and Straits Times Index companies.

The Board is required to ensure that a proper balance is maintained between its commercial objectives and its regulatory responsibilities. Therefore, the Board's performance criteria include a measure to capture the performance of SGX's regulatory responsibilities as a SRO.

Individual Director Evaluation

There is an individual assessment of each NED's contribution by the Chairman of the Board, and the results of the assessment are discussed with the NED. The factors considered in the individual assessment include the NED's attendance record, intensity of participation at Board and Board committee meetings, quality of interventions and special contributions made by the NED. The performance of individual NEDs are taken into account in their re-appointment or re-election. Specific needs which arise from time to time are taken into account in any appointment of new NEDs.

The assessment of the CEO's performance is undertaken by the Chairman of the Board together with the Chairmen of the NGC and the RSDC, and the results are reviewed by the Board.

The NEDs assess the performance of the Chairman of the Board. The NEDs will choose one of their number to lead the assessment, who shall provide the feedback to the Chairman of the Board.

Corporate Governance Report

Remuneration Matters Procedures for Developing Remuneration Policies

Principle 6

Remuneration & Staff Development Committee

The RSDC comprises 4 directors namely:



The Board considers that Mr Kwa Chong Seng, who has many years of experience in senior management positions and on various boards dealing with remuneration issues, is well qualified to chair the RSDC and that the members of the RSDC collectively have strong management experience and expertise on remuneration issues.

The key responsibilities of the RSDC, as delegated by the Board, are to:

- Oversee the governance of the SGX Group's remuneration policy;
- Oversee the remuneration of the Board and key management personnel including reviewing the remuneration of the CEO upon recruitment or renewal (where applicable), set appropriate remuneration frameworks and policies, including long-term incentive schemes, to deliver

annual and long-term performance of the SGX Group and to review the development and succession plan for EMCO members;

- Review and recommend to the Board, the CEO's and key management personnel's annual increments, variable bonuses, long-term incentive awards and other incentive awards or benefits in kind, against the achievement of their prescribed goals and targets;
- Review the Company's obligations arising in the event of termination of the CEO's and key management personnel's contracts of service, to ensure that such contracts of service contain fair and reasonable termination clauses which are not overly generous;
- Approve the framework of remuneration for the entire organisation including the structure of short-term and long-term incentive schemes and policies. Each year, the RSDC also approves the salary increment pool and total incentive pool for distribution to staff of all grades; and
- Review the succession and leadership development plans for senior management. As part of this annual review, the successors to key positions are identified, and development plans instituted for them.

The RSDC has access to the Head of Human Resources, who attends all RSDC meetings. The RSDC may also seek external professional advice on remuneration of Directors and staff.

Whilst the RSDC reviews the fees payable to NEDs to be recommended for shareholders' approval at the AGM, no member of the RSDC may by himself or herself decide on his or her own remuneration.

Remuneration Matters Level and Mix of Remuneration

Principle 7

The RSDC administers all the performance-related elements of remuneration for senior management. A significant proportion of senior management's remuneration is in the form of variable or "at risk" compensation, awarded in a combination of short-term and long-term incentives. The incentive schemes are designed to align the interests of the CEO, key management personnel and staff with those of shareholders and link rewards to corporate and individual performance. As a policy, up to half of the senior management's variable compensation may be deferred in the form of long-term incentives which will vest over a period of time.

Details of SGX's compensation philosophy and the compensation framework including the long-term incentive awards made thereunder, and the performance conditions for the vesting of the awards, are found under 'Remuneration Report' in this Annual Report.

Non-Executive Directors' Remuneration

SGX's CEO is an executive director and is, therefore, remunerated as part of senior management and in accordance with the terms of his contract. He does not receive directors' fees.

The framework for determining NEDs' fees (including the fees payable to the SGX Chairman), as set out below, was last revised in FY2018. The framework reflects an equitable and adequate remuneration on account of the scope and extent of a director's responsibilities and obligations and are measured competitively against Singapore-listed companies of similar size and to a lesser extent, global bourses, market competitive compensation levels to attract and retain talent, market trends on a national level and best practices for corporate governance.

Fee

	For Board	For Audit Committee & Risk Management Committee	For Other Board Committees
Committee Chairman	S\$ 930,000 per annum	S\$ 55,000 per annum	S\$ 40,000 per annum
Committee Member	S\$ 75,000 per annum	S\$ 40,000 per annum	S\$ 25,000 per annum

The gross remuneration paid to the NEDs (including SGX Chairman) for the financial year ended 30 June 2019 was S\$2,207,486.41 (details as set out in the table below):

FY2019 Fees	Share-based remuneration	Directors Fees	Total
01 Kwa Chong Seng	S\$ 232,498.87	S\$ 777,501.13	S\$ 1,010,000.00
02 Thaddeus Beczak		S\$ 115,000.00	S\$ 115,000.00
03 Chew Gek Khim	S\$ 18,745.10	S\$ 106,254.90	S\$ 125,000.00
04 Jane Diplock AO	S\$ 18,745.10	S\$ 136,254.90	S\$ 155,000.00
05 Kevin Kwok	S\$ 18,745.10	S\$ 176,254.90	S\$ 195,000.00
06 Liew Mun Leong	S\$ 18,745.10	S\$ 146,254.90	S\$ 165,000.00
07 Lim Chin Hu	S\$ 18,745.10	S\$ 115,752.18	S\$ 134,497.28
08 Lim Sok Hui (Mrs Chng)		S\$ 130,000.00	S\$ 130,000.00
09 Ng Kok Song ¹		S\$ 22,010.87	S\$ 22,010.87
10 Ng Wai King ²		S\$ 77,989.13	S\$ 77,989.13
11 Subra Suresh ²		S\$ 77,989.13	S\$ 77,989.13
Total			S\$ 2,207,486.41

¹ Mr Ng Kok Song stepped down from the Board on 20 September 2018.

² Messrs Ng Wai King and Mr Subra Suresh were appointed to the Board on 20 September 2018.

Subsidiary

Name of Director	Fees
Ms Jane Diplock AO ³	S\$ 85,000

³ Ms Jane Diplock AO is a director of SGX Regulation Pte. Ltd.

SGX seeks shareholders' approval at the AGM for the NED fees to be paid for the current financial year so that the NED fees can be paid on a quarterly basis in arrears. No director decides his/her own fees. The NED fees which are paid on a current year basis, will be payable to the Director if he/she is in service at the end of the current

quarter, or if the term of appointment ends within the quarter. Overseas directors are reimbursed for out-of-pocket travelling and accommodation expenses in Singapore.

To encourage NEDs to hold shares in the Company to better align the interests of the NEDs with the interests of

shareholders, one-quarter of the Chairman's fee of S\$930,000 and the NED base retainer fee will be paid in the form of share awards, provided that certain eligibility requirements are met, with the remaining three-quarters to be paid in cash. The awards will consist of the grant of fully paid shares, with no performance conditions attached.

Corporate Governance Report

The share awards are not subject to a vesting period, but are subject to a selling moratorium whereby each NED is required to hold the equivalent of 1 year's basic retainer fees for his or her tenure as a Director and for 1 year after the date he or she steps down. The fair value of share grants to the NEDs are based on the volume-weighted average price of the ordinary shares of SGX over the 14 trading days immediately after (and excluding) the date of the AGM. The actual number of ordinary shares to be awarded are rounded down to the nearest share, and any residual balance is paid in cash. Other than these share awards, the NEDs do not receive any other share incentives or securities pursuant to any of SGX's share plans.

Remuneration Matters Disclosure of Remuneration Principle 8

Remuneration of the CEO and the five top-earning Executives

For disclosure of the remuneration of the CEO and the 5 top-earning executives, please refer to 'Remuneration Report' in the Annual Report. The 'Remuneration Report' further sets out the performance conditions used to determine EMCO's short-term and long-term incentives. SGX has also disclosed in the Remuneration Report, the remuneration of the five top-earning executives in actual figures, in line with best practices, with a breakdown in terms of fixed pay, variable bonus, ex-gratia payment (if any), long-term incentives and benefits-in-kind. The Remuneration Report also discloses the employee share schemes that SGX has in place and how remuneration paid is varied according to SGX's and the individual's performance.

None of the current employees are related to the Directors.

Remuneration of employees who are immediate family members of a Director or the Group CEO

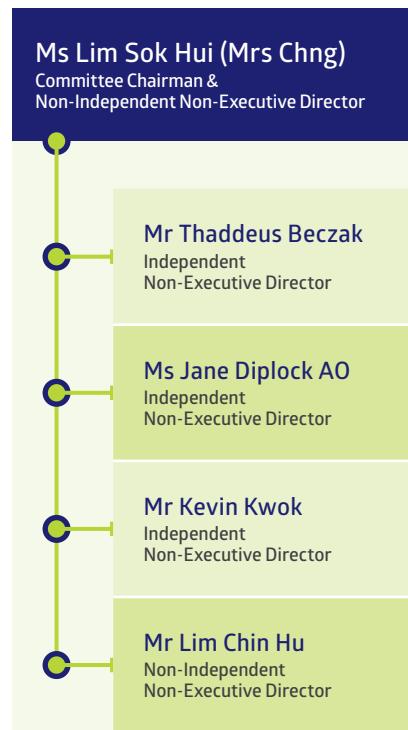
No employee of the SGX Group is a substantial shareholder of SGX or is an immediate family member of a Director, the CEO or a substantial shareholder of SGX and whose remuneration exceeded S\$100,000 during the financial year ended 30 June 2019.

Accountability & Audit Risk Management and Internal Controls Principle 9

The Board is responsible for overseeing risk management in SGX, amongst other matters. SGX recognises the importance of balancing risks and rewards to achieve the optimal level of risk that SGX can tolerate in its pursuit of its strategic priorities and business opportunities. In this regard, the Board, together with Management, has established a Risk Appetite Statement to identify the return objectives that are imperative to the organisation and the corresponding risk boundaries that are acceptable to support the achievement of these objectives. The risk appetite helps bring discipline and reinforces SGX's risk culture through the establishment of a "tone from the top" regarding the nature and extent of risks that SGX is willing to accept.

To assist the Board, the Board has established the RMC, a dedicated board risk management committee. Its responsibilities include reviewing and recommending to the Board the type and level of risk that SGX undertakes on an integrated basis to achieve its business strategy, and the appropriate framework and policies for managing risks that are consistent with SGX's risk appetite.

The RMC comprises 5 directors namely:



At the management level, the EMCO has also established a dedicated Enterprise Risk Committee, chaired by the Chief Risk Officer. This committee oversees and ensures that risks are being managed by appropriate units holistically across the organisation.

SGX has 3 lines of defence for risk management. The operating units are the first line of defence who, as risk owners, establish processes and controls to respond to risks. The second line of defence comprises the independent Compliance and Enterprise Risk Management functions. Compliance focuses on compliance risks; whilst Enterprise Risk Management oversees the completeness and accuracy of risk assessments, risk reporting and works with the operating units to mitigate these risks. Internal Audit, as the third line of defence, provides objective assurance to the AC. Together, these 3 lines of defence assure that there are adequate internal controls relating to processes, risk and control governance.

SGX has implemented an enterprise-wide risk management framework to facilitate the management of risks across the organisation. There are 3 programmes in place to identify, assess and manage risks faced by SGX. The first programme adopts a top-down approach, where key risks including strategic, financial, operational, compliance and regulatory risks, are identified by senior management. Mitigating actions are put in place to manage these risks, and key risk indicators (KRI) are established to monitor the risks. These KRIs are approved by the RMC and the Board. The second programme, the unit-level "Risk Self Assessments" (RSA), adopts a bottom-up approach and allows individual units to continuously identify risks faced by their units. Similar to the top-down exercise, mitigating actions are formulated to manage the risks. The third programme is a "Control Self-Assessment" programme which provides objective assurance to EMCO that key controls are operating effectively. The units perform self-testing to verify that key controls operated effectively throughout the year. Together, all these tools and exercises provide greater assurance that the SGX Group's risks identified are adequately managed. Where deficiencies in controls are identified, the operating units are able to address and rectify such deficiencies in a timely manner.

SGX has an active Business Continuity Management (BCM) programme to minimise the impact of a disruption on SGX's operations. As a major financial industry infrastructure provider, SGX has an obligation to ensure the continuity of its business as any operational disruption may cause adverse impact on the financial industry. SGX's BCM Policy and Guidelines ensure business continuity planning and staff readiness by way of regular rehearsals, exercising and testing. SGX recognises that operational resilience is required across the entire ecosystem and actively engages industry participants to improve their preparedness and readiness to deal with potential

business disruptions. During the year, it successfully tested SGX and participants' recovery process to market disruptions.

The Board has received assurance from the CEO and Chief Financial Officer (CFO) that, as at 30 June 2019, the SGX Group's financial records have been properly maintained, and the financial statements give a true and fair view of the SGX Group's operations and finances.

The Board has also received assurance from the CEO and the Executive Management Committee, as well as the Head of Legal, Compliance and Corporate Secretariat and the Head of Internal Audit that the internal controls (including financial, operational, compliance and information technology controls) and risk management systems were adequate and effective as at 30 June 2019 to address the risks that the SGX Group considers relevant and material to its operations.

Based on the internal controls established and maintained by the SGX Group, work performed by the internal and external auditors, and reviews performed by Management, various Board committees and the Board, as well as the said assurances set out above, the Board, with the concurrence of the AC, is of the opinion that the SGX Group's internal controls (including financial, operational, compliance and information technology controls) and risk management systems were adequate and effective as at 30 June 2019 to address the risks that the SGX Group considers relevant and material to its operations.

SGX's internal controls and risk management systems provide reasonable assurance against foreseeable events that may adversely affect SGX's business objectives. The Board notes that no internal controls and risk management systems can provide absolute assurance in this regard, or against the occurrence of material errors, poor judgement in

decision-making, human error, losses, fraud or other irregularities.

Accountability

The Board provides shareholders with quarterly and annual financial reports. Results for the first three quarters are released to shareholders no later than 25 days from the end of the quarter. Annual results are released within 31 days from the financial year-end. In presenting the annual and quarterly financial statements to shareholders, the Board aims to provide shareholders with a balanced and clear assessment of SGX's financial results, position and prospects.

For the financial year under review, the CEO and CFO provided assurance to the Board on the integrity of the financial statements of SGX and its subsidiaries. For interim financial statements, the Board provides a statement of negative assurance to shareholders, in line with the Listing Rules. For the full year financial statements, the Board with the concurrence of the AC provides an opinion that the financial statements give a true and fair view of the results of the SGX Group and that SGX will be able to pay its debts as and when they fall due. This, in turn, is supported by a negative assurance statement from the CEO and CFO. Management provides Directors with a monthly financial performance report either (a) within 10 business days from month-end close; or (b) on or prior to the day when the annual or quarterly financial results are released. SGX has also procured undertakings from all its Directors and executive officers in compliance with Listing Rule 720(1).

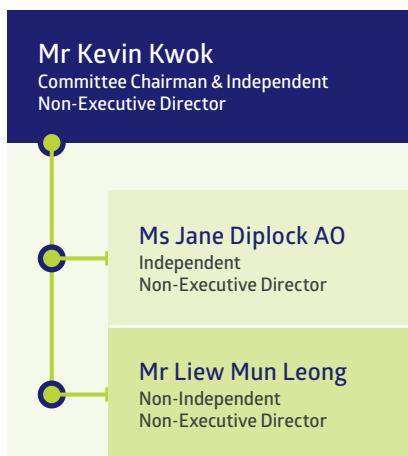
SGX is accountable to MAS on how it discharges its responsibilities as a market operator, depository and clearing house, and as a regulator. In this respect, an annual self-assessment report and an annual report on the SGX RegCo activities in relation to SGX's SRO conflicts management are typically prepared and submitted to MAS. MAS also conducts an annual on-site inspection of SGX as part of its oversight of SGX.

Corporate Governance Report

Accountability & Audit Audit Committee

Principle 10

The AC comprises 3 directors namely:



In compliance with the requirements of the SFR 2005, all members of the AC are independent NEDs who do not have any management and business relationships with SGX or any substantial shareholder of SGX. Mr Liew Mun Leong is deemed non-independent solely on account of having completed 9 consecutive years of service as of 1 July 2018 pursuant to the NGC's decision on Guideline 2.4 of the CCG 2012 (Provision 2.1 of the CCG 2018). None of the AC members were previous partners or directors of the Company's external auditor, PricewaterhouseCoopers LLP (PwC), within the last 24 months or hold any financial interest in PwC.

The Board considers Mr Kevin Kwok, who has extensive and practical accounting and financial management knowledge and experience, well qualified to chair the AC. The members of the AC collectively have strong accounting and related financial management expertise and experience. They keep abreast of relevant changes to accounting standards and issues which have a direct impact on the financial statements.

Key objectives

The key objectives of the AC are to assist the Board in discharging its statutory and other responsibilities relating to the integrity of the financial statements, monitoring of the system of internal controls and independence of the external auditor.

Financial Reporting

The AC meets on a quarterly basis to review the financial statements, including the relevance and consistency of the accounting principles adopted and the significant financial reporting issues and judgments, so as to obtain reasonable assurance as to the integrity and fairness of the financial statements. The AC recommends the financial statements and corresponding SGXNet announcements to the Board for approval.

Internal Controls and Regulatory Compliance

The AC reviews and assesses the adequacy and effectiveness of SGX's internal controls and regulatory

compliance. In order to do this, the AC considers the reports, the processes and controls in place and carries out discussions with Management, the Head of Internal Audit, the Head of Legal, Compliance & Corporate Secretariat, the Chief Risk Officer and the external auditor, at its quarterly AC meetings.

Taking into consideration the 3 lines of defence that SGX has for risk management (as described in Principle 9), the AC also considers the results of the Controls Self-Assessment Framework administered by the Enterprise Risk Management function in its assessment of SGX's internal controls.

Based on its reviews, the AC makes recommendations to the Board with regard to the adequacy and effectiveness of SGX's internal controls.

Internal Audit

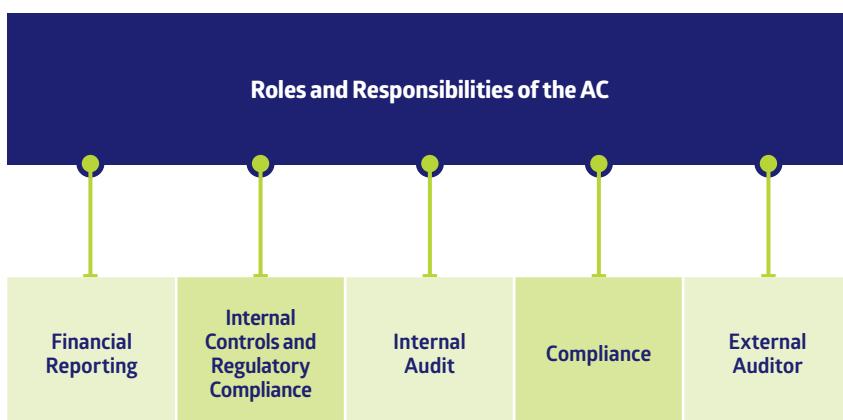
The AC reviews the scope and plans undertaken by the Internal Audit function, and considers the results, significant findings and recommendations together with Management's responses. The AC assesses the adequacy and effectiveness of the Internal Audit function and ensures that the internal auditor has direct and unrestricted access to the Chairman of the Board and the AC. The appointment, remuneration and resignation of the Head of Internal Audit are reviewed by the AC.

Compliance

The AC reviews the compliance framework and workplan. The AC also reviews compliance matters that may have a material impact on SGX's financials, internal controls or reputation.

External Auditor

The AC oversees SGX's relationship with its external auditor. It reviews the selection of the external auditor and recommends to the Board the appointment, re-appointment and removal of the external auditor, as well as the remuneration and terms of



engagement of the external auditor. The annual re-appointment of the external auditor is subject to shareholder approval at SGX's AGM.

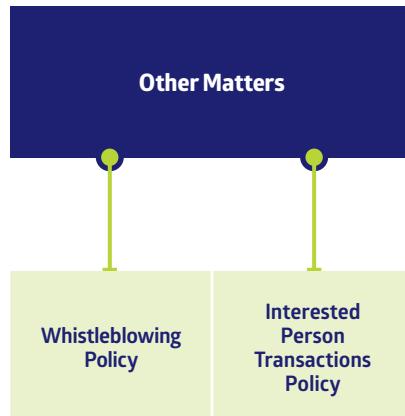
On an annual basis, the AC evaluates the performance and effectiveness of the external auditor and recommends the re-appointment of the external auditor to the Board. The AC reviews the scope and the audit plans as well as the results of audits undertaken by the external auditor and considers all significant findings, recommendations and Management's responses. It also reviews the independence and objectivity of the external auditor, and assesses the nature, extent and costs of non-audit services provided by the external auditor, seeking to balance the independence and objectivity of the external auditor with the business and operational needs of SGX.

Whistleblowing Policy

SGX has a whistleblowing policy which encourages employees and vendors to report malpractices and misconduct in the workplace. The policy establishes a confidential line of communication to report concerns about possible improprieties to the Head of Internal Audit, and ensures the independent investigation of, and follow-up of such matters. SGX will treat all information received confidentially and protect the identity of all whistle-blowers.

Anonymous disclosures will be accepted and anonymity honoured. Employees who have acted in good faith will be protected from reprisal. Reports can be lodged by calling the hotline at +65 6236 8585 or via email at whistleblowing@sgx.com. The AC reviews all whistleblowing complaints at its quarterly meetings to ensure independent, thorough investigation and appropriate follow-up actions. The outcome of each investigation is reported to the AC.

All SGX employees are educated on the whistleblowing policy as part of their mandatory annual e-learning. SGX also publicly discloses the purpose, scope, reporting and communication channels of the whistleblowing policy on its website.



Interested Person Transactions Policy

SGX has procedures in place to comply with the Listing Manual requirements relating to interested person transactions. All new directors are briefed on the relevant provisions that they need to comply with. All interested person transactions, if any, are reported to and monitored by the Finance department, and reviewed by the AC.

Authority of the AC

The Board has delegated to the AC the authority to investigate any matter within its terms of reference. The AC has full access to the internal and external auditors as well as to

Management. It also has full discretion to invite any director or officer, including any director from any subsidiary board within the SGX Group, to attend its meetings and has access to various resources, including external consultants, to enable it to discharge its responsibilities properly.

Activities in FY2019

The AC met 4 times during the financial year ended 30 June 2019. The Chairman, CEO, President, CFO, Chief Risk Officer, Head of Technology, Head of Internal Audit, Head of Legal, Compliance & Corporate Secretariat and the external auditor were invited to attend these meetings. The following matters were reviewed during the meetings:

Financial matters

In the review of the financial statements, the AC has discussed with Management the accounting principles that were applied and their judgment of items that might affect the integrity of the financial statements. The following significant matters impacting the financial statements were discussed with Management and the external auditor and were reviewed by the AC:

Significant matters	How the AC reviewed these matters
Impairment assessment of goodwill and intangible assets	<p>The AC has considered the approach and methodology applied to the valuation model in goodwill impairment assessment as well as the assessment for indicators of impairment of intangible assets. It has reviewed the reasonableness of business projections and cash flow forecasts, the long term growth rate and the discount rate. The AC is satisfied with the appropriateness of the methodology used and the reasonableness of the rates applied.</p> <p>The impairment assessment of goodwill of Energy Market Company Pte Ltd (EMC) and intangible assets of EMC and Baltic Exchange Limited were also an area of focus for the external auditor. The external auditor has included this item as a key audit matter in its audit report for the financial year ended 30 June 2019. Refer to page 109 of this Annual Report.</p>

Corporate Governance Report

Following the review and discussions, the AC recommended to the Board to approve the full year financial statements.

Oversight of the external auditor
The AC approved the scope and audit plans undertaken by the external auditor, reviewed the results of the audits, significant findings and recommendations as well as Management's responses.

The AC considered the independence and quality of the external auditor throughout the year and also met with the external auditor without the presence of Management. The external auditor provided regular updates to the AC on relevant changes to the accounting standards and the implications on the financial statements.

SGX conducted a Request for Proposal (RFP) exercise in November 2018 for provision of external audit services commencing from the start of the financial year ending 30 June 2020. Three international audit firms were invited to the RFP exercise and competitive proposals were submitted. The AC evaluated the proposals taking into consideration the Checklist for Evaluation of External Auditors in the Guidebook for Audit Committees in Singapore issued jointly by ACRA, MAS and SGX, the Guidance to Audit Committees on ACRA's Audit Quality Indicators Disclosure Framework issued by ACRA and the Audit Committee Guide issued by the Singapore Institute of Directors. Management feedback was also sought and presented to the AC as part of the evaluation process.

After due consideration, the AC recommended KPMG LLP for nomination as external auditor commencing from the start of the

financial year ending 30 June 2020. The Board accepted the AC's recommendation, subject to approval by shareholders at the forthcoming annual general meeting.

SGX has complied with Listing Rules 712 and 715 in relation to its external auditor.

Non-audit services

The AC reviewed the volume and nature of non-audit services provided by the external auditor during the financial year ended 30 June 2019. Based on this and other information, the AC is satisfied that the financial, professional and business relationships between SGX and the external auditor did not prejudice their independence and objectivity.

The total fees paid to our external auditor, PwC, are disclosed in the table below:

External Auditor Fees for FY2019	Total Audit Fees	Total Non-Audit Fees	Total Fees Paid
S\$'000	1,132	109	1,241
% of total audit fees	–	10	–

Internal Controls and Regulatory Compliance

The AC reviewed and assessed the effectiveness of SGX's internal controls and regulatory compliance. Taking into account the internal controls established and maintained by SGX, the work performed by the internal and external auditors as well as the Compliance function, and reviews performed by Management, including the results of the Controls Self-Assessment tests and various Board committees, the AC is of the opinion and recommended to the Board that SGX's internal controls addressing financial,

operational, compliance and information technology risks were adequate as at 30 June 2019.

Oversight of Internal Audit

The AC exercised its oversight over the Internal Audit function throughout the year. The AC reviewed the following:

- (a) scope of the annual internal audit plans to ensure that the plans provided a sufficiently robust review of the internal controls of SGX;
- (b) significant audit observations and Management's responses thereto;
- (c) approval of Internal Audit Charter;
- (d) adequacy and effectiveness of Internal Audit function; and
- (e) budget and staffing for Internal Audit function.

The AC Chairman met regularly with the Head of Internal Audit without the presence of Management, several times during the financial year under review. The Head of Internal Audit provided regular updates to the AC on the workings of the Internal Audit function.

The AC also reviewed Management's assessment of fraud risk and held discussions with the external auditor to obtain reasonable assurance that adequate measures were put in place to mitigate fraud risk exposure in SGX.

Oversight of Compliance

The AC exercised its oversight over the Compliance function throughout the year. The AC reviewed the following:

- (a) scope of annual compliance plans;
- (b) compliance activities, key compliance risks identified and compliance response thereto;
- (c) regulatory breaches and compliance response thereto;
- (d) approval of Compliance Charter; and
- (e) budget and staffing for the Compliance function.

The Compliance function is independent of the business functions and reports directly to the CEO. The role of the Compliance function and its accountability to the CEO and the AC is described in the Compliance Charter, which is reviewed annually and approved by the AC. The Compliance function executes an annual risk-based compliance programme, focusing on regulatory risks arising from SGX's obligations to comply with applicable laws and regulations. The programme comprises a combination of regulatory risk assessments and responses, compliance training (including mandatory annual e-learning for staff), independent compliance reviews, and regular reporting to senior management, the AC and regulators on breaches, significant compliance issues and relevant action plans. The AC receives regular quarterly reports and other relevant reports from the Head of Compliance for the financial year under review.

Material Contracts

There were no material contracts entered into by SGX or any of its subsidiaries involving interests of any Director or controlling shareholder during FY2019.

Interested Person Transactions

There were no Interested Person Transactions entered into by SGX or any of its subsidiaries involving interests of any Director or controlling shareholder or an associate of any Director or controlling shareholder during FY2019.

Internal Audit

Annually, Internal Audit prepares and executes a robust risk-based audit plan, which complements that of the external auditor, so as to review the adequacy and effectiveness of SGX's system of internal controls. These include operational, financial, compliance and information technology controls. In addition,

the external auditor will highlight any material internal control weaknesses which have come to their attention in the course of their statutory audit. All audit findings and recommendations made by the internal and external auditors are reported to the AC. Significant issues are discussed at AC meetings. Internal Audit follows up on all recommendations by the internal and external auditors and reports the implementation status to the AC every quarter.

Line of Reporting and Activities

Internal Audit is an independent function within SGX. The Head of Internal Audit reports directly to the AC and administratively to the CEO. The AC approves matters relating to the Internal Audit Charter, risk assessment and related audit plans and results and follows up on internal audit activities. The AC approves the hiring, removal, performance evaluation and compensation of the Head of Internal Audit. Internal Audit has unfettered access to all of SGX's documents, records, properties and personnel.

Internal Audit operates within the framework stated in its Internal Audit Charter, which is approved by the AC. The primary role is to assist the Board and senior management to meet the strategic and operational objectives of SGX, by providing an independent and objective evaluation of the adequacy and effectiveness of risk management, internal controls and governance processes.

All audit reports are circulated to the AC, Chairman, CEO, the external auditor, the Monetary Authority of Singapore, and relevant senior management representatives. The progress of corrective actions on outstanding audit issues is monitored through company-wide issue management systems. Information on

outstanding issues is categorised according to severity and quarterly reports are sent to senior management and the AC.

Adequacy of the Internal Audit Function

Internal Audit's annual workplan is established in consultation with, but independent of Management and is aligned with the risk management framework of SGX. The plan is submitted to and approved by the AC. The AC is satisfied that the Internal Audit function has adequate resources to perform its functions, and has appropriate standing within SGX. The AC also reviews annually the adequacy and effectiveness of the Internal Audit function. As at 30 June 2019, there are 11 staff within the Internal Audit function.

Professional Standards and Competency

Internal Audit is a member of The Institute of Internal Auditors (IIA) and has adopted the International Standards for the Professional Practice of Internal Auditing (IIA Standards) laid down in the International Professional Practices Framework issued by the IIA. Quality assessment reviews are carried out at least once in 3 years by external qualified professionals. The last review was completed in FY2018 and the next review will be conducted in FY2021. The quality assessment review concluded that the Internal Audit function is adequate and conforms with the IIA Standards. Besides the IIA, the technology auditors in the Internal Audit function are members of the Information Systems Audit and Control Association.

The professional competence of the internal auditors is maintained or upgraded through relevant audit training programmes, conferences and seminars. Internal Audit is staffed with suitably qualified and experienced professionals with a range of 5 to 23 years of diverse operational, technology and financial audit experience.

Corporate Governance Report

Other Codes & Practices

Conduct & Ethics Policy

All employees are required to observe and maintain high standards of integrity, as well as comply with laws, regulations and company policies. SGX sets standards of ethical conduct for employees, which cover all aspects of the business operations of SGX such as work ethics, personal conflicts of interest, confidentiality of information, related party transactions, gifts and dealings in securities.

Anti-Corruption, Gifts and Entertainment

SGX has zero tolerance for bribery and corruption. SGX requires its employees to comply with the relevant anti-corruption legislation in Singapore and overseas, and to follow SGX's internal procedures when giving or receiving gifts, entertainment, sponsorships and charitable contributions. This requirement extends to all of SGX's business dealings in all countries in which it operates. SGX will always choose to forgo business rather than pay bribes and fully supports its employees in adopting the same stance.

Confidential Information

SGX deals with confidential information on a daily basis. Protecting confidential information is of paramount importance to establishing and maintaining a trusted marketplace. SGX provides clear guidance to its staff on the proper management, use and disclosure of confidential information. SGX's Confidentiality Policy and SGX's Personal Data Protection Policy set out SGX's framework and procedures for compliance with, among other things, the user confidentiality obligations under the SFA, and the personal data protection obligations under the Personal Data Protection Act.

Securities Dealing

To guard against insider trading, SGX adopts a "black-out" policy that is consistent with what is prescribed under the Listing Manual. All Directors and staff and their "related persons" (e.g. spouses and financial dependents) are prohibited from dealing in SGX's securities for a period of 2 weeks before the release of the financial results for

the first three quarters of SGX's financial year, and 1 month before the release of the full year results.

SGX issues a quarterly notice to its Directors and staff informing them not to deal in SGX's securities during a black-out period and that they are prohibited at all times from trading in SGX securities if they are in possession of unpublished price-sensitive information. Directors and staff are also discouraged from dealing in SGX's securities on short term considerations.

In addition to the black-out policy on SGX's securities, staff and their "related persons" who want to trade securities of any company listed on Singapore Exchange Securities Trading Limited must, subject to certain prescribed exceptions, seek prior approval from their managers. Staff are prohibited at all times from trading in the securities of any company if they are in possession of material non-public information concerning that company.

All SGX staff are required to complete an annual online refresher module on SGX's staff dealing requirements as part of SGX's mandatory compliance training.

All Directors are required to report their dealings in SGX's securities within 2 business days.

Shareholder Rights and Engagement

Shareholder Rights and Conduct of General Meetings

Principle 11

Engagement with Shareholders

Principle 12

Engagement with Stakeholders

Principle 13

Shareholder Rights

SGX is fully committed to treat all shareholders fairly and equitably. All shareholders enjoy specific rights under the Constitution and the relevant laws and regulations. SGX ensures that all material information is disclosed on a comprehensive, accurate and timely basis via SGXNet, and where appropriate, also posted on the SGX Investor Relations (SGX IR) Website (investorrelations.sgx.com).

SGX recognises that the release of timely, regular and relevant information regarding the SGX Group's performance, progress and prospects aids shareholders in their investment decisions.

Shareholders are entitled to attend the general meetings and are accorded the opportunity to participate effectively in and vote at general meetings (including through the appointment of up to two proxies, if they are unable to attend in person or in the case of a corporate shareholder, through its appointed representative). Shareholders are also informed of the rules, including the voting procedures that govern the general meetings. Indirect investors who hold SGX shares through a nominee company or custodian bank or through a CPF agent bank may attend and vote at the AGM.

Conduct of General Meetings

Shareholders are informed of general meetings through notices sent to all shareholders or at the shareholder's election, made available electronically. Shareholders may download the Annual Report and Notice of AGM from the SGX IR Website. The general meeting procedures provide shareholders the opportunity to raise questions relating to each resolution tabled for approval. Opportunities are given to shareholders to participate, engage, and openly communicate their views on matters relating to SGX to the directors.

Shareholders or their appointed proxies are given the opportunity to vote at the general meetings of shareholders. SGX has been conducting electronic poll voting for all the resolutions passed at the general meetings of shareholders for greater transparency in the voting process. An independent external consultant is also appointed as scrutineer for the electronic poll voting process. Prior to the commencement of the general meeting of shareholders, the scrutineer would review the proxies and the proxy process. A proxy verification process agreed upon with the scrutineer is also in place. Votes cast for, or against, each resolution will be tallied and displayed live-on-screen to shareholders or their appointed proxies

immediately after each poll conducted at the meeting. SGX maintains an audit trail of all votes cast at the general meeting of shareholders. The outcome of the general meeting of shareholders (including total numbers and percentage of votes cast for or against the resolutions) are also promptly disclosed on SGXNet on the same day after the general meeting. Each share is entitled to 1 vote. SGX currently does not provide for voting in absentia.

All Directors, including the Chairman of each of the AC, NGC, RSDC and RMC, external auditor, senior management and legal advisors (where necessary), are present at general meetings to address queries from the meeting attendees.

SGX provides for separate resolutions at general meetings of shareholders on each distinct issue. All the resolutions at the general meetings are single item resolutions. Detailed information on each resolution in the AGM agenda is in the explanatory notes to the AGM Notice in the Annual Report.

The Company Secretaries prepare minutes of the general meetings, which capture the essence of the comments or queries from meeting attendees and responses from the Board and Management. These minutes are available on the SGX IR Website.

Disclosure of Information on a Timely Basis

SGX is committed to disclosing to its shareholders as much relevant information as is possible, in a timely, accurate, fair and transparent manner.

In addition to comprehensive, accurate and timely disclosure of information that is material or that may influence the price of SGX shares on SGXNet in compliance with the requirements of the Listing Manual, SGX adopts the practice of regularly communicating major developments in its businesses and operations through the appropriate media. Such channels include news releases, annual reports, shareholder circulars, shareholders' meetings, and direct announcements.

SGX notifies investors of the date of release of its financial results in advance. This is done through an SGXNet announcement and a media release. Results for the first three quarters are released to shareholders no later than 25 days from the end of the quarter. Annual results are released within 31 days from the financial year-end.

Briefings to present quarterly and full-year results are held for the media and analysts. "Live" video webcasts of briefings, accessible by the public, are available on the SGX IR Website.

Interaction with Shareholders

At each AGM, the CEO delivers a presentation to update shareholders on SGX's progress over the past year. The CFO will also deliver a presentation to shareholders on the financial performance for the year. The Directors (including the Chairman of the respective Board committees), EMCO and senior management executives are in attendance to address queries and concerns about SGX. SGX's external auditor also attends to address shareholders' queries relating to the conduct of the audit and the preparation and content of the external auditor's report.

Dividend Policy

SGX aims to pay a sustainable and growing dividend over time, consistent with long-term growth prospects. Dividends will be paid on a quarterly basis and will be at the discretion of the Board.

Corporate Website

SGX adopts transparent, accountable and effective communication practices as a key means to enhance standards of corporate governance. We aim to provide clear and continuous disclosure of our corporate governance practices through efficient use of technology. The following information is made available on SGX's corporate website:

- (a) Board of Directors and EMCO profiles;
- (b) Notice of AGM, Proxy Forms and Minutes of general meetings of shareholders;
- (c) Annual Report;

- (d) Letter/Circular to Shareholders;
- (e) Company announcements;
- (f) Press releases;
- (g) Financial Results; and
- (h) Calendar of Events.

The latest Annual Report, financial results (including webcasts of the quarterly and full-year results briefings for media and analysts and press releases) and company announcements are posted on the website following their release to the market, to ensure fair dissemination to shareholders.

SGX's corporate website (sgx.com) has a dedicated 'Investor Relations' link to the SGX IR Website, which features the latest and past financial results and related information. The contact details of the Investor Relations team are available on the dedicated link, as well as in the Annual Report, to enable shareholders to contact SGX easily. Investor Relations has procedures in place for addressing investors' queries or complaints as soon as possible.

Managing Stakeholder Relationships

SGX has in place an Investor Relations Policy which sets out the process and mechanism to engage its stakeholders, including the channel of communication (as described above) for questions to be posed by shareholders and through which SGX may respond accordingly.

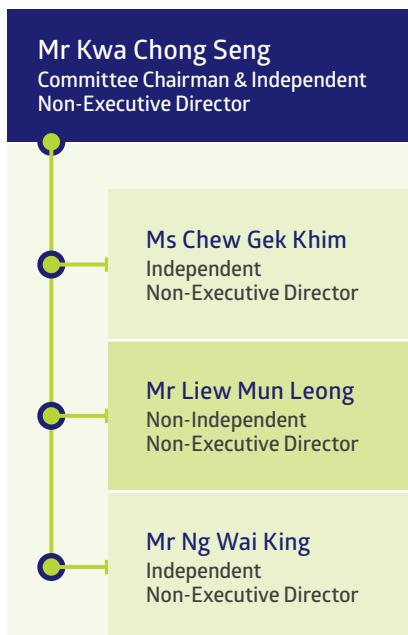
Through the Investor Relations team, SGX engages its shareholders, investors and analysts through investor roadshows, social media and participation in major investor conferences locally and abroad. SGX is committed to actively engaging the investment community to convey its investment proposition, as well as obtain feedback on its expectations.

Please refer to the section on "Stakeholder Engagement" on page 46 for more information on how SGX manages its stakeholder relationships.

Remuneration Report

The Remuneration & Staff Development Committee (RSDC) reviews and recommends to the Board for approval matters concerning management development, succession planning and remuneration of senior management and employees and the remuneration of the Board.

The RSDC comprises the following Directors:



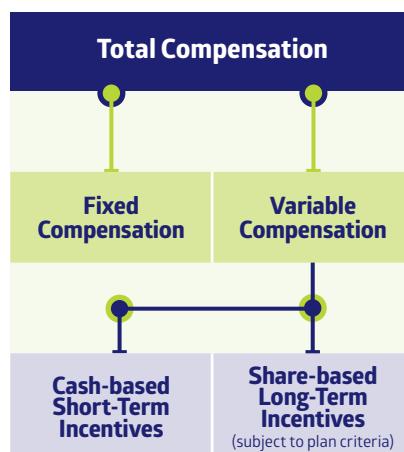
Compensation Philosophy

SGX adopts a compensation philosophy that is directed towards the attraction, retention and motivation of talent to achieve its business vision and strategic priorities and create sustainable value for its shareholders. Pay-for-performance is emphasised by linking total compensation to the achievement of organisational and individual performance goals and objectives, taking into consideration relevant regulatory standards and comparative compensation in the market to maintain market competitiveness.

SGX benchmarks total compensation for employees against other local and regional financial institutions using the market data provided by McLagan (Singapore), a business unit of Aon Hewitt Singapore Pte Ltd. McLagan (Singapore) and its consultants are independent and not related to any of our Directors.

Compensation Components and Mix

An employee's total compensation is made up of the following components:



The mix of fixed and variable compensation for employees is aligned with the remuneration mix in the financial services industry. The proportion of variable or "at risk" compensation to the total compensation increases with job grade seniority. At the senior management level, up to 50% of variable compensation is deferred over a time period of three to four years in the form of share-based long-term incentives.

Furthermore, in alignment with current regulatory standards, the mix of fixed and variable compensation for functions in Singapore Exchange Regulation (SGX RegCo), Risk Management, CFO unit, Human Resources, Internal Audit and Legal, Compliance and Corporate Secretariat, collectively known as "control functions", is weighted towards fixed compensation.

Fixed Compensation

Fixed compensation comprises base salary, fixed allowances and an annual wage supplement. Base salary is pegged to the 50th percentile of market pay data in the Singapore banking and financial services industry.

The annual salary review is in July of each year. The RSDC approves the salary increment budget taking into account market trends and the profitability of SGX as a whole.

Variable Compensation

Variable compensation comprises cash-based short-term incentives and share-based long-term incentives. The award of variable compensation is approved by the RSDC and Management through a process where due consideration is given to corporate and individual performance as well as relevant comparative remuneration in the market.

SGX adopts a performance management framework that is designed to drive organisational success through the achievement of goals which are aligned to its corporate mission and strategic priorities.

In measuring performance, achievement of goals in five categories namely, financial, products and services, stakeholders' trust, operational excellence, people and culture, are assessed. Employees' demonstration of SGX values – *Trust, Passion, Service* – is also assessed as a measure of "how" performance is delivered and used to determine an overall performance rating based on a blended, qualitative assessment. In addition, under the consequence management framework, any adverse feedback from the control functions on an individual's regulatory and controls performance as well as any policy breaches attributable to an individual will be considered in performance and compensation decisions.

In line with the current regulatory standards, the control functions' performance is assessed principally on the achievement of goals and objectives for the functions, not directly linked to the company's financial performance.

Each year, the RSDC evaluates the extent to which each of the senior management has delivered on the corporate and individual goals and objectives (details are not disclosed for strategic and confidentiality reasons) and based on the evaluation, approves the compensation for senior management and proposes the compensation for the CEO for the Board's approval.

Short-term Incentives

Short-term incentives take the form of an annual variable bonus for all employees excluding those participating in the sales incentive plan. Each year, the RSDC reviews and approves the variable bonus pool for distribution. The Management reviews and allocates variable bonus based on the individual performance of employees and their contribution towards SGX's performance. For those participating in the sales incentive plan, the sales incentive pool is generated by the achievement of sales targets and corporate goals and objectives and distributed to employees based on team and individual performances.

Long-term Incentives

Long-term incentives (LTIs) create value for the company by aligning employees' long-term incentives to the achievement of SGX's long-term results. Furthermore, due to its time-based vesting characteristic over a period of three to four years, it carries a retention element that strengthens SGX's ability to reward and retain key employees. The costs of LTIs are funded by the total incentive pool which is approved by the RSDC.

In alignment with current regulatory standards, LTIs may be clawed back in the event of exceptional circumstances of misstatement of financial results or of misconduct resulting in financial or other losses to the company.

There are two types of LTIs awarded as part of employees' total compensation – the SGX Performance Share Plan and the SGX Deferred Long-Term Incentives Scheme and the grants of which are made at the discretion of the RSDC. For the senior management, half of their deferred variable compensation is granted in performance shares under the SGX Performance Share Plan and the remaining half in deferred shares under the Deferred Long-Term Incentives Scheme. The number of shares awarded is determined using the valuation of the shares based on one-month volume-weighted average prices of SGX Shares before the approval of awards.

Total Incentives Funding

The total incentives pool funds the annual variable bonus for all employees (excluding those in control functions and those on sales incentive plan) and the long-term incentive plans. It is computed using the following formula:

Total Incentives (TI) Pool	= A percentage of [Profit before Variable Bonus less Corporate Tax less Cost of Equity]
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The percentage is determined by the RSDC and takes into account SGX's overall performance.

The SGX Performance Share Plan

The SGX Performance Share Plan (SGX PSP) is a share-based incentive scheme established with the objective of rewarding, motivating, and retaining key senior executives to optimise their performance standards. Through the SGX PSP, SGX will be able to recognise and reward past contributions and services, and motivate the plan participants to continue to strive for SGX's long-term success. In relation to SGX's business, the effective execution of strategic and non-financial priorities and growing scale and relevance amongst peer exchanges and companies, are key success factors and this is reflected in the SGX PSP performance targets.

The SGX PSP, after being in force for 10 years, expired on 21 September 2015. It was replaced by a new plan – the SGX Performance Share Plan 2015 (SGX PSP 2015), which was approved for adoption by the shareholders on 23 September 2015.

Under the SGX PSP 2015, performance targets have been revised and the vesting period is extended by a year, to four years. Starting from FY2018 grant, strategic and non-financial priorities have been introduced as a performance measure. For SGX to stay competitive in the fast changing business environment, it has to drive growth through the delivery of various strategic priorities, including the non-financial ones. This performance measure is adopted to

reward Management for driving development of product and services, managing stakeholders' trust, achieving greater operational efficiency and cultivating the desired people and corporate culture.

The RSDC may decide to vest an award, wholly or partly, in SGX shares or in cash, based on the aggregate market value of shares on vesting date.

Restrictions

The total number of new SGX shares which may be issued pursuant to awards granted under the SGX PSP 2015 on any date, when added to the total number of new shares issued and issuable in respect of all awards granted under the SGX PSP 2015 (and/or any share schemes then in force), shall not exceed 10% of the total number of SGX's issued shares (excluding shares held by the company as treasury shares) on the day preceding the relevant date of award.

Participants of SGX PSP were required to retain 50% of the total number of shares released to them for at least one calendar year from the vesting date. The vesting period of SGX PSP 2015 has been extended to four years (instead of three years for SGX PSP) and with that any shares that have been released by participants under SGX PSP 2015 are no longer subject to a retention period. Unless otherwise decided by the RSDC, the entitlement to this award is conditional on the plan participant remaining in service up to the specified vesting date.

Eligibility

Selected members of senior management who have attained the rank of Vice President, job grade 2 and above are eligible to be considered for the award under the plan.

FY2016 to FY2019 Grants

The performance share awards will vest upon the achievement of respective performance targets over the performance period. The performance targets were chosen as they are key success factors to SGX's business that also drive alignment with shareholders' interests.

Remuneration Report

Details of the performance share grants for FY2016 to FY2019 are as follows:

Summary of Grants

Grant	Performance period	Grant Date	Vesting Date	Performance Targets
FY2016	1 July 2015 to 30 June 2018	30 October 2015	1 September 2019	(1) EPS growth (2) Relative TSR against selected peer exchanges (Details in Table A)
FY2017	1 July 2016 to 30 June 2019	15 August 2016	1 September 2020	(1) EPS growth (2) Relative TSR against selected peer exchanges (Details in Table B)
FY2018	1 July 2017 to 30 June 2020	15 September 2017	1 September 2021	(1) Strategic and Non-financial Priorities (2) EPS (3) Relative TSR against selected peer exchanges (4) Relative TSR against Straits Times Index peer companies (Details in Table C)
FY2019	1 July 2018 to 30 June 2021	15 August 2018	1 September 2022	(1) Strategic and Non-financial Priorities (2) EPS (3) Relative TSR against selected peer exchanges (4) Relative TSR against Straits Times Index peer companies (Details in Table D)

1. Selected peer exchanges comprises 14 international listed exchanges.

2. Straits Times Index peer companies comprises 29 component-stocks of the FTSE STI Index, excluding SGX.

Table A – FY2016 Grant

Performance Level	EPS Growth (Weight = 50%)		Relative TSR against selected peer exchanges (Weight = 50%)	
	3 FY CAGR (%)	Payout (% of base allocation)	Average over 3FYs	Payout (% of base allocation)
Above Target	≥9.1%	150%	≥75 th percentile of peers	150%
At Target	5.7%	100%	50 th percentile of peers	100%
Threshold	2.8%	50%	25 th percentile of peers	50%
Below Threshold	<2.8%	Nil	<25 th percentile of peers	Nil

Table B – FY2017 Grant

Performance Level	EPS Growth (Weight = 50%)		Relative TSR against selected peer (Weight = 50%)	
	3 FY CAGR (%)	Payout (% of base allocation)	Average over 3FYs	Payout (% of base allocation)
Above Target	≥9.9%	150%	≥75 th percentile of peers	150%
At Target	6.2%	100%	50 th percentile of peers	100%
Threshold	3.1%	50%	25 th percentile of peers	50%
Below Threshold	<3.1%	Nil	<25 th percentile of peers	Nil

Table C – FY2018 Grant

Strategic and Non-financial Priorities (Weight = 40%)		EPS (Weight = 30%)			Relative TSR against selected peer exchanges (Weight = 15%)		Relative TSR against Straits Times Index peer companies (Weight = 15%)	
Performance Level	Payout (% of base allocation)	Performance Level	Average over 3FYs	Payout (% of base allocation)	Average over 3FYs	Payout (% of base allocation)	Average over 3FYs	Payout (% of base allocation)
Exceeded	150%	Above Target	≥37 cents	150%	≥75 th percentile of peers	150%	≥75 th percentile of peers	150%
Met	100%	At Target	34 cents	100%	50 th percentile of peers	100%	50 th percentile of peers	100%
Partially Met	50%	Threshold	32 cents	50%	25 th percentile of peers	50%	25 th percentile of peers	50%
Not Met	Nil	Below Threshold	<32 cents	Nil	<25 th percentile of peers	Nil	<25 th percentile of peers	Nil

Table D – FY2019 Grant

Strategic and Non-financial Priorities (Weight = 40%)		EPS (Weight = 30%)			Relative TSR against selected peer exchanges (Weight = 15%)		Relative TSR against Straits Times Index peer companies (Weight = 15%)	
Performance Level	Payout (% of base allocation)	Performance Level	Average over 3FYs	Payout (% of base allocation)	Average over 3FYs	Payout (% of base allocation)	Average over 3FYs	Payout (% of base allocation)
Exceeded	150%	Above Target	≥38 cents	150%	≥75 th percentile of peers	150%	≥75 th percentile of peers	150%
Met	100%	At Target	35 cents	100%	50 th percentile of peers	100%	50 th percentile of peers	100%
Partially Met	50%	Threshold	33 cents	50%	25 th percentile of peers	50%	25 th percentile of peers	50%
Not Met	Nil	Below Threshold	<33 cents	Nil	<25 th percentile of peers	Nil	<25 th percentile of peers	Nil

The extent to which the performance share awards will vest could range from 0% to 150%, depending on the achievement of performance targets in the respective performance periods. There shall be no award if the achievement falls below the threshold performance level. For an achievement between the Threshold/Partially met and Above Target/Exceeded performance levels, the payout percentage will be pro-rated on a straight-line basis.

The SGX Deferred Long-Term Incentives Scheme

The SGX Deferred Long-Term Incentives Scheme (SGX DLTIS) was approved by the RSDC in July 2006.

It recognises past contributions and services, and strengthens the

Company's ability to reward and retain high-performing recipients whose contributions are essential to the long-term growth of SGX.

The RSDC may decide to vest an award, wholly or partly, in SGX shares or in cash, based on the aggregate market value of shares on vesting date.

The shares are vested in three equal instalments over a period of three years with the first instalment vesting one year after grant date.

Restrictions

Unless otherwise decided by the RSDC, the entitlement to the award is conditional on the recipient remaining in service up to the specified vesting date.

Eligibility

Selected executives who have attained the rank of Assistant Vice President and above are eligible to be considered for the award under the scheme.

The SGX Restricted Share Plan

The SGX Restricted Share Plan (SGX RSP) was adopted at the annual general meeting of the Company held on 20 September 2018.

Through the SGX RSP, SGX will grant shares to the Group's Non-Executive Directors (NEDs) as part of their remuneration in respect of their office as such in lieu of cash, or where, the RSDC deems appropriate, to give recognition to the contributions made or to be made by such Group NEDs to the success of the Group, in order to

Remuneration Report

improve the alignment of the interests of Group NEDs with the interests of shareholders. The SGX RSP could also serve as an additional tool to recruit and retain Group employees whose contributions are essential to the long-term growth and profitability of the Group and to give recognition to outstanding Group employees who have contributed to the growth of the Group. The SGX RSP will act as an enhancement to the Group's overall ability to attract and retain high performing talent.

Restrictions

NEDs of the Group who are granted SGX RSP are required to have served on the Board of Directors for at least twelve months on the date of grant of the share awards. The grant will consist of fully paid shares with no performance conditions attached and no vesting period imposed. A moratorium on sale of such shares for a period up to one year after the grant of the award is imposed. The moratorium will be lifted if the NED steps off the Board of Directors before the end of the moratorium period.

Eligibility

NEDs meeting the criteria set out under "Restrictions" are eligible to participate in the SGX RSP. Selected employees of the Group are eligible to be considered for the award under the SGX RSP.

Please refer to the Directors' Statement on page 98 for the details of the share plans and grants to NEDs, senior management and employees.

Disclosure on Directors' Remuneration

The table below shows the gross remuneration of the Executive Director of SGX for the financial year ended 30 June 2019.

Executive Director	Fixed pay ¹	Bonus for FY2019 ^{1,2} \$	Long-term incentives ³ \$	Benefits-in-kind \$	Total gross Remuneration \$
Mr Loh Boon Chye	1,211,280	2,403,900	643,424	32,571	4,291,175

¹ Includes Employer CPF Contribution.

² The bonus was determined by the Board after taking into account the achievement of specific quantitative and qualitative targets and objectives set for FY2019.

³ Vesting of DLTIS award based on the fair value on grant date. The shares vested on 1 September 2018.

Please refer to the Corporate Governance Report on page 69 for the details of the Non-Executive Directors' remuneration.

Disclosure on Five Top-Earning Executives' Remuneration

The table below shows the gross remuneration of the five top-earning executives for the financial year ended 30 June 2019.

Executives	Fixed pay ¹	Bonus for FY2019 ^{1,2} \$	Long-term incentives ³ \$	Benefits-in-kind \$	Total gross Remuneration \$
Mr Muthukrishnan Ramaswami	506,484	902,700	418,842	3,516	1,831,542
Mr Syn Hsien-Min Michael	472,248	716,100	272,077	2,472	1,462,897
Mr Chew Sutat	472,248	625,100	298,046	10,211	1,405,605
Mr Tan Boon Gin	537,240	605,100	143,224	9,278	1,294,842
Mr Chng Lay Chew	580,488	452,700	183,058	3,604	1,219,850

¹ Includes Employer CPF Contribution.

² The bonuses for SGX senior management were determined by the RSDC after taking into account the achievement of the specific individual and organisational targets and objectives set for FY2019.

³ Vesting of DLTIS awards based on the fair value on grant date. The shares vested on 1 September 2018. There was no PSP vesting as the vesting period was extended by a year.

There were no retirement plans, severance/termination and post-employment benefits granted to Directors, the CEO and the five top-earning executives, save for the shares vested to Mr Lawrence Wong, who retired from SGX on 31 March 2018, as approved by the RSDC.

Benefits

Benefits provided for employees are comparable with local market practices. These include medical, dental, and group insurances.

Summary of Disclosures

Summary of Disclosures of Code of Corporate Governance 2018 (CCG 2018)

Rule 710 of the SGX Listing Manual requires Singapore listed companies to describe their corporate governance practices with specific reference to the CCG 2018 in their annual reports for financial years commencing on or after 1 January 2019. We have elected to adopt CCG 2018 in advance. This summary of disclosures describes our corporate governance practices with specific reference to the disclosure requirements in the principles and provisions of the CCG 2018.

Board Matters	Remuneration Matters	Shareholder Rights and Responsibilities
The Board's Conduct of Affairs Principle 1	Procedures for Developing Remuneration Policies Principle 6	Shareholder Rights and Conduct of General Meetings Principle 11
Provision 1.1 Page 60	Provision 6.1 Page 68	Provision 11.1 Page 76
Provision 1.2 Page 61	Provision 6.2 Page 68	Provision 11.2 Page 77
Provision 1.3 Page 60	Provision 6.3 Page 68	Provision 11.3 Pages 63 and 77
Provision 1.4 Page 60	Provision 6.4 Page 78	Provision 11.4 Page 77
Provision 1.5 Page 63		Provision 11.5 Page 77
Provision 1.6 Page 61		Provision 11.6 Page 77
Provision 1.7 Page 62		
Board Composition and Guidance Principle 2	Level and Mix of Remuneration Principle 7	Engagement with Shareholders Principle 12
Provision 2.1 Page 60	Provision 7.1 Page 78	Provision 12.1 Page 76
Provision 2.2 Page 62	Provision 7.2 Page 68	Provision 12.2 Page 76
Provision 2.3 Page 62	Provision 7.3 Page 68	Provision 12.3 Page 77
Provision 2.4 Page 65		
Provision 2.5 Page 60		
Chairman and Chief Executive Officer Principle 3	Disclosure on Remuneration Principle 8	Managing Stakeholders Relationship
Provision 3.1 Page 65	Provision 8.1 Page 69	Engagement with Stakeholders Principle 13
Provision 3.2 Page 65	Provision 8.2 Page 70	Provision 13.1 Page 77
Provision 3.3 Page 65	Provision 8.3 Page 79	Provision 13.2 Page 76
Board Membership Principle 4	Accountability and Audit	Provision 13.3 Page 77
Provision 4.1 Page 66	Risk Management and Internal Controls Principle 9	
Provision 4.2 Page 66	Provision 9.1 Page 70	
Provision 4.3 Page 66	Provision 9.2 Page 71	
Provision 4.4 Page 66		
Provision 4.5 Pages 22 to 25		
Board Performance Principle 5	Audit Committee Principle 10	
Provision 5.1 Page 66	Provision 10.1 Page 72	
Provision 5.2 Page 67	Provision 10.2 Page 72	
	Provision 10.3 Page 72	
	Provision 10.4 Page 75	
	Provision 10.5 Page 74	

Self-Regulatory Organisation Governance Report

Obligations

SGX is a front-line regulator, regulating market participants including listed companies, and trading and clearing members. SGX is also a listed, for-profit entity with a widely distributed ownership and shareholder base. This gives rise to Self-Regulatory obligations and potential for conflict between these two responsibilities. We employ the highest standards in carrying out our dual role and ensuring that any potential Self-Regulatory Organisation (SRO) conflicts between our responsibilities as a regulator and as a listed company are adequately addressed.



We achieve our objectives through stringent listing and trading rules. We apply strict admission criteria on our members, sponsors and their registered professionals and issuers to assure their quality and safeguard the integrity of the markets and clearing houses. Issuers must ensure the timely, accurate and adequate disclosure of material information. We also impose prudent financial requirements on our members and have robust default management processes. To ensure compliance with our rules, we conduct comprehensive on-going supervision and surveillance and take enforcement action when necessary. We continually benchmark ourselves against developed jurisdictions and established international standards to improve our systems and processes.

The Role of Singapore Exchange Regulation Pte Ltd (SGX RegCo) in Managing Regulatory Conflicts

The Monetary Authority of Singapore (MAS) regulates SGX in the discharge of our regulatory functions and our management of regulatory conflicts. We have a strong governance framework in place to manage any potential, perceived or actual regulatory conflicts.

SGX's regulatory conflicts governance framework was further enhanced in 2017 with the establishment of SGX RegCo, an independently-governed subsidiary of SGX that undertakes all regulatory functions on behalf of SGX and its regulated subsidiaries.

The SGX RegCo Board is responsible for ensuring that SGX RegCo, in the performance of its regulatory duties,

exercises its judgment independently of SGX's business functions. The SGX RegCo Board is an independent board from the SGX Board and a majority of the SGX RegCo Board, including its chairperson, are independent of management and business relationships with SGX. All members of the SGX RegCo Board are also independent of companies listed on SGX-ST and member firms of the SGX Group. Appointments to the SGX RegCo Board are subject to MAS approval.

The SGX RegCo Chief Executive Officer reports exclusively to the SGX RegCo Board in relation to the performance of the functions of SGX RegCo. This further strengthens the independence of SGX RegCo.

The formation of SGX RegCo and the nature of its board structure therefore demonstrably segregate SGX's regulatory functions from SGX's commercial and operating activities.

One of SGX RegCo's functions is to formulate and maintain arrangements and processes within the SGX Group for managing potential, perceived or actual regulatory conflicts. The board of SGX RegCo is directly responsible for reviewing the adequacy of such arrangements, and is accountable to the MAS and the SGX Board in this regard.

The SGX RegCo Board decides on conflict cases as needed, reviews the regulatory implications of our strategic initiatives, and also ensures the adequacy of the plans, budget and resources of SGX RegCo. The SGX RegCo Board reports to MAS and the SGX Board on its activities annually.

Self-Regulatory Organisation Governance Report

Enhancing Stakeholder Trust and Confidence

FY2019 presented an opportunity for SGX RegCo to deploy regulatory tools that would address concerns we had about non-compliant listed issuers – which form the minority of companies listed on SGX – without unnecessarily burdening the majority of compliant companies with additional compliance processes and costs.



¹ SGX RegCo may exercise its administrative powers by issuing a Notice of Compliance. The Notice contains requirements imposed on Relevant Persons that must be complied with. The requirements are definitive and calibrated to address the circumstances of each case. For more information, please refer to the Regulator's Column on "What SGX RegCo does when it detects irregularities in a company" issued on 13 April 2018.

We issued our administrative tool, the Notice of Compliance (NOC), eight times through the year. In so doing, the NOCs served the twin purpose of drawing out additional or clearer disclosures, and helped contain issues. Each NOC is crafted to address specific concerns and is therefore written in a nuanced way to express our requirements. The issuance of NOCs has therefore enabled SGX RegCo to direct companies to meet a wide range of requirements, including the appointment of Special Auditors who will report exclusively and directly to SGX RegCo, the objection to the reappointment of certain directors, to the demand for a fuller explanation on the resignation of certain independent directors at a time that is critical for the company.

Our emphasis on targeted and swift action when dealing with potential breaches of our Listing Rules and errant companies is important if we are to retain and grow stakeholder trust and confidence. We will continue to emphasise proactive, transparent and robust regulatory responses to concerns about companies raised by investors and other stakeholders. We will also keep up our close collaboration with other regulators and industry groups when it comes to acting against possible wrong-doers and improving overall governance standards.

Risk-based Supervisory Approach

SGX RegCo closely monitors the disclosures of our listed companies and product issuers, and issues queries where we determine that further clarity is required. We issued an average of 372² disclosure queries annually to our listed companies over the past 3 financial years. We diligently apply our administrative powers on listed companies and product issuers for all major disclosure failings, and closely monitor issuers with suspected financial irregularities. Where necessary and appropriate, we exercised our administrative powers during the year through the issuance of NOC. As for enforcement of our rules, our disciplinary actions are aimed at securing market confidence and as credible deterrence. Since the

introduction of our enhanced enforcement regime in October 2015, we have been in transition in terms of preparing the relevant Listings Disciplinary and Listings Appeals Committees, and putting processes and protocols in place. The new regime allows for higher penalties. This necessarily calls for a more robust due process and greater burden of proof. The result has been a gap in enforcement actions in much of FY2019.

Where misconduct is detected, SGX RegCo's focus is on ensuring a due process where natural justice is upheld while trying to be as swift as possible in meting out the necessary enforcement actions. As at end-June 2019, we have commenced a total of 17 enforcement actions³ (13 in FY2018). Our risk-based approach also involved encouraging good behaviour by providing faster time-to-market for good quality issuers through the SGX Fast Track programme which was launched in FY2018 and has since been well received.

Leveraging on Our Ecosystem

SGX RegCo remains committed to being proactive in our approach towards supervision with a view of striking a balance between the interests of different stakeholders. In doing so, we also recognise the substantive role that professionals play in our ecosystem. In FY2019, we took significant strides in (i) supporting the development of industry and professional bodies through partnerships and collaborations; and (ii) holding professionals accountable in the way they discharge their responsibilities.

(a) [Partnerships and Collaboration with Professional Bodies](#): To enhance the quality of valuation professionals who perform and improve listed issuers' valuation disclosures, we signed an MOU on 11 January 2019 with the Singapore Accountancy Commission (SAC). Under the MOU, the Institute of Valuers and Appraisers, Singapore (IVAS), will provide expert advice and support in areas relating to business valuation upon referral by SGX RegCo. The review by IVAS will

determine whether valuation reports are prepared in compliance with applicable standards relating to the practice of business valuation. IVAS will also cooperate with SGX in setting standards and providing guidance relating to valuation and disclosures. We are also concurrently having preliminary discussions with other professional bodies to explore ways of working together and to provide guidance to professionals who have dealings with our listed companies and SGX RegCo.

(b) [Accountability of Professionals](#):

SGX published a consultation paper which proposed, among others, rule enhancements on the roles and responsibilities (including due diligence expectations) of issue managers, and independence of issue managers. We are in the process of reviewing the consultation responses and drafting the response paper. SGX RegCo has also emphasised that auditors must be held to greater accountability and has proposed to strengthen our regulatory regime when it comes to audits. We intend to propose that all issuers minimally have at least one auditor that is registered with ACRA to oversee audits for their financial statements.

Inspections and Compliance Visits on Member Firms

SGX RegCo completed 20 on-site visits in its workplan for FY2019. The on-site visits were mainly conducted on the topics of cybersecurity, business continuity management, and risk-based capital reporting. Recommendations to address deficiencies and suggested enhancements were accepted by Members. These are tracked by us to completion.

² FY2016(330), FY2017(382), FY2018(404).

³ SGX RegCo discloses a breakdown of the types of disciplinary actions taken on a quarterly basis on [sgx.com](#). These figures include those taken against listed companies, intermediaries and their representatives.

Self-Regulatory Organisation Governance Report

Supporting the Development of our Markets

We set and enforce regulation that assures a fair, orderly and transparent marketplace, as well as supports the overall advancement of our markets. To achieve this, we regularly assess existing requirements including those deemed as fundamental pillars of the market with a view of either adopting new frameworks and structures, or refining existing requirements.



Engagement with Stakeholders

We placed greater emphasis on engagement with the Boards and Key Management of our listed issuers in FY2019. We embarked on an initiative to engage these stakeholders with an objective to “put a face to regulation” in order to build trust and relationships with the issuers, understand their business operations and seek feedback from them. This involved face-to-face engagement with the issuers at their offices/operating premises. We have engaged the Board and/or Key Management of 43 listed issuers to date and we expect this to pick up pace in FY2020. Additionally, we have embarked on an initiative to meet with the audit committees and external auditors of certain issuers. The objective of the meetings is to highlight to the audit committees and external auditors the areas of concern based on our own review of the issuers that should be covered in their audits and considered for discussion in the Key Audit Matters of the issuers’ annual reports. To date, we have met 26 issuers and will be commencing the next round of engagement with a second batch of issuers, with the aim of encouraging clarity and transparency to enable investors to make informed investment decisions.

To better understand the issues our market faces, we initiated a stakeholder outreach initiative on the theme of reducing undue regulatory burden. This involved one-to-one meetings with representatives across various stakeholder groups⁴ which were followed up with efforts to address the concerns raised.

SGX Regulatory Symposium 2019

This year’s SGX Regulatory Symposium attracted 268 senior stakeholders of our capital markets ecosystem to discuss the symposium’s theme, “The Market You Want – A Regulatory Perspective”. This builds on our intention to formalise future SGX Regulatory Symposia as a key annual event in the regulatory calendar.

Automated Processing of Corporate Actions

As part of our risk-based approach in reviewing corporate actions, we launched the Automated Clearance Regime (ACR) in February 2019 to enable straight-through processing for circulars of certain corporate actions⁵ submitted by issuers. This provides issuers with faster clearance for their circulars and a shorter time to market, as we recognise how important this is for corporate actions⁶.

Increase Cybersecurity Awareness⁷ of Members

We conducted cyber-drills with 3 of our Members and achieved the objectives of (i) enabling Members to understand the potential widespread impact of a cyber-attack, and to re-assess their recovery processes to ensure key services can be restored within their desired timings; and (ii) allowing Members to re-assess their current state of controls to see if they are adequate to deal with potential cyber-attacks. SGX RegCo also provides Members with a quarterly monitoring report which assists them in their monitoring of security performance.

Promoting Sustainability Reporting

We continued to take active steps to raise investors’ awareness in sustainable investing and to build capability of our issuers. We published an investor guide to reading sustainability reports in December 2018 and collaborated with the National University of Singapore (NUS) to organise an SGX-NUS case competition on sustainable investing in October 2018. We also made efforts to profile issuers that have successfully integrated sustainable practices into their business models and helped issuers to build up their reporting capabilities through workshops, which were designed to provide specific guidance to issuers producing their first sustainability reports. The online training module for issuers was rolled out in both English and Mandarin.

SGX Regulatory Symposium 2019

268 senior stakeholders of our capital markets ecosystem attended

⁴ These include Mainboard issue managers, Catalist sponsors, lawyers, listed issuers, private equity firms and special interest groups such as industry associations.

⁵ These corporate actions include (i) share purchase mandate; (ii) change of auditors; and (iii) change of name.

⁶ We have also published Guidance Notes for the respective low risk corporate actions prior to the launch of the ACR to make clear our expectations for these low risk corporate actions. The publication provides transparency on the common queries raised for these low risk corporate actions. This was intended to facilitate the transition to ACR which is made available to most listed issuers.

⁷ Cybersecurity awareness sessions have also been conducted for our retail Members on a quarterly basis. Industry experts have been invited to share with the Members’ management and security teams on best practices and threat intelligence.

Self-Regulatory Organisation Governance Report

Development of SGX RegCo Staff and Capabilities

SGX RegCo takes a proactive approach to the development of its staff and their capabilities. Our staff participate in local and overseas conferences, ensuring the organisation is kept up to date with global regulatory developments and trends in the capital markets. Our regulatory training is also complemented by brownbag seminars featuring leading industry professionals across various sectors, in recognition of the need to consider multiple perspectives in our decision-making process. Through FY2019, five brown bag sessions were organised for SGX RegCo staff on a variety of topics including navigating crises and managing corporate reputations, and SupTech.

Average Training Hours per SGX RegCo Officer in FY2019

54 hours

Enhancing our Regulatory Capabilities

SGX RegCo has started an initiative to enhance and transform its digital capabilities over the next two to three years. A working group has been established to drive the efficiency and effectiveness of our officers through the use of technology, and digitised management of SGX RegCo's internal knowledge and information. The initiative will also provide the foundation for the implementation of SupTech solutions such as machine learning, data analytics and artificial intelligence.

Report of Independent Committees

Overview

SGX's systems to deal with potential conflicts of interests arising from its dual role as a front-line regulator of the market and a listed for-profit entity include the setting up of independent committees comprising the Listings Advisory Committee, Disciplinary Committee and Appeals Committee. To ensure the impartial and independent administration of their powers and duties, the members of the independent committees are not directors, officers or employees of SGX or its related corporations.

The Listings Advisory Committee provides advice on SGX's listing policies and Mainboard listing applications which involve novel or unprecedented issues, or where specialist expertise is required, or which involve matters of public interest, or when SGX is of the view that a referral is appropriate. The Listings Advisory Committee comprises members with legal, accounting, corporate finance and market experience as well as representatives of the investment community.

The Disciplinary Committee and Appeals Committee provide independent and transparent adjudication of SGX rule breaches. The Disciplinary and Appeals

Committees members have legal, accounting, corporate finance, market experience, as well as directorship experience in SGX-listed issuers.

The Disciplinary Committee hears charges brought by SGX against relevant persons for breaches of SGX's rules. Under the SGX trading rules and clearing rules, the Disciplinary Committee is able to impose a wide range of sanctions against trading or clearing members, their approved executive directors, trading representatives, approved traders and registered representatives including reprimands, fines, restrictions or conditions on activities, suspensions, expulsions, requiring directors to step down from day-to-day conduct of the business affairs of a member and appointing a manager to manage a member's business. Under the SGX listing rules, the Listings Disciplinary Committee (which members are drawn from the Disciplinary Committee) can impose sanctions including reprimands, fines against issuers, sponsors and registered professionals, prohibiting issuers from raising funds through SGX, requiring the resignation of directors or executive officers, prohibiting issue managers from participating in any specific listing

application on SGX, revocation or cancellation of an issue manager's accreditation, sponsor's authorisation or registered professional's registration, suspending the trading of an issuer's securities and removal of an issuer from the Official List of the SGX-ST.

The Appeals Committee hears appeals by SGX or the party facing the charge, against the decisions of the Disciplinary Committee. The Listings Appeals Committee, apart from hearing appeals against decisions of the Listings Disciplinary Committee, additionally hears appeals against certain decisions of SGX made under the SGX listing rules. The decision of the Appeals Committee or Listings Appeals Committee is final.

The independent committees are supported by the Office of the Secretariat which manages the processes of the independent committees' meetings and hearings.

The operations of the independent committees and the Office of the Secretariat are funded separately by a Compliance Fund which is segregated from the rest of SGX's monies. In FY2019, the operating costs of the independent committees and the Office of the Secretariat amounted to S\$512,225.

Report of Independent Committees

Listings Advisory Committee Annual Report

Note from the Listings Advisory Committee Chairman

This is the Listing Advisory Committee's (LAC) fourth Annual Report and sets out our work done from 1 July 2018 to 30 June 2019.

During the financial year, SGX referred one listing application to the LAC for its advice, and submitted eight non-referral cases for review by the Deputy Chairman, Professor Hans Tjio, and me.

Referral Case

As part of the LAC's 2016 recommendations on dual class share (DCS) structures, the LAC recommended that SGX, after having assessed a listing applicant as being suitable for listing, refer initial DCS structure listing applications to the LAC for its review and advice. This would allow SGX to benefit from the LAC's collective practitioner experience, until SGX became more familiar with such listing applications. Accordingly, in August 2018, SGX referred the first DCS structure listing application to the LAC.

The listing applicant (the Company) was in a high growth industry and proposed to adopt a DCS structure comprising two classes of shares, with one carrying one vote per share and the other carrying five votes per share (Multiple Vote Shares). The sole permitted holder of the Multiple Vote Shares would be the Company's parent, which was listed in Jurisdiction X (the Listed Parent). The Listed Parent was more than 50% owned by its two founders (the Promoters) and their associates (the Promoter Group).

In reviewing the case, the LAC noted that SGX had refined the suitability factors for listing with a DCS structure. The factors included: the business model of the company, e.g. the company has a long-term plan that involves ramping up growth at a fast pace; the role and contribution of intended multiple vote shareholders to the success of the company; and the track record of the company, group or business. Based on the suitability factors outlined by SGX, all of the LAC members present, save for one LAC member who abstained, supported the suitability of the Company to list with a DCS structure.

However, the LAC identified certain potential risks arising from the circumstances of the applicant and therefore recommended strengthening corporate governance safeguards. The LAC observed that the Promoter Group owned just over 50% of the Listed Parent, which is at the threshold for majority control. Spinning off the Company would thus allow further equity fund-raising to be carried out without affecting the Promoter Group's majority control of the Listed Parent. Members of the LAC felt that the circumstances raised a potential for the Company to be utilised as the Listed Parent group's vehicle to raise funds which are eventually used to benefit the Listed Parent. Therefore, to safeguard the interests of the Company and its minority shareholders, the LAC felt that strengthened corporate governance safeguards would be needed to protect minority shareholders. The LAC recommended that there be a sufficient number of independent directors who are resident in Singapore.

The grounds of decisions of the LAC are available on the SGX Website.

Non-Referral Cases

The eight non-referral cases submitted for review involved companies, business trusts and REITs with operations in Singapore and overseas. After reviewing these cases, the Deputy Chairman and I, taking into consideration the Secretariat's recommendations, agreed with SGX that these listing applications did not fulfil any of the criteria for referral to the LAC. We had, where appropriate, recommended prospectus disclosure on certain issues.

Acknowledgments

As I recount the insightful discussions with Deputy Chairman, Professor Hans Tjio, and fellow distinguished LAC members over the past four years since the LAC was formed, I note the passion of the members in developing Singapore's capital markets and dedication in ensuring the highest levels of corporate governance amongst SGX-listed issuers. I am satisfied that the LAC has provided and will continue to provide good advice to SGX, listing applicants, and SGX-listed companies, as they navigate the competitive and ever-changing capital market landscape.

I thank Deputy Chairman, Professor Hans Tjio, and all the members of the LAC for their contributions.

Mr Gautam Banerjee
Chairman
SGX Listings Advisory Committee

Listings Advisory Committee Members

During FY2019, Mr Kabir Mathur stepped down from his role as a LAC member. Mr Derek Lau was appointed as a member of the LAC.

The members of the LAC are as follows:

No.	Name	Position	Title
01	Mr Gautam Banerjee	Chairman	<ul style="list-style-type: none"> ▪ Chairman, Blackstone Singapore Pte Ltd ▪ Former Executive Chairman, PricewaterhouseCoopers Singapore
02	Professor Hans Tjio	Deputy Chairman	<ul style="list-style-type: none"> ▪ Director, EW Barker Centre for Law and Business, National University of Singapore ▪ Member, Securities Industry Council
03	Mrs Fang Ai Lian	Member	<ul style="list-style-type: none"> ▪ Adviser, Far East Organization ▪ Former Managing Partner, Ernst & Young LLP
04	Mr David Gerald	Member	<ul style="list-style-type: none"> ▪ Founder, President and Chief Executive Officer, Securities Investors Association (Singapore)
05	Mr Goh Kian Hwee	Member	<ul style="list-style-type: none"> ▪ Joint Group Managing Director, QAF Limited ▪ Former Senior Partner, Rajah & Tann Singapore LLP
06	Mr Subramaniam Iyer	Member	<ul style="list-style-type: none"> ▪ Founder and Director, S2K2 Advisory (operating as SmartCapital)
07	Mr Derek Lau	Member	<ul style="list-style-type: none"> ▪ Chief Executive Officer, Heliconia Capital Management Pte. Ltd.
08	Mr Lionel Lee	Member	<ul style="list-style-type: none"> ▪ Non-Executive Director, Ezra Holdings Limited
09	Mr Daryl Liew	Member	<ul style="list-style-type: none"> ▪ Co-Chairman, Advocacy Committee, CFA Society Singapore ▪ Head, Portfolio Management, Singapore, REYL Singapore Pte Ltd
10	Mrs Margaret Lui	Member	<ul style="list-style-type: none"> ▪ Chief Executive Officer, Azalea Investment Management Pte Ltd
11	Mr Mak Lye Mun	Member	<ul style="list-style-type: none"> ▪ Country Head and Chief Executive Officer, CIMB Bank Berhad, Singapore Branch
12	Mr Kabir Mathur	Member (till 27 August 2018)	<ul style="list-style-type: none"> ▪ Former Director, KKR Singapore Pte. Limited
13	Mr Ronald Ong	Member	<ul style="list-style-type: none"> ▪ Chairman and Chief Executive Officer, Southeast Asia, Morgan Stanley Asia (Singapore) Pte.
14	Mr Soon Tit Koon	Member	<ul style="list-style-type: none"> ▪ Independent Director, Great Eastern Holdings Limited ▪ Independent Director, SPH REIT Management Pte. Ltd.
15	Mr Toh Teng Peow David	Member	<ul style="list-style-type: none"> ▪ Director and Chief Technology Officer, Nanyang Technological University-NTUitive Pte. Ltd. ▪ Independent Director, iFAST Corporation Ltd.
16	Ms Tracey Woon	Member	<ul style="list-style-type: none"> ▪ Vice Chairman, Asia Pacific, Wealth Management, UBS AG

Report of Independent Committees

Disciplinary and Appeals Committees Report

Cases Heard in FY2019

During FY2019, SGX initiated a Disciplinary Committee proceeding against a trading representative for breaches of the SGX-ST Rules. The Disciplinary Committee imposed fines of S\$25,000 in total on the trading representative, and required the trading representative to attend an education programme.

Date of Hearing	6 September 2018
Parties Charged	A Trading Representative from an SGX-ST Trading Member firm
Relevant Rules	<p>Rule 7.5.3 of the SGX-ST Rules*, which requires adherence to the principles of good business practice in the conduct of business affairs.</p> <p>Rule 13.1.1 of the SGX-ST Rules*, which states that if a Trading Member or its Trading Representative wants to trade as principal with a customer who is not a holder of a Capital Markets Services Licence, the customer must first be informed.</p> <p>Rule 13.1.2 of the SGX-ST Rules*, which requires any contract note relating to the above transaction to show that the Trading Member or its Trading Representative acted as principal.</p> <p>Rule 13.2.1(4) of the SGX-ST Rules*, which requires a Trading Member or its Trading Representative to act in the best interests of his customer.</p>
Charges	<p>One charge brought under Rule 7.5.3*, one charge brought under Rule 13.1.1*, one charge brought under Rule 13.1.2*, and one charge brought under Rule 13.2.1(4)*.</p> <p>At the hearing, the defendant admitted to all four charges. SGX-ST proceeded with the charge under Rule 7.5.3* and the charge under Rule 13.2.1(4)*, and applied for the other two charges to be taken into consideration by the Disciplinary Committee for sentencing purposes.</p>
Description of Trading Behaviour	<p>As part of an arrangement to enable his customer to acquire shares in a particular counter beyond the limits imposed by his trading firm, the defendant pre-arranged for his customer's buy orders to be matched with the defendant's and the defendant's brother's sell orders in the Unit Share Market.</p> <p>In doing so, the defendant also caused his customer to pay more than would have been paid in the Ready Market.</p> <p>The defendant did not inform his customer nor his trading firm that he was trading as principal.</p>
Sanctions Imposed	<p>The Disciplinary Committee imposed a fine of S\$15,000 for the breach of Rule 7.5.3*. As a member of the trading community, the defendant had an obligation not to circumvent the rules of his trading firm and the SGX-ST, even if the objective was to help a customer. Furthermore, the calculated actions to avoid scrutiny by using the Unit Share Market were troubling. Therefore, a relatively high penalty was warranted to set a precedent and to act as a deterrence.</p> <p>The Disciplinary Committee imposed a fine of S\$10,000 for the breach of Rule 13.2.1(4)*. The Disciplinary Committee was of the view that it was imperative that a trading representative disclose to his customer if he was trading as principal. The defendant's actual profits and avoided losses were taken into account in determining the sentence.</p> <p>The defendant was also required to attend an education programme.</p>

* The rule references are to the SGX-ST Rules as they were prior to 3 June 2019.

The Disciplinary Committee's grounds of decisions are available on SGX's website.

Disciplinary Committee Members

The members of the Disciplinary Committee are:

No.	Name	Position	Title
01	Mr Eric Ang Teik Lim	Co-Chairman	<ul style="list-style-type: none"> ▪ Senior Executive Advisor, DBS Bank Ltd ▪ Former Head of Capital Markets, DBS Bank Ltd
02	Mr Cavinder Bull, Senior Counsel	Co-Chairman	<ul style="list-style-type: none"> ▪ Chief Executive Officer, Drew & Napier LLC
03	Mr Tan Chong Huat	Deputy Chairman	<ul style="list-style-type: none"> ▪ Senior Partner, RHTLaw Taylor Wessing LLP ▪ Non-Executive Chairman, RHT Group of Companies
04	Mr Hemant Bhatt	Member	<ul style="list-style-type: none"> ▪ Chief Executive Officer, Downstream & Commercial, Golden Agri-Resources Ltd
05	Ms Cheng Ai Phing	Member	<ul style="list-style-type: none"> ▪ Director, GIG Consulting Pte Ltd ▪ Council Member, Accounting Standards Council ▪ Independent Director, ARA Asset Management (Fortune) Limited ▪ Member, Board of Trustees, NTUC-Education and Training Fund ▪ Former Senior Partner, Deloitte & Touche LLP
06	Mr Paul Davies	Member	<ul style="list-style-type: none"> ▪ Owner, Yahava Koffeworks Wholesale (WA) Pty Ltd ▪ Former Managing Director, Goldman Sachs Futures Pte.
07	Mr George Lee	Member	<ul style="list-style-type: none"> ▪ Independent Director, Bumitama Agri Ltd. ▪ Independent Director, RE&S Holdings Limited ▪ Former Adviser, OCBC Bank (Malaysia) Berhad ▪ Former Head of Global Corporate Banking and former Head of Global Investment Banking, OCBC Bank Ltd
08	Mr Francis Mok Lip Wee	Member	<ul style="list-style-type: none"> ▪ Partner, Allen & Gledhill LLP
09	Mr Colin Ng Teck Sim	Member	<ul style="list-style-type: none"> ▪ Consultant, CHP Law LLC ▪ Former Chairman, Colin Ng & Partners LLP
10	Mr Soh Gim Teik	Member	<ul style="list-style-type: none"> ▪ Partner, Finix Corporate Advisory LLP
11	Dr Tommy Tan	Member	<ul style="list-style-type: none"> ▪ Chief Executive Officer, Co-Founder, TC Capital Pte Ltd
12	Mr Teyu Che Chern	Member	<ul style="list-style-type: none"> ▪ Chief Executive Officer, Phillip Futures Pte Ltd ▪ Executive Director, Phillip Securities Pte Ltd
13	Mr Lucas Tran	Member	<ul style="list-style-type: none"> ▪ Partner, KPMG LLP
14	Ms Yeoh Choo Guan	Member	<ul style="list-style-type: none"> ▪ Managing Director, UBS AG and Chief Executive Officer, UBS Securities Pte. Ltd.

Report of Independent Committees

Appeals Committee Members

There was no appeal hearing in FY2019.

The members of the Appeals Committee are:

No.	Name	Position	Title
01	Mr Francis Xavier, Senior Counsel, PBM	Chairman	<ul style="list-style-type: none"> ▪ Regional Head, Dispute Resolution, Rajah & Tann Singapore LLP
02	Mr Chan Leng Sun, Senior Counsel	Deputy Chairman	<ul style="list-style-type: none"> ▪ Member, Essex Court Chambers Duxton (Singapore Group Practice) ▪ Deputy Chairman, Singapore International Arbitration Centre ▪ Member, ICC Commission on Arbitration and ADR
03	Mr Kan Yut Keong, Benjamin	Member	<ul style="list-style-type: none"> ▪ Managing Director, Cornerstone Advisors Pte. Ltd. ▪ Audit Committee Chairman, Competition & Consumer Commission of Singapore ▪ Member, Securities Industry Council ▪ Independent Director and Chairman of Audit Committee, PropNex Limited ▪ Independent Director, Nam Cheong Limited ▪ Former Managing Director, PricewaterhouseCoopers Corporate Finance Pte Ltd ▪ Former Partner, PricewaterhouseCoopers Singapore
04	Mr Lim How Teck, BBM	Member	<ul style="list-style-type: none"> ▪ Chairman, Redwood International Pte Ltd ▪ Chairman, Heliconia Capital Management Pte. Ltd. ▪ Chairman, ARA-CWT Trust Management (Cache) Limited ▪ Chairman, NauticAWT Limited
05	Mr Quek Suan Kiat	Member	<ul style="list-style-type: none"> ▪ Director, Singapore Accountancy Commission ▪ Director, National Environment Agency ▪ Former Vice Chairman, Barclays Bank Plc Singapore Branch
06	Mr Michael Smith	Member	<ul style="list-style-type: none"> ▪ Regional Chief Executive Officer, Europe and USA, Mapletree Investments Pte Ltd

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Directors' Statement

For the financial year ended 30 June 2019

The directors present their statement to the shareholders together with the audited financial statements of Singapore Exchange Limited ("the Company" or "SGX") and its subsidiaries ("the Group") for the financial year ended 30 June 2019.

In the opinion of the directors,

- (a) the financial statements set out on pages 112 to 182 are drawn up so as to give a true and fair view of the financial position of the Group and of the Company as at 30 June 2019 and the financial performance, changes in equity of the Group and of the Company, and the cash flows of the Group for the financial year ended on that date; and
- (b) at the date of this statement, there are reasonable grounds to believe that the Company will be able to pay its debts as and when they fall due.

Directors

The directors of the Company in office at the date of this statement are as follows:

Mr Kwa Chong Seng	(Chairman)
Mr Loh Boon Chye	(Chief Executive Officer)
Mr Thaddeus Beczak	
Ms Chew Gek Khim	
Ms Jane Diplock AO	
Mr Kevin Kwok	
Mr Liew Mun Leong	
Mr Lim Chin Hu	
Ms Lim Sok Hui (Mrs Chng Sok Hui)	
Mr Ng Wai King	(Appointed on 20 September 2018)
Professor Subra Suresh	(Appointed on 20 September 2018)

Arrangements to enable directors to acquire shares and debentures

Neither at the end of nor at any time during the financial year was the Company a party to any arrangement whose object was to enable the directors of the Company to acquire benefits by means of an acquisition of shares in, or debentures of, the Company or any other body corporate, other than as disclosed under "Share plans" in this statement.

Directors' interests in shares or debentures

- (a) According to the register of directors' shareholdings, none of the directors holding office at the end of the financial year had any interest in the shares or debentures of the Company or its related corporations, except as follows:

	Number of ordinary shares registered in name of director or nominee		Number of ordinary shares in which director is deemed to have an interest	
	At 30.06.2019	At 01.07.2018	At 30.06.2019	At 01.07.2018
<u>Singapore Exchange Limited</u>				
Mr Kwa Chong Seng	51,963	20,000	—	—
Mr Loh Boon Chye	134,034	44,366	—	—
Ms Chew Gek Khim	2,577	—	—	—
Ms Jane Diplock AO	2,577	—	—	—
Mr Kevin Kwok	22,577	70,000	70,000	70,000
Mr Liew Mun Leong	2,577	—	—	—
Mr Lim Chin Hu	22,577	20,000	—	—

- (b) According to the register of directors' shareholdings, one director holding office at the end of the financial year had interests in the shares of the Company granted pursuant to SGX Performance Share Plan and SGX Deferred Long-Term Incentives Scheme as set out below:

Subject to the terms and conditions of the SGX Performance Share Plan and SGX Deferred Long-Term Incentives Scheme, 709,768 shares granted to Loh Boon Chye will vest between 1 September 2019 and 1 September 2022.

- (c) There was no change in any of the abovementioned interests in the Company or in related corporations between the end of the financial year and 21 July 2019.

Share plans

The Company offers the following share plans administered by the Remuneration & Staff Development Committee ("RSDC"):

- (a) SGX Performance Share Plan;
- (b) SGX Deferred Long-Term Incentives Scheme; and
- (c) SGX Restricted Share Plan.

(a) SGX Performance Share Plan

The current SGX Performance Share Plan ("SGX PSP 2015") was adopted at the annual general meeting of the Company held on 23 September 2015. Through the SGX PSP 2015, the Company recognises and rewards key senior management for achievements and contributions to the SGX Group and motivates them to continue to strive for the SGX Group's long-term prosperity, and at the same time meet guidelines on the deferral of employees' variable compensation in line with prevailing regulatory requirements. In addition, the SGX PSP 2015 aims to foster an ownership culture which aligns the interest of employees with the interest of shareholders.

Eligibility

Senior management having rank of Senior Vice President and above, and selected senior management having rank of Vice President, job grade 2, who have been in the full time employment of the SGX Group for a period of at least 12 months (or such shorter period as the RSDC may determine), are eligible to participate in the SGX PSP 2015.

Fully paid SGX shares, their equivalent cash value or combinations thereof will be awarded and vest, free of charge, provided that certain prescribed performance targets are met and upon expiry of the prescribed vesting period(s). The amount released, if in the form of cash, is based on the market value of such shares on vesting date.

Unless otherwise decided by the RSDC, the entitlement to this award is conditional on the participant remaining in service up to the specified vesting date.

Restrictions

The total number of new SGX shares which may be issued pursuant to awards granted under SGX PSP 2015 on any date, when added to the total number of new shares issued and issuable in respect of all awards granted, shall not exceed 10% of SGX's issued share capital on the day preceding the relevant date of award.

For grants under SGX PSP 2015, the vesting period is four years and any shares that have been released to the participants are not subject to a retention period.

Share grant and vesting

The RSDC approves all grants, and has absolute discretion in the granting and award of performance shares.

(i) FY2016 Grant under SGX PSP 2015

The number of SGX shares to be awarded to each participant will be based on the achievement of prescribed performance targets over a three-year performance period from 1 July 2015 to 30 June 2018. The performance targets were not met and accordingly, no performance shares will vest on 1 September 2019.

Directors' Statement

For the financial year ended 30 June 2019

Share plans (continued)

(a) SGX Performance Share Plan (continued)

Share grant and vesting (continued)

(i) FY2016 Grant under SGX PSP 2015 (continued)

The details of shares granted to the participants are as follows. No shares lapsed during the financial year.

Participants (as defined under SGX Performance Share Plan)	Shares granted at grant date	Balance as at 01.07.2018 and 30.06.2019 ⁽¹⁾
EMCO members		
Mr Muthukrishnan Ramaswami ⁽²⁾	53,600	53,600
Mr Chew Sutat ⁽²⁾	37,800	37,800
Mr Syn Hsien-Min Michael ⁽²⁾	34,700	34,700
Mr Chng Lay Chew	22,800	22,800
Ms Agnes Koh	15,100	15,100
Mr Arulraj Maria Devadoss	14,200	14,200
Ms Tinku Gupta	13,200	13,200
Other staff	264,600	200,200
Other participants		
Mr Timothy Utama ⁽²⁾⁽³⁾	31,500	—
	487,500	391,600

⁽¹⁾ Represents the number of shares required if participants are to be awarded at 100% of the grant. However, the shares to be awarded at the vesting date may range from 0% to 150% of the grant, depending on the level of achievement against the performance conditions.

⁽²⁾ Received more than 5% of the shares granted.

⁽³⁾ Mr Timothy Utama resigned as SGX's Chief Operations and Technology Officer and his last day of service was 31 March 2016. All his unvested shares lapsed at the end of his employment.

(ii) FY2017 Grant under SGX PSP 2015

The number of SGX shares to be awarded to each participant will be based on the achievement of prescribed performance targets, over a three-year performance period from 1 July 2016 to 30 June 2019. The performance shares will vest on 1 September 2020.

The details of shares granted to the participants are as follows. No shares lapsed during the financial year.

Participants (as defined under SGX Performance Share Plan)	Shares granted at grant date	Balance as at 01.07.2018 and 30.06.2019 ⁽¹⁾
EMCO members		
Mr Loh Boon Chye ⁽²⁾	133,100	133,100
Mr Muthukrishnan Ramaswami ⁽²⁾	59,900	59,900
Mr Chew Sutat ⁽²⁾	41,600	41,600
Mr Syn Hsien-Min Michael ⁽²⁾	39,900	39,900
Mr Chng Lay Chew	25,800	25,800
Mr Tan Boon Gin	25,800	25,800
Ms Agnes Koh	21,600	21,600
Ms Tinku Gupta	16,000	16,000
Mr Arulraj Maria Devadoss	15,000	15,000
Other staff	280,100	225,900
	658,800	604,600

⁽¹⁾ Represents the number of shares required if participants are to be awarded at 100% of the grant. However, the shares to be awarded at the vesting date may range from 0% to 150% of the grant, depending on the level of achievement against the performance conditions.

⁽²⁾ Received more than 5% of the shares granted.

Share plans (continued)

(a) SGX Performance Share Plan (continued)

Share grant and vesting (continued)

(iii) FY2018 Grant under SGX PSP 2015

The number of SGX shares to be awarded to each participant will be based on the achievement of prescribed performance targets, over a three-year performance period from 1 July 2017 to 30 June 2020. The performance shares will vest on 1 September 2021.

The details of shares granted to the participants are as follows. No shares lapsed during the financial year.

Participants (as defined under SGX Performance Share Plan)	Shares granted at grant date	Balance as at 01.07.2018 and 30.06.2019 ⁽¹⁾
EMCO members		
Mr Loh Boon Chye ⁽²⁾	135,900	135,900
Mr Muthukrishnan Ramaswami ⁽²⁾	57,800	57,800
Mr Chew Sutat ⁽²⁾	42,500	42,500
Mr Syn Hsien-Min Michael ⁽²⁾	36,700	36,700
Mr Tan Boon Gin ⁽²⁾	34,000	34,000
Mr Chng Lay Chew	26,300	26,300
Ms Agnes Koh	22,100	22,100
Ms Tinku Gupta	22,100	22,100
Mr Arulraj Maria Devadoss	16,100	16,100
Other staff	264,700	228,100
	658,200	621,600

⁽¹⁾ Represents the number of shares required if participants are to be awarded at 100% of the grant. However, the shares to be awarded at the vesting date may range from 0% to 150% of the grant, depending on the level of achievement against the performance conditions.

⁽²⁾ Received more than 5% of the shares granted.

(iv) FY2019 Grant under SGX PSP 2015

The number of SGX shares to be awarded to each participant will be based on the achievement of prescribed performance targets, over a three-year performance period from 1 July 2018 to 30 June 2021. The performance shares will vest on 1 September 2022.

The details of shares granted to the participants are as follows. No shares lapsed during the financial year.

Participants (as defined under SGX Performance Share Plan)	Shares granted during the financial year	Balance as at 30.06.2019 ⁽¹⁾
EMCO members		
Mr Loh Boon Chye ⁽²⁾	152,900	152,900
Mr Muthukrishnan Ramaswami ⁽²⁾	62,500	62,500
Mr Chew Sutat ⁽²⁾	48,000	48,000
Mr Tan Boon Gin ⁽²⁾	42,600	42,600
Mr Syn Hsien-Min Michael ⁽²⁾	41,200	41,200
Mr Chng Lay Chew	29,400	29,400
Ms Agnes Koh	24,800	24,800
Ms Tinku Gupta	24,800	24,800
Mr Arulraj Maria Devadoss	17,400	17,400
Other staff	252,900	252,900
	696,500	696,500

⁽¹⁾ Represents the number of shares required if participants are to be awarded at 100% of the grant. However, the shares to be awarded at the vesting date may range from 0% to 150% of the grant, depending on the level of achievement against the performance conditions.

⁽²⁾ Received more than 5% of the shares granted.

Directors' Statement

For the financial year ended 30 June 2019

Share plans (continued)

(a) SGX Performance Share Plan (continued)

Share grant and vesting (continued)

(v) Summary of SGX Performance Share Plan under SGX PSP 2015

The summary of the total number of shares granted, lapsed, vested and outstanding as at 30 June 2019 is as follows:

	Shares granted during financial year	Aggregate shares granted since commencement of SGX Performance Share Plan to 30.06.2019	Aggregate shares lapsed since commencement of SGX Performance Share Plan to 30.06.2019	Aggregate shares vested since commencement of SGX Performance Share Plan to 30.06.2019	Aggregate shares outstanding as at 30.06.2019
Participants who received more than 5% of the total grants available					
Mr Loh Boon Chye	152,900	421,900	–	–	421,900
Mr Muthukrishnan Ramaswami	62,500	233,800	–	–	233,800
Mr Chew Sutat	48,000	169,900	–	–	169,900
Mr Syn Hsien-Min Michael	41,200	152,500	–	–	152,500
Participants who received less than 5% of the total grants available					
Other staff	391,900	1,522,900	(186,700)	–	1,336,200
	696,500	2,501,000	(186,700)	–	2,314,300

(b) SGX Deferred Long-Term Incentives Scheme

The SGX Deferred Long-Term Incentives Scheme ("SGX DLTIS") was approved by the RSDC in July 2006. The objectives of the SGX DLTIS is to retain key employees whose contributions are essential to the long-term growth and profitability of the SGX Group and attract potential employees with relevant skills to contribute to the SGX Group and to create value for its shareholders.

Eligibility

Employees having the rank of Assistant Vice President and above, and have been in the continuous employment of the SGX Group for at least one year as at the date of award, are eligible to participate in the SGX DLTIS.

Fully paid SGX shares, their equivalent cash value or combinations thereof will be awarded to eligible employees and vest upon expiry of the prescribed vesting period(s). The amount released, if in the form of cash, is based on the market value of such shares on vesting date.

Unless otherwise decided by the RSDC, the entitlement to the award is conditional on the recipient remaining in service up to the specified vesting date.

Share plans (continued)

(b) SGX Deferred Long-Term Incentives Scheme (continued)

Share grant and vesting

(i) FY2016 Award

The FY2016 Award is in the form of SGX shares and the award vested in three equal instalments over a period of three years. The first instalment of this award vested on 1 September 2016 and the final instalment vested on 3 September 2018.

The details of shares awarded are as follows:

Recipients (as defined under SGX Deferred Long-Term Incentives Scheme)	Shares awarded at grant date	Balance as at 01.07.2018	Shares lapsed during financial year	Shares vested during financial year	Balance as at 30.06.2019
EMCO members					
Mr Muthukrishnan Ramaswami ⁽¹⁾	53,600	17,868	–	(17,868)	–
Mr Chew Sutat	37,800	12,600	–	(12,600)	–
Mr Syn Hsien-Min Michael	34,700	11,568	–	(11,568)	–
Mr Chng Lay Chew	22,800	7,600	–	(7,600)	–
Ms Agnes Koh	15,100	5,034	–	(5,034)	–
Mr Arulraj Maria Devadoss	14,200	4,734	–	(4,734)	–
Ms Tinku Gupta	13,200	4,400	–	(4,400)	–
Other staff	764,800	205,066	(3,234)	(201,832)	–
	956,200	268,870	(3,234)	(265,636)	–

⁽¹⁾ Received more than 5% of the shares awarded.

(ii) FY2017 Award

The FY2017 Award is in the form of SGX shares. The award will vest in three equal instalments over a period of three years with the first instalment vested on 1 September 2017.

The details of shares awarded are as follows:

Recipients (as defined under SGX Deferred Long-Term Incentives Scheme)	Shares awarded at grant date	Balance as at 01.07.2018	Shares lapsed during financial year	Shares vested during financial year	Balance as at 30.06.2019
EMCO members					
Mr Loh Boon Chye ⁽¹⁾	133,100	88,734	–	(44,366)	44,368
Mr Muthukrishnan Ramaswami ⁽¹⁾	59,900	39,934	–	(19,966)	19,968
Mr Chew Sutat	41,600	27,734	–	(13,866)	13,868
Mr Syn Hsien-Min Michael	39,900	26,600	–	(13,300)	13,300
Mr Chng Lay Chew	25,800	17,200	–	(8,600)	8,600
Mr Tan Boon Gin	25,800	17,200	–	(8,600)	8,600
Ms Agnes Koh	21,600	14,400	–	(7,200)	7,200
Ms Tinku Gupta	16,000	10,667	–	(5,333)	5,334
Mr Arulraj Maria Devadoss	15,000	10,000	–	(5,000)	5,000
Other staff	737,000	431,039	(15,904)	(212,061)	203,074
	1,115,700	683,508	(15,904)	(338,292)	329,312

⁽¹⁾ Received more than 5% of the shares awarded.

Directors' Statement

For the financial year ended 30 June 2019

Share plans (continued)

(b) SGX Deferred Long-Term Incentives Scheme (continued)

Share grant and vesting (continued)

(iii) FY2018 Award

The FY2018 Award is in the form of SGX shares. The award will vest in three equal instalments over a period of three years with the first instalment vesting on 1 September 2018.

The details of shares awarded are as follows:

Recipients (as defined under SGX Deferred Long-Term Incentives Scheme)	Shares awarded at grant date	Balance as at 01.07.2018	Shares lapsed during financial year	Shares vested during financial year	Balance as at 30.06.2019
EMCO members					
Mr Loh Boon Chye ⁽¹⁾	135,900	135,900	—	(45,300)	90,600
Mr Muthukrishnan Ramaswami	57,800	57,800	—	(19,266)	38,534
Mr Chew Sutat	42,500	42,500	—	(14,166)	28,334
Mr Syn Hsien-Min Michael	36,700	36,700	—	(12,233)	24,467
Mr Tan Boon Gin	34,000	34,000	—	(11,333)	22,667
Mr Chng Lay Chew	26,300	26,300	—	(8,766)	17,534
Ms Agnes Koh	22,100	22,100	—	(7,366)	14,734
Ms Tinku Gupta	22,100	22,100	—	(7,366)	14,734
Mr Arulraj Maria Devadoss	16,100	16,100	—	(5,366)	10,734
Other staff	780,500	743,000	(30,003)	(244,293)	468,704
	1,174,000	1,136,500	(30,003)	(375,455)	731,042

⁽¹⁾ Received more than 5% of the shares awarded.

(iv) FY2019 Award

The FY2019 Award is in the form of SGX shares. The award will vest in three equal instalments over a period of three years with the first instalment vesting on 1 September 2019.

The details of shares awarded are as follows:

Recipients (as defined under SGX Deferred Long-Term Incentives Scheme)	Shares awarded during financial year	Shares lapsed during financial year	Balance as at 30.06.2019
EMCO members			
Mr Loh Boon Chye ⁽¹⁾	152,900	—	152,900
Mr Muthukrishnan Ramaswami	62,500	—	62,500
Mr Chew Sutat	48,000	—	48,000
Mr Tan Boon Gin	42,600	—	42,600
Mr Syn Hsien-Min Michael	41,200	—	41,200
Mr Chng Lay Chew	29,400	—	29,400
Ms Agnes Koh	24,800	—	24,800
Ms Tinku Gupta	24,800	—	24,800
Mr Arulraj Maria Devadoss	17,400	—	17,400
Other staff	936,200	(41,200)	895,000
	1,379,800	(41,200)	1,338,600

⁽¹⁾ Received more than 5% of the shares awarded.

Share plans (continued)

(b) SGX Deferred Long-Term Incentives Scheme (continued)

Share grant and vesting (continued)

(v) Summary of SGX Deferred Long-Term Incentives Scheme

The summary of the total number of shares awarded, lapsed, vested and outstanding as at 30 June 2019 is as follows:

	Shares awarded during financial year	Aggregate shares awarded since commencement of SGX Deferred Long-Term Incentives Scheme to 30.06.2019	Aggregate shares lapsed since commencement of SGX Deferred Long-Term Incentives Scheme to 30.06.2019	Aggregate shares vested since commencement of SGX Deferred Long-Term Incentives Scheme to 30.06.2019	Aggregate shares outstanding as at 30.06.2019
Recipient who received more than 5% of the total awards available					
Mr Magnus Böcker ⁽¹⁾	–	604,000	–	(604,000)	–
Recipients who received less than 5% of the total awards available					
Other staff	1,379,800	9,924,800	(950,367)	(6,575,479)	2,398,954
	1,379,800	10,528,800	(950,367)	(7,179,479)	2,398,954

⁽¹⁾ Mr Magnus Böcker's contract as the Chief Executive Officer ended on 30 June 2015.

(c) SGX Restricted Share Plan

The SGX Restricted Share Plan ("RSP") was adopted at the annual general meeting of the Company held on 20 September 2018 to:

- (1) Grant shares to the Group non-executive directors as part of their remuneration in respect of their office as such in lieu of cash, or where, the RSDC deems appropriate, to give recognition to the contributions made or to be made by such Group non-executive directors to the success of the Group, in order to improve the alignment of the interests of Group non-executive directors with the interests of shareholders; and
- (2) Serve as an additional motivational tool to recruit and retain Group employees whose contributions are essential to the long-term growth and profitability of the Group and to give recognition to outstanding Group employees who have contributed to the growth of the Group. The SGX RSP will act as an enhancement to the Group's overall ability to attract and retain high performing talent.

Eligibility

Non-executive directors meeting the criteria set out below under "Share grant and vesting" and employees of the Group are eligible to participate in the RSP.

Share grant and vesting

For RSP granted to non-executive directors of the Group, the non-executive director is required to have served on the board of directors for at least 12 months on the date of grant of the share awards. The grant will consist of fully paid shares with no performance conditions attached and no vesting period imposed. A moratorium on sale of such shares for a period up to one year after the grant of the award is imposed. The moratorium will be lifted if the non-executive director steps off the board of directors before the end of the moratorium period.

RSP granted to employees has no performance conditions but subject to vesting period(s) determined on a case-by-case basis.

Directors' Statement

For the financial year ended 30 June 2019

Share plans (continued)

(c) SGX Restricted Share Plan (continued)

Share grant and vesting (continued)

(i) FY2019 Award

In FY2019, approximately one-quarter of the Group Chairman's fees and approximately one-quarter of eligible non-executive directors' basic fees were delivered in SGX shares, with approximately three-quarters being paid in cash.

The details of shares awarded are as follows:

Recipients (as defined under SGX Restricted Share Plan)	Shares awarded during financial year	Shares vested during financial year	Balance as at 30.06.2019
Non-Executive Directors⁽¹⁾			
Mr Kwa Chong Seng	31,963	(31,963)	—
Ms Chew Gek Khim	2,577	(2,577)	—
Ms Jane Diplock AO	2,577	(2,577)	—
Mr Kevin Kwok	2,577	(2,577)	—
Mr Liew Mun Leong	2,577	(2,577)	—
Mr Lim Chin Hu	2,577	(2,577)	—
	44,848	(44,848)	—

⁽¹⁾ All recipients received more than 5% of the shares awarded

(ii) Summary of SGX Restricted Share Plan

The summary of the total number of shares awarded, lapsed, vested and outstanding as at 30 June 2019 are as follows:

Recipients who received more than 5% of the total awards available	Shares awarded during financial year	Aggregate shares awarded since commencement of SGX Restricted Share Plan to 30.06.2019	Aggregate shares lapsed since commencement of SGX Restricted Share Plan to 30.06.2019	Aggregate shares vested since commencement of SGX Restricted Share Plan to 30.06.2019	Aggregate shares outstanding as at 30.06.2019
Mr Kwa Chong Seng	31,963	31,963	—	(31,963)	—
Ms Chew Gek Khim	2,577	2,577	—	(2,577)	—
Ms Jane Diplock AO	2,577	2,577	—	(2,577)	—
Mr Kevin Kwok	2,577	2,577	—	(2,577)	—
Mr Liew Mun Leong	2,577	2,577	—	(2,577)	—
Mr Lim Chin Hu	2,577	2,577	—	(2,577)	—
	44,848	44,848	—	(44,848)	—

Audit Committee

The Audit Committee comprises the following non-executive directors at the date of this statement:

Mr Kevin Kwok (Chairman)
 Ms Jane Diplock AO
 Mr Liew Mun Leong

Based on the criteria prescribed in the Securities and Futures (Corporate Governance of Approved Exchanges, Approved Clearing Houses and Approved Holding Companies) Regulations 2005 (SFR 2005), all of the Audit Committee members are independent save for Mr Liew Mun Leong. Mr Liew is deemed non-independent solely on account of having completed nine consecutive years of service as 1 July 2018 pursuant to the NGC's decision on Guideline 2.4 of the Code of Corporate Governance ("CCG") 2012 (Provision 2.1 of the CCG 2018).

The Audit Committee carried out its functions in accordance with Section 201B (5) of the Singapore Companies Act, Regulation 14(2) of the SFR 2005, the Singapore CCG and the Singapore Exchange Securities Trading Limited ("SGX-ST") Listing Manual. These functions include a review of the financial statements of the Company and of the Group for the financial year and the independent auditor's report thereon.

Accordingly, the Audit Committee has also undertaken a review of the nature and extent of non-audit services provided by the firm acting as the auditor. In the opinion of the Audit Committee, these services would not affect the independence of the auditor.

The Audit Committee nominates KPMG LLP for appointment as the external auditor of the Company in place of the retiring auditor, PricewaterhouseCoopers LLP, at the forthcoming annual general meeting.

In appointing the auditor of the Company and the subsidiaries, the Group has complied with Rule 712 and Rule 715 of the SGX-ST Listing Manual. The Group has no significant associated company.

Independent Auditor

The retiring auditor, PricewaterhouseCoopers LLP, will not be seeking re-appointment at the forthcoming annual general meeting. KPMG LLP has expressed its willingness to accept appointment as auditor.

On behalf of the directors



Mr Kwa Chong Seng

Director

31 July 2019



Mr Loh Boon Chye

Director

Independent Auditor's Report

To the Members of Singapore Exchange Limited

Report on the Audit of the Financial Statements

Our Opinion

In our opinion, the accompanying financial statements of Singapore Exchange Limited (the "Company") and its subsidiaries (the "Group") are properly drawn up in accordance with the provisions of the Companies Act, Chapter 50 (the "Act") and Singapore Financial Reporting Standards (International) ("SFRS(I)s") so as to give a true and fair view of the financial position of the Group and of the Company as at 30 June 2019, and of the financial performance and changes in equity of the Group and of the Company, and the cash flows of the Group for the financial year ended on that date.

What we have audited

The financial statements of the Group and the Company comprise:

- the statements of comprehensive income of the Group and of the Company for the year ended 30 June 2019;
- the statements of financial position of the Group and of the Company as at 30 June 2019;
- the statements of changes in equity of the Group and of the Company for the year then ended;
- the statement of cash flows of the Group for the year then ended; and
- the notes to the financial statements, including a summary of significant accounting policies.

Basis for Opinion

We conducted our audit in accordance with Singapore Standards on Auditing ("SSAs"). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the 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 Accounting and Corporate Regulatory Authority Code of Professional Conduct and Ethics for Public Accountants and Accounting Entities ("ACRA Code") together with the ethical requirements that are relevant to our audit of the financial statements in Singapore, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ACRA Code.

Our Audit Approach

Overview

Materiality	The overall group materiality that we used amounted to \$23 million, being approximately 5% of profit before tax for the financial year ended 30 June 2019. In determining materiality, both quantitative and qualitative factors were considered.
Audit Scope	Audit procedures were performed over the complete financial information of the Company and the subsidiaries that are significant to the Group ("significant components").
Key audit matters	Impairment assessment of goodwill relating to Energy Market Company Pte Ltd ("EMC") and intangible assets relating to EMC and Baltic Exchange Limited ("BEL").

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the accompanying financial statements. In particular, we considered where management made subjective judgements; for example, in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain. As in all of our audits, we also addressed the risk of management override of internal controls, including among other matters consideration of whether there was evidence of bias that represented a risk of material misstatement due to fraud.

Materiality

The scope of our audit was influenced by our application of materiality. An audit is designed to obtain reasonable assurance whether the financial statements of the Group are free from material misstatement. Misstatements may arise due to fraud or error. They are considered material if individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements of the Group.

Based on our professional judgement, we determined certain quantitative thresholds for materiality. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures and to evaluate the effect of misstatements, both individually and in aggregate, on the financial statements as a whole. We determined overall materiality for the financial statements of the Group as a whole to be \$23 million, being approximately 5% of profit before tax. We chose profit before tax as the benchmark because, in our view, it reflects the underlying performance of the Group and it is one of the benchmarks that is commonly used by the users of financial statements in evaluating the performance of the Group. In performing our audit, we allocated materiality levels, which are less than the overall group materiality, to the significant components.

We agreed with the Audit Committee that we would report to them misstatements identified during our audit above \$1 million as well as misstatements below that amount that, in our view, warranted reporting for qualitative reasons.

Audit Scope

We tailored the scope of our audit in order to perform sufficient work to enable us to provide an opinion on the financial statements of the Group as a whole, taking into account the structure of the Group, the accounting processes and controls and the industry in which the Group operates. The Group's financial reporting process is dependent on its IT systems. Our audit scope included testing the operating effectiveness of the controls over the integrity of key financial data processed through the IT systems that are relevant to financial reporting.

We audited the complete financial information of the Company and each of the significant components. This, together with the audit procedures performed at the Group level over group consolidation, goodwill, intangible assets, taxation and disclosures in the financial statements, gave us the evidence we needed for our opinion on the financial statements as a whole.

Key Audit Matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements for the financial year ended 30 June 2019. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key Audit Matter	How our audit addressed the key audit matter
<u>Impairment assessment of goodwill relating to Energy Market Company Pte Ltd ("EMC") and intangible assets relating to EMC and Baltic Exchange Limited ("BEL")</u>	<p>As at 30 June 2019, the goodwill and intangible asset (right to operate the Singapore electricity spot market) arising from the acquisition of EMC amounted to \$9,614,000 and \$22,844,000 respectively and they were allocated to EMC Cash Generating Unit ("CGU"). Baltic trade name ("trade name") arising from the acquisition of BEL amounted to \$34,722,000 at 30 June 2019 and was part of BEL CGU.</p> <p>Management is required to perform an impairment assessment of goodwill annually and assess whether there is any indication that the intangible assets may be impaired. The recoverable amounts of the CGUs are compared with the carrying amounts of the CGUs to determine whether there is any impairment loss.</p> <p>We focused on these areas because of the significant management judgements required in the impairment assessment, including estimating the future cash flows, long term growth rates and discount rate.</p> <p>Refer to Note 3 – Critical accounting estimates and judgements, Note 20 – Intangible assets and Note 21 – Goodwill for disclosures relating to the impairment assessment.</p>
	<p>We evaluated the reasonableness of management's estimate of future cash flows by taking into consideration the past performance and market developments.</p> <p>With the assistance of our valuation specialists, we assessed the reasonableness of the rates used by management, i.e. long term growth rate and discount rate.</p> <p>We found the estimate of future cash flows and the rates used to be reasonable.</p> <p>We performed sensitivity analysis to assess the impact on the recoverable amount of the CGU by reasonable possible changes to the long term growth rate and discount rate. We found that reasonable changes in these rates did not result in impairment loss.</p>

Independent Auditor's Report

To the Members of Singapore Exchange Limited

Other Information

Management is responsible for the other information. The other information comprises the Directors' Statement (but does not include the financial statements and our auditor's report thereon), which we obtained prior to the date of this auditor's report, and the other sections of the annual report ("the Other Sections"), which are expected to be made available to us after that date.

Our opinion on the financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed on the other information that we obtained prior to the date of this auditor's report, 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.

When we read the Other Sections, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance and take appropriate actions in accordance with SSAs.

Responsibilities of Management and Directors for the Financial Statements

Management is responsible for the preparation of financial statements that give a true and fair view in accordance with the provisions of the Act and SFRS(1)s, and for devising and maintaining a system of internal accounting controls sufficient to provide a reasonable assurance that assets are safeguarded against loss from unauthorised use or disposition; and transactions are properly authorised and that they are recorded as necessary to permit the preparation of true and fair financial statements and to maintain accountability of assets.

In preparing the financial statements, management is 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 management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The directors' responsibilities include overseeing the Group's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the 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. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SSAs 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 financial statements.

Auditor's Responsibilities for the Audit of the Financial Statements (continued)

As part of an audit in accordance with SSAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the 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.
- 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 management.
- Conclude on the appropriateness of management's 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 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 financial statements, including the disclosures, and whether the 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 financial statements of the Group. 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 directors 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 directors 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 directors, we determine those matters that were of most significance in the audit of the 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.

Report on Other Legal and Regulatory Requirements

In our opinion, the accounting and other records required by the Act to be kept by the Company and by those subsidiary corporations incorporated in Singapore of which we are the auditors have been properly kept in accordance with the provisions of the Act.

The engagement partner on the audit resulting in this independent auditor's report is Mrs Deborah Ong (Ms Deborah Tan Yang Sock).

PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP
Public Accountants and Chartered Accountants

Singapore, 31 July 2019

Statements of Comprehensive Income

For the financial year ended 30 June 2019

	Note	The Group		The Company	
		2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Operating revenue					
Equities and Fixed Income	4	347,529	406,600	—	2,615
Derivatives	4	459,749	339,812	—	—
Market Data and Connectivity	4	102,530	98,266	25,647	24,244
Management fees from subsidiaries		—	—	200,527	193,748
Dividends from subsidiaries		—	—	369,000	349,300
Operating revenue		909,808	844,678	595,174	569,907
Operating expenses					
Staff	5	191,417	175,743	106,549	108,835
Technology	6	130,674	126,922	65,454	62,151
Processing and royalties		47,258	46,334	281	693
Premises	7	28,831	28,304	20,983	19,306
Professional fees		14,603	12,789	6,310	6,662
Others	8	36,008	29,690	18,064	13,705
Operating expenses		448,791	419,782	217,641	211,352
Operating profit	9	461,017	424,896	377,533	358,555
Other gains – net	10	13,468	11,306	7,865	12,434
Profit before tax and share of results of associated companies and joint venture		474,485	436,202	385,398	370,989
Share of results of associated companies and joint venture	23	(1,500)	1,268	—	—
Profit before tax		472,985	437,470	385,398	370,989
Tax	26	(81,887)	(74,270)	(3,636)	(3,970)
Net profit after tax		391,098	363,200	381,762	367,019
Attributable to:					
Equity holders of the Company		391,098	363,200	381,762	367,019
Earnings per share based on net profit attributable to the equity holders of the Company (in cents per share)					
– Basic	11	36.5	33.9		
– Diluted	11	36.4	33.8		

	The Group		The Company	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Net profit after tax	391,098	363,200	381,762	367,019
Other comprehensive income				
Items that may be reclassified subsequently to profit or loss:				
<u>Foreign exchange translation</u>				
– Exchange differences arising during the year	(6,161)	(108)	–	–
<u>Cash flow hedges</u>				
– Fair value (losses)/gains arising during the year	(96)	(1,405)	154	(32)
– Transferred to profit or loss	1,373	(1,069)	32	–
<u>Available-for-sale financial assets</u>				
– Fair value gains arising during the year	–	111	–	111
<u>Financial assets, at FVOCI</u>				
– Fair value gains arising during the year	92	–	92	–
Items that will not be reclassified subsequently to profit or loss:				
<u>Financial assets, at FVOCI</u>				
– Fair value gains arising during the year	8,716	–	46	–
<u>Other comprehensive income/(expense) for the financial year, net of tax</u>				
	3,924	(2,471)	324	79
Total comprehensive income for the financial year	395,022	360,729	382,086	367,098
Total comprehensive income attributable to:				
Equity holders of the Company	395,022	360,729	382,086	367,098

Statements of Financial Position

As at 30 June 2019

The Group

Note	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000
Assets			
Current assets			
Cash and cash equivalents	12	666,670	831,587
Trade and other receivables	13	885,451	826,786
Derivative financial instruments	15	256	40
Available-for-sale financial assets	16	—	22,003
Financial assets, at FVOCI	17	24,780	—
		1,577,157	1,680,416
			1,612,543
Non-current assets			
Available-for-sale financial assets	16	—	3,648
Derivative financial instruments	15	5,851	—
Financial assets, at FVOCI	17	58,783	—
Investment property	18	24,596	26,234
Property, plant and equipment	18	60,951	71,824
Software	19	182,090	173,799
Intangible assets	20	57,566	61,428
Goodwill	21	85,299	88,628
Investments in associated companies	23	78,967	8,628
Investment in joint venture	24	100	—
Other assets		928	333
		555,131	434,522
			428,668
Total assets		2,132,288	2,114,938
			2,041,211
Liabilities			
Current liabilities			
Trade and other payables	25	911,506	890,662
Derivative financial instruments	15	1,293	1,967
Taxation	26	77,167	82,440
Provisions	27	11,507	10,963
		1,001,473	986,032
			973,396
Non-current liabilities			
Trade and other payables	25	—	—
Deferred tax liabilities	26	39,966	32,674
		39,966	32,674
			35,282
Total liabilities		1,041,439	1,018,706
			1,008,678
Net assets		1,090,849	1,096,232
			1,032,533
Equity			
Capital and reserves attributable to the Company's equity holders			
Share capital	28	429,113	429,236
Treasury shares	28	(13,233)	(11,363)
Cash flow hedge reserve		(128)	(1,405)
Currency translation reserve		(3,297)	2,864
Fair value reserve		8,931	111
Securities clearing fund reserve	31	25,000	25,000
Derivatives clearing fund reserve	32	34,021	34,021
Share-based payment reserve		18,865	15,875
Retained profits		511,342	441,377
Proposed dividends	29	80,235	160,516
Total equity		1,090,849	1,096,232
			1,032,533

The Company

Note	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000
Assets			
Current assets			
Cash and cash equivalents	12	257,422	413,012
Trade and other receivables	13	19,579	19,313
Derivative financial instruments	15	198	—
Available-for-sale financial assets	16	—	22,003
Financial assets, at FVOCI	17	24,780	—
		301,979	454,328
			414,751
Non-current assets			
Property, plant and equipment	18	35,318	42,941
Software	19	36,539	35,718
Investments in subsidiaries	22	867,730	738,840
Investment in associated company	23	4,389	4,389
Other receivables	13	4,545	6,104
Other assets		333	333
		948,854	828,325
			825,063
Total assets		1,250,833	1,282,653
			1,239,814
Liabilities			
Current liabilities			
Trade and other payables	25	280,019	294,021
Derivative financial instruments	15	—	39
Taxation	26	4,148	3,896
Provisions	27	7,355	7,108
		291,522	305,064
			332,650
Non-current liabilities			
Deferred tax liabilities	26	6,753	6,712
		6,753	6,712
			6,355
Total liabilities		298,275	311,776
			339,005
Net assets		952,558	970,877
			900,809
Equity			
Capital and reserves attributable to the Company's equity holders			
Share capital	28	429,113	429,236
Treasury shares	28	(13,233)	(11,363)
Cash flow hedge reserve		154	(32)
Fair value reserve		261	111
Share-based payment reserve		18,865	15,875
Retained profits		437,163	376,534
Proposed dividends	29	80,235	160,516
Total equity		952,558	970,877
			900,809

Statements of Changes in Equity

For the financial year ended 30 June 2019

The Group

	Note	Share capital \$'000	Treasury shares \$'000	Cash flow hedge reserve* \$'000
2019				
Balance at 1 July 2018		429,236	(11,363)	(1,405)
Dividends paid				
- Financial year 2018 – Final dividend		–	–	–
- Financial year 2018 – Under provision of final dividend		–	–	–
- Financial year 2019 – Interim dividends	29	–	–	–
Proposed dividend				
- Financial year 2019 – Final dividend	29	–	–	–
Employee share plans – Value of employee services	5	–	–	–
Restricted share plan – Value of directors' services		–	–	–
Vesting of shares under share-based remuneration plans	28(a)	(109)	7,278	–
Vesting of shares under restricted share plan	28(a)	(14)	340	–
Purchase of treasury shares	28(a)	–	(9,502)	–
Tax effect on treasury shares **	28(a)	–	14	–
Transfer upon disposal of equity investments		–	–	–
		(123)	(1,870)	–
Total comprehensive income for the financial year		–	–	1,277
Balance at 30 June 2019		429,113	(13,233)	(128)
2018				
Balance at 1 July 2017		428,031	(12,561)	1,069
Dividends paid				
- Financial year 2017 – Final dividend		–	–	–
- Financial year 2017 – Under provision of final dividend		–	–	–
- Financial year 2018 – Interim dividends	29	–	–	–
Proposed dividend				
- Financial year 2018 – Final dividend	29	–	–	–
Employee share plans – Value of employee services	5	–	–	–
Vesting of shares under share-based remuneration plans	28(a)	1,205	9,294	–
Purchase of treasury shares	28(a)	–	(8,192)	–
Tax effect on treasury shares **	28(a)	–	96	–
		1,205	1,198	–
Total comprehensive income for the financial year		–	–	(2,474)
Balance at 30 June 2018		429,236	(11,363)	(1,405)

* These reserves are not available for distribution as dividends to the equity holders of the Company.

** The tax effect relates to the deferred tax benefit on the difference between consideration paid for treasury shares and share-based payment expense to employees and directors.

Currency translation reserve* \$'000	Fair value reserve* \$'000	Securities clearing fund reserve* \$'000	Derivatives clearing fund reserve* \$'000	Share-based payment reserve* \$'000	Retained profits \$'000	Proposed dividends \$'000	Total \$'000
2,864	111	25,000	34,021	15,875	441,377	160,516	1,096,232
–	–	–	–	–	–	(160,516)	(160,516)
–	–	–	–	–	(84)	–	(84)
–	–	–	–	–	(240,802)	–	(240,802)
–	–	–	–	–	(80,235)	80,235	–
–	–	–	–	10,159	–	–	10,159
–	–	–	–	326	–	–	326
–	–	–	–	(7,169)	–	–	–
–	–	–	–	(326)	–	–	–
–	–	–	–	–	–	–	(9,502)
–	–	–	–	–	–	–	14
–	12	–	–	–	(12)	–	–
–	12	–	–	2,990	(321,133)	(80,281)	(400,405)
(6,161)	8,808	–	–	–	391,098	–	395,022
(3,297)	8,931	25,000	34,021	18,865	511,342	80,235	1,090,849
2,972	–	25,000	34,021	15,448	399,460	139,093	1,032,533
–	–	–	–	–	–	(139,093)	(139,093)
–	–	–	–	–	(153)	–	(153)
–	–	–	–	–	(160,614)	–	(160,614)
–	–	–	–	–	(160,516)	160,516	–
–	–	–	–	10,926	–	–	10,926
–	–	–	–	(10,499)	–	–	–
–	–	–	–	–	–	–	(8,192)
–	–	–	–	–	–	–	96
–	–	–	–	427	(321,283)	21,423	(297,030)
(108)	111	–	–	–	363,200	–	360,729
2,864	111	25,000	34,021	15,875	441,377	160,516	1,096,232

Statements of Changes in Equity (continued)

For the financial year ended 30 June 2019

The Company

	Note	Share capital \$'000	Treasury shares \$'000	Cash flow hedge reserve* \$'000	Fair value reserve* \$'000	Share-based payment reserve* \$'000	Retained profits \$'000	Proposed dividends \$'000	Total \$'000
2019									
Balance at 1 July 2018		429,236	(11,363)	(32)	111	15,875	376,534	160,516	970,877
Dividends paid									
- Financial year 2018									
- Final dividend									
- Financial year 2018									
- Under provision of final dividend									
- Financial year 2019									
- Interim dividends	29								
Proposed dividend									
- Financial year 2019									
- Final dividend	29								
Employee share plans – Value of employee services	5								
Restricted share plan – Value of directors' services									
Vesting of shares under share-based remuneration plans	28(a)								
Vesting of shares under restricted share plan	28(a)								
Purchase of treasury shares	28(a)								
Tax effect on treasury shares**	28(a)								
Transfer upon disposal of equity investments									
		(109)	7,278	–	–	(7,169)	–	–	–
		(14)	340	–	–	(326)	–	–	–
		–	(9,502)	–	–	–	–	–	(9,502)
		–	14	–	–	–	–	–	14
		–	–	–	12	–	(12)	–	–
		(123)	(1,870)	–	12	2,990	(321,133)	(80,281)	(400,405)
Total comprehensive income for the financial year		–	–	186	138	–	381,762	–	382,086
Balance at 30 June 2019		429,113	(13,233)	154	261	18,865	437,163	80,235	952,558
2018									
Balance at 1 July 2017		428,031	(12,561)	–	–	15,448	330,798	139,093	900,809
Dividends paid									
- Financial year 2017									
- Final dividend									
- Financial year 2017									
- Under provision of final dividend									
- Financial year 2018									
- Interim dividends	29								
Proposed dividend									
- Financial year 2018									
- Final dividend	29								
Employee share plans – Value of employee services	5								
Vesting of shares under share-based remuneration plans	28(a)								
Purchase of treasury shares	28(a)								
Tax effect on treasury shares**	28(a)								
		1,205	9,294	–	–	(10,499)	–	–	–
		–	(8,192)	–	–	–	–	–	(8,192)
		–	96	–	–	–	–	–	96
		1,205	1,198	–	–	427	(321,283)	21,423	(297,030)
Total comprehensive income for the financial year		–	–	(32)	111	–	367,019	–	367,098
Balance at 30 June 2018		429,236	(11,363)	(32)	111	15,875	376,534	160,516	970,877

* These reserves are not available for distribution as dividends to the equity holders of the Company.

** The tax effect relates to the deferred tax benefit on the difference between consideration paid for treasury shares and share-based payment expense to employees and directors.

Statement of Cash Flows

For the financial year ended 30 June 2019

	Note	The Group	
		2019 \$'000	2018 \$'000
Cash flows from operating activities			
Profit before tax and share of results of associated companies and joint venture		474,485	436,202
Adjustments for:			
- Depreciation and amortisation	9	62,512	60,838
- Share-based payment expense		10,485	10,926
- Net write-off of property, plant and equipment and software	8	407	826
- Net loss/(gain) on disposal of property, plant and equipment and software	8	203	(103)
- Interest income		(12,748)	(10,021)
- Gains on dilution of interests in associated companies		(221)	–
- Dividend income from financial assets, at FVOCI/available-for-sale financial assets	10	(99)	(13)
Operating cash flow before working capital change		535,024	498,655
Change in working capital			
- Cash committed for National Electricity Market of Singapore		10,831	(5,921)
- Trade and other receivables		(59,368)	(13,721)
- Trade and other payables		10,675	13,090
Cash generated from operations		497,162	492,103
Income tax paid	26(c)	(79,694)	(65,285)
Net cash provided by operating activities		417,468	426,818
Cash flows from investing activities			
Investments in associated companies		(71,693)	(1,499)
Purchase of financial assets, at FVOCI		(48,947)	–
Purchase of available-for-sale financial assets		–	(25,517)
Purchase of property, plant and equipment and software		(47,347)	(78,559)
Purchase and sale of call options		(5,541)	–
Interest received		13,181	11,028
Dividend received from financial assets, at FVOCI/available-for-sale financial assets		104	8
Dividend received from associated company		–	4,941
Proceeds from disposal of property, plant and equipment and software		–	103
Top-up of club membership		–	(8)
Net cash used in investing activities		(160,243)	(89,503)
Cash flows from financing activities			
Dividends paid		(401,402)	(299,860)
Purchase of treasury shares	28	(9,502)	(8,192)
Net cash used in financing activities		(410,904)	(308,052)
Net (decrease)/increase in cash and cash equivalents		(153,679)	29,263
Cash and cash equivalents at beginning of financial year	12	549,597	520,323
Decrease in cash committed for Singapore Exchange Derivatives Clearing Limited – Derivatives Clearing Funds	32	50,000	–
Effects of currency translation on cash and cash equivalents		(406)	11
Cash and cash equivalents at end of financial year	12	445,512	549,597

Notes to the Financial Statements

For the financial year ended 30 June 2019

These notes form an integral part of and should be read in conjunction with the accompanying financial statements.

1. General

The Company is incorporated and domiciled in Singapore. On 23 November 2000, the Company was admitted to the Official List of Singapore Exchange Securities Trading Limited ("SGX-ST"). The address of the registered office is:

2 Shenton Way
#02-02 SGX Centre 1
Singapore 068804

The principal activities of the Group are to operate an integrated securities exchange and derivatives exchange, related clearing houses and operation of an electricity market in Singapore, as well as provision and distribution of bulk freight market indices and information.

The principal activities of the Company are those of investment holding, treasury management, provision of management and administrative services to related corporations, provision of market data and technology connectivity services. The principal activities of the subsidiaries are set out in Note 22 to the financial statements. There has been no significant change in the principal activities of the Company and its subsidiaries during the financial year.

2. Significant accounting policies

(a) Basis of preparation

These financial statements have been prepared in accordance with Singapore Financial Reporting Standards (International) ("SFRS(I)") under the historical cost convention except as disclosed in the accounting policies below. The preparation of financial statements in conformity with SFRS(I) requires the use of estimates and assumptions, based on management's best knowledge, that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the financial year.

On 1 July 2018, the Group has adopted SFRS(I), a new financial reporting framework identical to International Financial Reporting Standards. In addition to the adoption of the new framework, the Group also concurrently applied the following SFRS(I)s and interpretations of SFRS(I) ("SFRS(I) INT") which are applicable for the financial year beginning on 1 July 2018 as follows:

- SFRS(I) 1 *First-time adoption of Singapore Financial Reporting Standards (International)* ("SFRS(I) 1")
- SFRS(I) 9 *Financial Instruments* ("SFRS(I) 9")
- SFRS(I) 15 *Revenue from Contracts with Customers* ("SFRS(I) 15")
- SFRS(I) INT 22 *Foreign Currency Transactions and Advance Consideration*

The adoption of SFRS(I) does not have any significant impact to the Group's and the Company's financial statements.

(1) Adoption of SFRS(I)

Following the adoption of SFRS(I), the financial statements for the year ended 30 June 2019 are the first set of annual financial statements the Group had prepared in accordance with SFRS(I)s. The Group's previously issued financial statements for periods up to and including the financial year ended 30 June 2018 were prepared in accordance with Singapore Financial Reporting Standards ("FRS").

On initial implementation of SFRS(I), the Group is required to apply all the specific transition requirements in SFRS(I) 1. Under SFRS(I) 1, these financial statements are required to be prepared using accounting policies that comply with SFRS(I) effective as at 30 June 2019. The same accounting policies are applied throughout all periods presented in these financial statements, subject to mandatory exceptions and optional exemptions under SFRS(I) 1.

The Group's opening balance sheet has been prepared as at 1 July 2017, which is the Group's date of transition to SFRS(I)s.

Application of optional exemptions

The Group has elected the following optional exemptions that allows companies not to retrospectively apply SFRS(I) 1. Consequently, the carrying amounts of assets and liabilities at the date of transition to SFRS(I) is the same as previously reported under FRS.

(i) *Business combinations*

SFRS(I) 3 *Business Combinations* has not been applied to business combinations that occurred before the date of transition on 1 July 2017. The same classification as in its previous SFRS financial statements has been adopted.

The Group has not applied SFRS(I) 1-21 *The Effects of Changes in Foreign Exchange Rates* ("SFRS(I) 1-21") retrospectively to fair value adjustments and goodwill from business combinations that occurred before the date of transition to SFRS(I) on 1 July 2017. Such fair value adjustments and goodwill continue to be accounted for using the same basis as under SFRS(I) 1-21.

(ii) *Short-term exemption on adoption of SFRS(I) 9*

The Group has also elected the short-term exemption on adoption of SFRS(I) 9 on 1 July 2018 which exempts the Group from applying SFRS(I) 9 to comparative information. Accordingly, the requirements of FRS 39 *Financial Instruments: Recognition and Measurement* are applied to financial instruments up to the financial year ended 30 June 2018.

(2) Adoption of SFRS(I) 9

SFRS(I) 9 introduces new requirements for classification and measurement of financial instruments, impairment of financial assets and hedge accounting.

Arising from the election of short-term exemption on adoption of SFRS(I) 9, the Group is exempted from complying with SFRS(I) 7 *Financial Instruments: Disclosures* ("SFRS(I) 7") for the comparative period to the extent that the disclosures required by the SFRS(I) 7 relate to the items within the scope of SFRS(I) 9.

As a result, the requirements under FRS are applied in place of the requirements under SFRS(I) 7 and SFRS(I) 7 to comparative information on items within the scope of the SFRS(I) 9.

Classification and measurement of financial assets

(i) Equity investments reclassified from Available-for-sale financial assets to Financial assets, at FVOCI

The Group has elected to recognise changes in the fair value of all its equity investments previously classified as Available-for-sale financial assets, in other comprehensive income, because these investments are held as strategic investments or for liquidity fund. As a result, assets with a fair value of \$7,199,000 were reclassified from Available-for-sale financial assets to Financial assets, at FVOCI on 1 July 2018.

(ii) Debt instruments reclassified from Available-for-sale financial assets to Financial assets, at FVOCI

Investments in bonds were reclassified from Available-for-sale financial assets to Financial assets, at FVOCI. The contractual cash flows of these investments are solely payments of principal and interest. As a result, bonds with fair value of \$18,452,000 were reclassified from Available-for-sale financial assets to Financial assets, at FVOCI.

The table below shows the reconciliation of Statement of Financial Position at 30 June 2018 and 1 July 2018 upon initial application of SFRS(I) 9.

The Group	Available-for-sale financial assets \$'000	Financial assets, at FVOCI \$'000
<i>Current assets</i>		
Balance as at 30 June 2018 – Before adoption of SFRS(I) 9	22,003	–
Reclassify equity and debt investments from AFS to FVOCI	(22,003)	22,003
Balance as at 1 July 2018 – After adoption of SFRS(I) 9	–	22,003

The Group	Available-for-sale financial assets \$'000	Financial assets, at FVOCI \$'000
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Non-current assets

Balance as at 30 June 2018 – Before adoption of SFRS(I) 9	3,648	–
Reclassify equity investments from AFS to FVOCI	(3,648)	3,648
Balance as at 1 July 2018 – After adoption of SFRS(I) 9	–	3,648

The Company	Available-for-sale financial assets \$'000	Financial assets, at FVOCI \$'000
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Current assets

Balance as at 30 June 2018 – Before adoption of SFRS(I) 9	22,003	–
Reclassify equity and debt investments from AFS to FVOCI	(22,003)	22,003
Balance as at 1 July 2018 – After adoption of SFRS(I) 9	–	22,003

Impairment of financial assets

The Group and the Company has the following types of financial assets subject to the expected credit loss impairment under SFRS(I) 9:

- Trade receivables recognised under SFRS(I) 15;
- Debt instruments measured at FVOCI; and
- Loans to related parties and other receivables at amortised cost.

The impairment methodology under FRS and SFRS(I) for each of these classes of financial assets is different. The impact of the change in impairment methodology on the Group's retained profits is assessed to be immaterial. The impairment methodology for each of these classes of financial assets under SFRS(I) 9 is as disclosed in Note 2(i) and Note 40.

(3) Adoption of SFRS(I) 15

SFRS(I) 15 establishes a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers. Under SFRS(I) 15, an entity recognises revenue when (or as) a performance obligation is satisfied.

Prior to the adoption of SFRS(I) 15, initial listing fees for initial public offerings and additional listing fees were recognised upon the initial and subsequent listing of an applicant's equity securities. Under SFRS(I) 15, initial and additional listing fees are recognised over time when the services are provided. The impact of adoption on both current and prior year's profit or loss and cumulative impact on opening retained profits is assessed to be immaterial.

Notes to the Financial Statements

For the financial year ended 30 June 2019

2. Significant accounting policies (continued)

(b) Group accounting

(1) Subsidiaries

(i) Consolidation

Subsidiaries are entities over which the Group has control. The Group controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are consolidated from the date when control is transferred to the Group and cease to be consolidated on the date when that control ceases.

In preparing the consolidated financial statements, intercompany transactions, balances and unrealised gains and losses on transactions between group companies are eliminated. Unrealised losses are considered an impairment indicator of the asset transferred. Where necessary, adjustments are made to the financial statements of subsidiaries to ensure consistency of accounting policies with those of the Group.

Non-controlling interest is that part of the net results of operations and of net assets of a subsidiary attributable to interests which are not owned directly or indirectly by the equity holders of the Company. They are shown separately in the statement of comprehensive income, statement of changes in equity and statement of financial position of the Group. Total comprehensive income is attributed to the non-controlling interest based on their respective interests in a subsidiary, even if this results in the non-controlling interests having a deficit balance.

Please refer to Note 2(o) for the Company's accounting policy on investments in subsidiaries.

(ii) Acquisitions

The acquisition method of accounting is used to account for business combinations by the Group.

The consideration transferred for the acquisition of a subsidiary or business comprises the fair value of the assets transferred, the liabilities incurred and the equity interests issued by the Group. The consideration transferred also includes the fair value of any contingent consideration arrangement and the fair value of any pre-existing equity interest in the subsidiary.

Acquisition-related costs are expensed as incurred.

Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are, with limited exceptions, measured initially at their fair values at the acquisition date.

On an acquisition-by-acquisition basis, the Group recognises any non-controlling interest in the acquiree at the date of acquisition either at fair value or at the non-controlling interest's proportionate share of the acquiree's net identifiable assets.

The excess of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over the fair value of the net identifiable assets acquired is recorded as goodwill.

Please refer to Note 2(p) for the accounting policy on goodwill.

(iii) Disposals

When a change in the Group's ownership interest in a subsidiary results in a loss of control over the subsidiary, the assets and liabilities of the subsidiary including any goodwill are derecognised. Amounts previously recognised in other comprehensive income in respect of that entity are also reclassified to profit or loss or transferred directly to retained profits if required by a specific SFRS(I).

Any retained interest in the entity is remeasured at fair value. The difference between the carrying amount of the retained interest at the date when control is lost and its fair value is recognised in profit or loss.

(2) Associated companies and joint ventures

Associated companies are entities over which the Group has significant influence, but not control, generally accompanied by a shareholding giving rise to voting rights of 20% and above but not exceeding 50%. Where the voting rights are less than 20%, the presumption that the entity is not an associated company is overcome if the Group has significant influence including representation on the board of directors or participation in policy-making process of the investee.

Joint ventures are entities over which the Group has joint control as a result of contractual arrangements, and the rights to the net assets of the entities.

Investments in associated companies and joint ventures are accounted for in the consolidated financial statements using the equity method of accounting less impairment losses, if any.

(i) Acquisitions

Investments in associated companies and joint ventures are initially recognised at cost. The cost of an acquisition is measured at the fair value of the assets given, equity instruments issued or liabilities incurred or assumed at the date of exchange, plus costs directly attributable to the acquisition. Goodwill on associated companies and joint ventures represents the excess of the cost

of acquisition of the associated company or joint venture over the Group's share of fair value of the identifiable net assets of the associated company or joint venture and is included in the carrying amount of the investments.

(ii) *Equity method of accounting*

In applying the equity method of accounting, the Group's share of its associated companies' or joint ventures' post-acquisition profits or losses are recognised in profit or loss and its share of post-acquisition other comprehensive income is recognised in other comprehensive income. These post-acquisition movements and distribution received from associated companies or joint ventures are adjusted against the carrying amounts of the investments. Dividends received or recoverable from the associated companies or joint ventures are recognised as a reduction of the carrying amount of the investments. When the Group's share of losses in an associated company or joint venture equals or exceeds its interest in the associated company, the Group does not recognise further losses, unless it has obligations or has made payments on behalf of the associated company or joint venture.

Unrealised gains on transactions between the Group and its associated companies or joint ventures are eliminated to the extent of the Group's interest in the associated companies or joint ventures. Unrealised losses are also eliminated unless the transactions provide evidence of an impairment of the assets transferred. Where necessary, adjustments are made to bring the accounting policies in line with those of the Group.

(iii) *Disposals*

Investments in associated companies or joint ventures are derecognised when the Group loses significant influence or joint control. Any retained interest in the entity, if classified as a financial asset, is remeasured at its fair value. The difference between the carrying amount of the retained interest at the date when significant influence or joint control is lost and its fair value and any proceeds on partial disposal, is recognised in profit or loss.

Please refer to Note 2(o) for the Company's accounting policy on investments in associated companies and joint ventures.

(c) *Currency translation*

(1) *Functional and presentation currency*

Items included in the financial statements of each entity in the Group are measured using the currency of the primary economic environment in which the entity operates ("functional currency"). The financial statements are presented in Singapore Dollars ("SGD"), which is the functional currency of the Company.

(2) *Transactions and balances*

Foreign currency transactions are translated into the functional currency using the exchange rates at the dates of transactions. Foreign exchange gains and losses resulting from the settlement of such transactions are recognised in profit or loss.

Foreign currency monetary assets and liabilities are translated into the functional currency at the rates of exchange at the balance sheet date. Currency translation differences are recognised in profit or loss.

Non-monetary items measured at fair values in foreign currencies are translated using the exchange rates at the date when the fair values are determined.

The results and financial position of all the Group entities that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- (i) Assets and liabilities are translated at the closing exchange rates at the reporting date;
- (ii) Revenue and expenses are translated at average exchange rates; and
- (iii) All resulting currency translation differences are recognised in other comprehensive income and accumulated in the currency translation reserve. These currency translation differences are reclassified to profit or loss on disposal or partial disposal of the Group entities that give rise to such reserve.

(d) *Revenue recognition*

Revenue is measured based on the consideration specified in a contract with a customer. The Group recognises revenue as services are performed and as it satisfied its obligations to provide a product or service to a customer. Revenue is presented net of goods and services tax and after eliminating revenue within the Group on the following basis:

(1) *Equities and Fixed Income*

Listing

Initial and additional listing fees represent one performance obligation. Revenue is recognised over a period of time that the Group provides listing services.

Annual listing fee is recognised on a straight-line basis over the period which the fee relates. It represents the extent of the Group's completion of the performance obligation under the contract.

Corporate actions and other revenue

Revenue is recognised on a per transaction basis when service is provided.

Securities Clearing

Securities clearing revenue, net of rebates, generated from contracts cleared and settled is recognised when service is provided and on a per transaction basis.

Notes to the Financial Statements

For the financial year ended 30 June 2019

2. Significant accounting policies (continued)

(d) Revenue recognition (continued)

(1) Equities and Fixed Income (continued)

Access

Access revenue generated from contracts is recognised when service is rendered.

Collateral management, membership and other revenue

Collateral management revenue is recognised on a time proportion basis. Membership revenue is recognised on a straight-line basis over the period which the fee relates. It represents the extent of the Group's completion of the performance obligation under the contract. Other revenue is recognised when service is rendered.

Securities settlement, contract processing and depository management

Revenue is recognised on a per transaction basis when service is provided.

(2) Derivatives

Equities and Commodities

Equities and Commodities revenue, net of rebates, generated from contracts cleared and settled is recognised when service is provided and on a per transaction basis.

Collateral management, licence, membership and other revenue

Collateral management revenue is recognised on a time proportion basis. Licence revenue is recognised when service is rendered on a per transaction basis. Membership revenue is recognised on a straight-line basis over the period which the fee relates. It represents the extent of the Group's completion of the performance obligation under the contract. Other revenue is recognised when service is rendered.

(3) Market Data and Connectivity

Market data and Connectivity

Data subscription and connectivity revenue is recognised on a straight-line basis over the period which the fee relates. It represents the extent of the Group's completion of the performance obligation under the contract. Other market data services are recognised when service is rendered.

(4) Rental income

Revenue from rental is recognised on a straight-line basis over the period which the rental income relates.

(5) Interest income

Revenue is recognised on a time proportion basis using the effective interest method.

(6) Dividend income

Revenue is recognised when the right to receive payment is established.

(e) Income taxes

Current income tax liabilities (and assets) for current and prior periods are recognised at the amounts expected to be paid to (or recovered from) the tax authorities, using the tax rates and tax laws that have been enacted or substantively enacted by the balance sheet date.

Deferred income tax is provided in full, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements.

Deferred income tax assets and liabilities are measured at:

- (i) the tax rates that are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled, based on tax rates and tax laws that have been enacted or substantively enacted by the balance sheet date; and
- (ii) the tax consequence that would follow from the manner in which the Group expects, at the balance sheet date, to recover or settle the carrying amounts of its assets and liabilities.

Deferred tax assets are recognised to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

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 income taxes relate to the same tax jurisdiction.

(f) Leases

(1) When the Group is the lessee – Operating leases

Leases where all risks and rewards the Group incidental to ownership are retained by the lessors are classified as operating leases. Operating lease payments (net of any incentives received from lessors) are recognised in profit or loss on a straight-line basis over the lease period.

When an operating lease is terminated before the expiry of the lease period, any payment required to be made to the lessor by way of penalty is recognised as an expense in the financial year in which the lease is terminated.

(2) When the Group is the lessor – Operating leases

Leases where the Group retains substantially all risks and rewards incidental to ownership are classified as operating leases. Rental income from operating leases (net of any incentives given to the lessees) is recognised in profit or loss on a straight-line basis over the lease term.

Contingent rents are recognised as income in profit or loss when earned.

(g) Employee benefits

Employee benefits are recognised as employee compensation expense when they are due, unless they can be capitalised as an asset.

(1) Defined contribution plans

The Group makes legally required contributions to defined contribution plans. The Group's obligation is limited to the amount it contributes to the defined contribution plan. The Group's contributions are recognised as employee compensation expense when they are due.

(2) Employee leave entitlement

Employee entitlements to annual leave are recognised when they accrue to employees. A provision is made for the estimated liability for annual leave as a result of services rendered by employees up to the balance sheet date.

(3) Share-based compensation

The fair value of employee services received in exchange for equity-settled share-based remuneration plans granted to employees is recognised as share-based payment to employees in profit or loss with a corresponding increase in the share-based payment reserve over the vesting period. The amount is determined by reference to the fair value of the shares on grant date and the expected number of shares to be vested on vesting date.

At the end of each financial reporting period, the Company revises its estimates of the expected number of shares that the participants are expected to receive. Any changes to the expected number of shares to be vested will entail a corresponding adjustment to the share-based payment to employees and share-based payment reserve.

Upon vesting of a share-based compensation plan, the portion of share-based payment previously recognised in the share-based payment reserve is reversed against treasury shares. Differences between share-based payment and cost of treasury shares are taken to the share capital of the Company.

(h) Cash and cash equivalents

Cash and cash equivalents include cash on hand and deposits with banks which are subject to an insignificant risk of change in value.

(i) Financial assets

The accounting for financial assets before 1 July 2018 are as follows:

(1) Trade and other receivables

Trade and other receivables are recognised on the date they are originated and initially at fair value and subsequently measured at amortised cost using the effective interest method, less an allowance for impairment. An allowance for impairment of trade and other receivables is recognised when there is objective evidence that the Group will not be able to collect amounts due according to the original terms of the receivables. The amount of the allowance is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the original effective interest rate and is recognised in profit or loss.

The allowance for impairment loss is reduced through profit or loss in a subsequent period when the amount of impairment loss decreases and the related decrease can be objectively measured. The carrying amount of the asset previously impaired is increased to the extent that the new carrying amount does not exceed the amortised cost had no impairment been recognised in prior periods.

(2) Available-for-sale financial assets

Available-for-sale financial assets are presented as non-current assets unless the investment matures or management intends to dispose of the assets within 12 months after the balance sheet date.

Purchase and sale of available-for-sale financial assets are recognised on trade date – the date on which the Group commits to purchase or sell the asset. Available-for-sale 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 risks and rewards of ownership. On disposal of an available-for-sale financial asset, the difference between the carrying amount and the sales proceeds is recognised in profit or loss. Any amount previously recognised in other comprehensive income relating to that asset is reclassified to profit or loss.

Available-for-sale financial assets are initially recognised at fair value plus transaction costs and are subsequently carried at fair value. Interest and dividend income on available-for-sale financial assets are recognised separately in income. Changes in the fair values of available-for-sale debt securities denominated in foreign currencies are analysed into currency translation differences on the amortised cost of the securities and other changes; the currency translation differences are recognised in profit or loss and the other changes are recognised in other comprehensive income and accumulated in the fair value reserve.

Changes in the fair values of available-for-sale equity securities are recognised in other comprehensive income and accumulated in the fair value reserve, together with the related currency translation differences.

The Group assesses at each reporting date whether there is objective evidence that the available-for-sale financial assets are impaired and recognises an allowance for impairment when such evidence exists. A significant or prolonged decline in the fair value of the available-for-sale financial asset below its cost is considered an indicator that the available-for-sale financial asset is impaired.

If there is objective evidence of impairment, the cumulative loss that has been recognised in other comprehensive income is reclassified from equity to profit or loss. The amount of cumulative loss that is reclassified is measured as the difference between the acquisition cost (net of any principal repayment and amortisation) and current fair value, less any impairment loss on that available-for-sale financial asset previously recognised in profit or loss. The impairment losses recognised as an expense for an available-for-sale equity security are not reversed through profit or loss in a subsequent period.

Notes to the Financial Statements

For the financial year ended 30 June 2019

2. Significant accounting policies (continued)

(i) Financial assets (continued)

The accounting for financial assets from 1 July 2018 are as follows:

(1) Classification and measurement

The Group classifies its financial assets in the following measurement categories:

- Amortised cost;
- Fair value through other comprehensive income (FVOCI); and
- Fair value through profit or loss (FVPL).

The classification depends on the Group's business model for managing the financial assets as well as the contractual terms of the cash flows of the financial assets.

The Group reclassifies debt instruments when and only when its business model for managing those assets changes.

At initial recognition

At initial recognition, the Group measures a financial asset at its fair value plus, in the case of a financial asset not FVPL, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVPL are expensed in profit or loss.

At subsequent measurement

(i) Debt instruments

Debt instruments mainly comprise of cash and cash equivalents, trade and other receivables, listed and unlisted debt securities.

There are two subsequent measurement categories, depending on the Group's business model for managing the asset and the cash flow characteristics of the asset:

- Amortised cost: Debt instruments that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortised cost. A gain or loss on a debt instrument that is subsequently measured at amortised cost and is not part of a hedging relationship is recognised in profit or loss when the asset is derecognised or impaired. Interest income from these financial assets is included in interest income using the effective interest rate method.
- FVOCI: Debt instruments that are held for collection of contractual cash flows and for sale, and where the assets' cash flows represent solely payments of principal and interest, are classified as FVOCI. Movements in fair values are recognised in Other Comprehensive Income ("OCI") and accumulated in fair value reserve, except for the recognition of impairment gains

or losses, interest income and foreign exchange gains and losses, which are recognised in profit and loss. When the financial asset is derecognised, the cumulative gain or loss previously recognised in OCI is reclassified from equity to profit or loss and presented in "other gains and losses". Interest income from these financial assets is included in interest income using the effective interest rate method.

(ii) Equity investments

The Group subsequently measures all its equity investments at their fair values. The Group has elected to recognise changes in fair value of equity securities not held for trading in OCI as these are strategic investments or for liquidity funds and the Group considers this to be more relevant. Movements in fair values of investments classified as FVOCI are presented as "fair value gains/losses" in OCI. Dividends from equity investments are recognised in profit or loss as "dividend income".

(2) Impairment

The Group assesses on a forward looking basis the expected credit losses associated with its debt financial assets carried at amortised cost and FVOCI. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

For trade receivables, the Group applies the simplified approach permitted by the SFRS(I) 9, which requires expected lifetime losses to be recognised from initial recognition of the receivables.

(3) Recognition and derecognition

Regular way purchases and sales of financial assets are recognised on trade date – the date on which the Group commits to purchase or sell the asset.

Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group has transferred substantially all risks and rewards of ownership.

On disposal of a debt instrument, the difference between the carrying amount and the sale proceeds is recognised in profit or loss. Any amount previously recognised in OCI relating to that asset is reclassified to profit or loss.

On disposal of an equity investment, the difference between the carrying amount and sales proceed is recognised in OCI and transferred to retained profits along with the amount previously recognised in OCI relating to that asset.

(j) Property, plant and equipment

(1) Property, plant and equipment

Property, plant and equipment are initially recognised at cost and subsequently stated at cost less accumulated depreciation and accumulated impairment losses.

(2) Components of costs

The cost of property, plant and equipment includes expenditure that is directly attributable to the acquisition and bringing the asset to the condition necessary for it to be capable of operating in the manner intended by management. Cost also includes any fair value gains or losses on qualifying cash flow hedges of property, plant and equipment that are transferred from the hedging reserve. Dismantlement, removal or restoration costs are included as part of the cost of property, plant and equipment if the obligation for dismantlement, removal or restoration is required to be incurred for the purpose of acquiring and using the asset.

(3) Depreciation of property, plant and equipment

No depreciation is provided on freehold land and work-in-progress.

Depreciation is calculated on a straight-line basis to allocate the cost of property, plant and equipment over their expected useful lives as follows:

	Useful lives
Leasehold improvements	1 to 7 years or lease term, whichever is shorter
Building and plant	25 to 50 years
Furniture, fittings and office equipment	3 to 10 years
Computer hardware	1 to 7 years
Motor vehicles	5 years

Fully depreciated assets still in use are retained in the financial statements.

The residual values and useful lives of property, plant and equipment are reviewed, and adjusted as appropriate, at each financial year end. The effects of any revision are recognised in profit or loss when the changes arise.

(4) Subsequent expenditure

Subsequent expenditure relating to property, plant and equipment that has already been recognised is added to the carrying amount of the asset only when it is probable that future economic benefits, in excess of the originally assessed standard of performance of the existing asset, will flow to the Group and the cost can be reliably measured. All other repair and maintenance expenses are recognised in profit or loss when incurred.

(5) Disposal

On disposal or retirement of a property, plant and equipment, the difference between the net disposal proceeds and its carrying amount is recognised in profit or loss.

(k) Software

Costs recognised are directly associated with identifiable software controlled by the Group that generate economic benefits exceeding costs beyond one year. Cost also includes any fair value gains or losses on qualifying cash flow hedges of computer software that are transferred from the hedging reserve. Costs associated with maintaining computer software are expensed off when incurred.

Acquired computer software licences are capitalised on the basis of the cost incurred to acquire and other directly attributable costs of preparing the software for its intended use. Direct expenditures, including employee costs, which enhance or extend the performance of computer software programmes beyond their original specifications, and which can be reliably measured, are recognised as a capital improvement and added to the original cost of the software.

Computer software costs and acquired computer software licences are stated at cost less accumulated amortisation and accumulated impairment losses. These costs are amortised using the straight-line method over their estimated useful lives, a period not exceeding seven years. Where an indication of impairment exists, the carrying amount is assessed and written down immediately to its recoverable amount.

The period and method of amortisation of the software are reviewed at least at each financial year end. The effects of any revision of the amortisation period or method are included in profit or loss for the period in which the changes arise.

(l) Intangible assets

Intangible assets arising from business combinations are initially recognised at cost and are subsequently carried at cost less accumulated amortisation and accumulated impairment losses. These costs are amortised to profit or loss using the straight-line method over the estimated useful life of 30 years of the underlying asset.

The period and method of amortisation of intangible assets are reviewed at least at each period end. The effects of any revision of the amortisation period or method are included in profit or loss for the period in which the changes arise.

(m) Investment property

Investment property is held to either earn rental or for capital appreciation or both. Investment property acquired through business combinations are accounted as acquisition of assets (Note 2(b)(1)(ii)).

Investment property is initially recognised at cost and subsequently carried at cost less accumulated depreciation and accumulated impairment losses. Freehold land of the investment property is not depreciated. Building is depreciated on a straight-line basis to allocate the cost over the estimated useful life of 50 years. The residual value and useful life are reviewed, and adjusted as appropriate, at each financial year end. The effects of any revision are recognised in profit or loss when the changes arise.

Investment property is subject to renovations or improvements at regular intervals. The cost of major renovations and improvements is capitalised and the carrying amounts of the replaced components are recognised in profit or loss. All other repair and maintenance expenses are recognised in profit or loss when incurred.

On disposal of an investment property, the difference between the net disposal proceeds and the carrying amount is recognised in profit or loss.

Notes to the Financial Statements

For the financial year ended 30 June 2019

2. Significant accounting policies (continued)

(n) Goodwill on acquisitions

Goodwill on acquisitions of subsidiaries and businesses, represents the excess of (i) the sum of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over (ii) the fair value of the identifiable net assets acquired. Goodwill on subsidiaries is recognised separately as intangible assets and carried at cost less accumulated impairment losses.

Goodwill on acquisitions of associated companies and joint ventures represents the excess of the cost of the acquisition over the Group's share of the fair value of the identifiable net assets acquired. Goodwill on associated companies and joint ventures is included in the carrying amount of the investments.

(o) Investments in subsidiaries, associated companies and joint ventures

Investments in subsidiaries, associated companies and joint ventures are stated at cost less accumulated impairment losses in the statement of financial position of the Company. Where an indication of impairment exists, the carrying amount of the investment is assessed and written down to its recoverable amount. Impairment losses are recognised in the profit or loss in the year in which it is determined.

On disposal of an investment, the difference between the net proceeds and its carrying amount is recognised in profit or loss.

(p) Impairment of non-financial assets

(1) Goodwill

Goodwill recognised separately as an intangible asset is tested for impairment annually and whenever there is indication that the goodwill may be impaired. Goodwill included in the carrying amount of an investment in associated company or joint venture is tested for impairment as part of the investment, rather than separately.

For the purpose of impairment testing of goodwill, goodwill is allocated to each of the Group's cash-generating-units ("CGU") expected to benefit from synergies arising from the business combination. A CGU is the smallest identifiable group of assets that generate cash inflows that are largely independent of the cash inflows from other assets or group of assets.

An impairment loss is recognised when the carrying amount of a CGU, including the goodwill, exceeds the recoverable amount of the CGU. Recoverable amount of a CGU is the higher of the CGU's fair value less cost to sell and value-in-use.

The total impairment loss of a CGU is allocated first to reduce the carrying amount of goodwill allocated to the CGU and then to the other assets of the CGU pro-rata on the basis of the carrying amount of each asset in the CGU.

An impairment loss on goodwill is recognised as an expense and is not reversed in a subsequent period.

(2) Property, plant and equipment

Software

Intangible assets

Investment property

Investments in subsidiaries, associated companies and joint ventures

Property, plant and equipment, software, intangible assets, investment property and investments in subsidiaries, associated companies and joint ventures are reviewed for impairment whenever there is any objective evidence or indication that the carrying amount may not be fully recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount, which is the higher of an asset's net selling value and its value-in-use. The impairment loss is recognised in profit or loss.

The recoverable amount is determined on an individual asset basis unless the asset does not generate cash flows that are largely independent of those from other assets. If this is the case, the recoverable amount is determined for the CGU to which the asset belongs.

An impairment loss for an asset other than goodwill is reversed if, and only if, there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised. The carrying amount of this asset is increased to its revised recoverable amount, provided that this amount does not exceed the carrying amount that would have been determined (net of any accumulated amortisation or depreciation) had no impairment loss been recognised for the asset in prior years. A reversal of impairment loss for an asset other than goodwill is recognised in profit or loss.

(q) Trade and other payables

Trade and other payables represent liabilities for goods and services provided to the Group prior to the end of financial year which are unpaid. They are classified as current liabilities, if payment is due within one year or less. Otherwise, they are presented as non-current liabilities.

Trade and other payables are initially measured at fair value, and subsequently measured at amortised cost, using the effective interest method.

(r) Offsetting financial instruments

Financial assets and liabilities are offset and the net amount reported in the balance sheet when there is a legally enforceable right to offset and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously.

(s) Provisions

Provisions are recognised when the Group has a 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 of the obligation can be made. Changes in the estimated amount are recognised in profit or loss when the changes arise.

(t) Derivative financial instruments and hedging activities

A derivative financial instrument is initially recognised at its fair value on the date the contract is entered into and is subsequently carried at its fair value. The method of recognising the resulting gain or loss depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged.

The Group documents at the inception of the transaction the relationship between the hedging instruments and hedged items, as well as its risk management objective and strategies for undertaking various hedge transactions. The Group also documents its assessment, both at hedge inception and on an ongoing basis, on whether the derivatives designated as hedging instruments are highly effective in offsetting changes in fair value or cash flows of the hedged items.

Derivatives that are designated as hedging instrument are designated by the Group as cash flow hedge. Fair value changes on derivatives that are not designated or do not qualify for hedge accounting are recognised in profit or loss when the changes arise.

Currency forwards – cash flow hedge

The Group has entered into currency forwards that qualify as cash flow hedges against highly probable forecasted transactions in foreign currencies. The fair value changes on the effective portion of the currency forwards designated as cash flow hedges are recognised in the hedging reserve and transferred to either the cost of a hedged non-monetary asset upon acquisition or profit or loss when the hedged forecast transactions are recognised.

The fair value of currency forward contracts purchased or sold is based on the quoted bid price or offer price respectively at the balance sheet date. The notional principal amounts of the currency forward contracts are recorded as off-balance sheet items.

The fair value changes on the ineffective portion of currency forwards are recognised immediately in profit or loss. When a forecasted transaction is no longer expected to occur, the gains and losses that were previously recognised in the hedging reserve are transferred to profit or loss immediately.

(u) Share capital and treasury shares

Ordinary shares are classified as equity.

When any entity within the Group purchases the Company's ordinary shares ("treasury shares"), the consideration paid, including any directly attributable incremental costs, net of income taxes, is deducted from equity attributable to the Company's equity holders and presented as treasury shares within equity, until they are cancelled, sold or reissued.

When treasury shares are subsequently sold or reissued pursuant to the share-based remuneration plan, the cost of the treasury shares is reversed from the treasury share account and the realised gain or loss on sale or reissue, net of any directly attributable incremental transaction costs and related income tax, is taken to the share capital account of the Company.

(v) Dividends

Interim dividends are deducted from retained profits during the financial year in which they are declared payable.

Final dividends are transferred from retained profits to a proposed dividend reserve when they are proposed by the directors. The amount will be transferred from the proposed dividend reserve to dividend payable when the dividends are approved by the shareholders.

(w) Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the executive committee who are responsible for allocating resources and assessing performance of the operating segments.

3. Critical accounting estimates and judgments

Estimates and judgments are regularly evaluated based on historical experience, current circumstances and expectations of future events. The following provides a description of the areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the financial statements:

(a) Intangible assets

Intangible assets are valued on acquisition using appropriate methodology and amortised over the estimated useful lives. The valuation is calculated using discounted cash flow model and management's best estimate of future cash flows, long term growth rate and discount rate. Useful lives are based on management's best estimates of periods over which value from the intangible assets will be realised (Note 2(l) and Note 20). Management reassess the estimated useful lives at each period end, taking into account the period over which the intangible assets is expected to generate future economic benefit. Intangible assets are tested for impairment in accordance with Note 2(p)(2).

(b) Goodwill

Goodwill is tested for impairment in accordance with Note 2(p)(1). The recoverable amount of goodwill is based on value-in-use calculation using discounted cash flow model and management's best estimate of future cash flows, long term growth rate and discount rate (Note 21).

Notes to the Financial Statements

For the financial year ended 30 June 2019

4. Operating revenue

Operating revenue comprised the following:

	The Group		The Company	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Equities and Fixed Income				
<i>Issuer Services</i>				
Listing	45,780	51,626	—	—
Corporate actions and other	33,951	34,564	—	—
	79,731	86,190	—	—
<i>Securities Trading and Clearing</i>				
Securities clearing	138,850	170,879	—	—
Access	34,266	40,657	—	—
Collateral management, membership and other	8,995	9,589	—	—
	182,111	221,125	—	—
<i>Post Trade Services</i>				
Securities settlement	76,555	87,625	—	—
Contract processing	—	3,366	—	2,615
Depository management	9,132	8,294	—	—
	85,687	99,285	—	2,615
	347,529	406,600	—	2,615
<i>Derivatives</i>				
Equity and Commodities	292,096	237,060	—	—
Collateral management, licence, membership and other	167,653	102,752	—	—
	459,749	339,812	—	—
<i>Market Data and Connectivity</i>				
Market data	42,997	42,356	21	81
Connectivity	59,533	55,910	25,626	24,163
	102,530	98,266	25,647	24,244

5. Staff

	The Group		The Company	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Salaries				
Employer's contribution to defined contribution plans on salaries	119,758	108,402	70,115	63,867
	9,706	9,059	5,741	5,514
	129,464	117,461	75,856	69,381
Variable bonus	48,737	44,383	20,080	27,684
Employer's contribution to defined contribution plans on variable bonus	3,057	2,973	1,670	1,747
	51,794	47,356	21,750	29,431
Variable share-based payment	10,159	10,926	10,159	10,926
Variable share-based payment recharge to subsidiary	—	—	(1,216)	(903)
	191,417	175,743	106,549	108,835

The remuneration of key management under the employment of the Group and the Company are included in staff costs. Refer to Note 39 on key management's remuneration.

6. Technology

	The Group		The Company	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
System maintenance and rental	75,728	72,737	47,167	41,906
Depreciation and amortisation	51,283	50,186	15,833	17,908
Communication charges	3,663	3,999	2,454	2,337
	130,674	126,922	65,454	62,151

7. Premises

	The Group		The Company	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Rental and maintenance of premises	19,892	19,910	12,888	11,986
Depreciation of furniture and fittings, building and leasehold improvements	8,939	8,394	8,095	7,320
	28,831	28,304	20,983	19,306

8. Other operating expenses

	The Group		The Company	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Marketing	8,444	5,168	3,901	2,324
Travelling	4,534	3,592	1,845	1,487
Allowance/(reversal) for impairment of trade receivables (net)	797	1,838	6	(16)
Net write-off of property, plant and equipment and software	407	826	407	817
Net loss/(gain) on disposal of property, plant and equipment	203	(103)	193	(103)
Directors' fee	3,446	2,744	2,530	1,771
Regulatory fee	6,022	5,065	400	400
Amortisation of intangible assets	2,210	2,244	—	—
Services from price vendors	3,422	2,781	637	537
Miscellaneous	6,523	5,535	8,145	6,488
	36,008	29,690	18,064	13,705

9. Operating profit

	The Group		The Company	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
<u>Operating profit is arrived after:</u>				
<i>Charging:</i>				
Audit services by auditor of the Company	1,132	1,005	422	345
Other services by auditor of the Company	109	452	89	438
Rental of technology equipment – operating lease	1,299	1,388	1,245	704
Rental of premises – operating lease	23,873	21,622	16,815	16,338
Provision for unutilised leave (Note 27(b))	544	10	247	(685)
Depreciation and amortisation	62,512	60,838	24,008	25,241
<i>And crediting:</i>				
Collateral management revenue on collateral balances held in trust (net)	108,273	53,330	—	—

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For the financial year ended 30 June 2019

10. Other gains – net

	The Group		The Company	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Other revenue including interest income:				
– Interest income from fixed deposits and current accounts with banks	12,109	9,925	5,186	5,160
– Interest income from financial assets, at FVOCI/available-for-sale financial assets	639	96	639	96
– Dividend income from financial assets, at FVOCI/available-for-sale financial assets	99	13	99	4,954
– Others	680	829	2,708	2,636
	13,527	10,863	8,632	12,846
Net foreign exchange (loss)/gain	(59)	443	(767)	(412)
	13,468	11,306	7,865	12,434

11. Earnings per share

	The Group	
	2019 \$'000	2018 \$'000
Net profit attributable to the equity holders of the Company	391,098	363,200
Weighted average number of ordinary shares in issue for basic earnings per share ('000)	1,070,155	1,070,534
Adjustments for:		
– Shares granted under SGX performance share plans and deferred long-term incentives schemes ('000)	3,617	3,041
Weighted average number of ordinary shares for diluted earnings per share ('000)	1,073,772	1,073,575
Earnings per share (in cents per share)		
– Basic	36.5	33.9
– Diluted	36.4	33.8

Basic earnings per share is calculated by dividing the net profit attributable to the equity holders of the Company by the weighted average number of ordinary shares in issue during the year.

For the purpose of calculating diluted earnings per share, the weighted average number of ordinary shares in issue is adjusted for the effects of all dilutive potential ordinary shares. Shares granted under the SGX performance share plans and the deferred long-term incentives schemes have potential dilutive effect on ordinary shares. The adjustment made represents the number of shares expected to vest under SGX performance share plans and the deferred long-term incentives schemes.

12. Cash and cash equivalents

	The Group			The Company		
	30 June		1 July	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000	2019 \$'000	2018 \$'000	2017 \$'000
Cash at bank and on hand	56,686	68,595	47,047	19,520	23,103	9,410
Fixed deposits with banks	609,984	762,992	749,345	237,902	389,909	384,344
	666,670	831,587	796,392	257,422	413,012	393,754

12. Cash and cash equivalents (continued)

For the purpose of presenting the statement of cash flows of the Group, the consolidated cash and cash equivalents comprise the following:

	The Group		
	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000
Cash and cash equivalents per statement of cash flows	445,512	549,597	520,323
Add: Cash committed for			
- Singapore Exchange Derivatives Clearing Limited Clearing Fund (Note 32) ("SGX-DC")	150,021	200,021	200,021
- Securities Clearing Fund (Note 31)	60,000	60,000	60,000
- National Electricity Market of Singapore ("NEMS") (Note (a))	11,137	21,969	16,048
Cash and cash equivalents (as above)	666,670	831,587	796,392

(a) Cash committed for NEMS

Cash committed for NEMS represents Energy Market Company Pte Ltd ("EMC") commitment to the operation of the electricity market of Singapore. The manners in which the cash can be used are defined by the Singapore Electricity Market Rules issued by the Energy Market Authority of Singapore. The committed cash is not available to EMC for its operations.

13. Trade and other receivables

	The Group			The Company		
	30 June		1 July	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000	2019 \$'000	2018 \$'000	2017 \$'000
Current						
Trade receivables (net) (Note (a))	784,243	772,122	770,837	5,397	6,131	5,119
Other receivables (Note (b))	101,208	54,664	43,864	14,182	13,182	15,878
	885,451	826,786	814,701	19,579	19,313	20,997
Non-current						
Other receivables						
- Amount due from a subsidiary (non-trade) (Note (c))	-	-	-	4,545	6,104	6,215
	-	-	-	4,545	6,104	6,215
(a) Trade receivables (net) comprise:						
Receivables from clearing members and settlement banks – Daily settlement of accounts for due contracts and rights (Note 25(a))	564,621	552,217	575,526	-	-	-
Receivables under NEMS (Note 14)	138,761	154,653	130,270	-	-	-
Other trade receivables	81,684	69,802	67,794	5,406	6,134	5,137
Less: Allowance for impairment of trade receivables (Note 40)	(823)	(4,550)	(2,753)	(9)	(3)	(18)
	784,243	772,122	770,837	5,397	6,131	5,119

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For the financial year ended 30 June 2019

13. Trade and other receivables (continued)

The receivables from clearing members and settlement banks represent the net settlement obligations to The Central Depository (Pte) Limited ("CDP"). The corresponding net settlement obligations from CDP to the clearing members and settlement banks are disclosed in Note 25(a).

	The Group			The Company		
	30 June		1 July	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000	2019 \$'000	2018 \$'000	2017 \$'000
(b) Other receivables comprise:						
Prepayments	20,420	23,206	22,011	12,487	10,786	12,608
Interest receivable	78,001	28,268	18,975	1,265	1,878	2,800
Deposits	764	721	650	287	263	297
Staff advances	29	41	39	—	3	6
Others (non-trade)	1,994	2,428	2,189	143	252	167
	101,208	54,664	43,864	14,182	13,182	15,878

- (c) Amount due from a subsidiary relates to an unsecured loan with interest fixed at 3.5% per annum and principal repayable in full by November 2021.

14. Cash, receivables and payables under NEMS

EMC has cash, receivables and payables in respect of sale of electricity to market participants and purchase of electricity and ancillary services from market participants in the NEMS as follows:

	The Group		
	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000
Cash committed for NEMS (Note 12)			
Receivables under NEMS (Note 13(a))	11,137	21,969	16,048
Total settlement cash and receivables	138,761	154,653	130,270
	149,898	176,622	146,318
Payables under NEMS (Note 25(a))			
Total settlement payables	149,898	176,622	146,318
	149,898	176,622	146,318

15. Derivative financial instruments

	The Group			The Company		
	Fair value			Fair value		
	Currency forwards notional amount \$'000	Asset \$'000	Liability \$'000	Currency forwards notional amount \$'000	Asset \$'000	Liability \$'000
30 June 2019						
Cash-flow hedges						
– Currency forwards	122,587	256	(387)	9,406	198	–
Call option		5,851	–		–	–
Sale of call option	–	–	(906)		–	–
	6,107	–	(1,293)		198	–
Current	256	(1,293)			198	–
Non-current	5,851	–			–	–
	6,107	–	(1,293)		198	–
30 June 2018						
Cash-flow hedges						
– Currency forwards	86,674	40	(1,967)	9,054	–	(39)
	40	–	(1,967)		–	(39)
Current	40	(1,967)			–	(39)
1 July 2017						
Cash-flow hedges						
– Currency forwards	82,500	1,450	(79)		–	–
	1,450	–	(79)		–	–
Current	1,450	(79)			–	–

16. Available-for-sale financial assets

	The Group and The Company					
	30 June		1 July		1 July	
	2019 \$'000	2018 \$'000	2018 \$'000	2017 \$'000	2017 \$'000	2017 \$'000
Current						
Equity securities – Quoted	–	–	3,551	–	–	–
Bonds – Unquoted	–	–	18,452	–	–	–
	–	–	22,003	–	–	–
The Group						
	30 June		1 July		30 June	
	2019 \$'000	2018 \$'000	2017 \$'000	2017 \$'000	2018 \$'000	2017 \$'000
Non-current						
Equity securities – Unquoted	–	3,648	–	–	–	–

Available-for-sale financial assets are reclassified to Financial assets, at FVOCI on 1 July 2018 on adoption of SFRS(I) 9.

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For the financial year ended 30 June 2019

17. Financial assets at FVOCI

	The Group		The Company	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Current				
Equity securities – Quoted	4,923	–	4,923	–
Bonds – Unquoted	19,857	–	19,857	–
	24,780	–	24,780	–
Non-current				
Equity securities – Unquoted				
– Trumid Holdings, LLC	51,033	–	–	–
– Smartkarma Holdings Pte Limited	4,102	–	–	–
– Copa Fin Limited	3,648	–	–	–
	58,783	–	–	–

18. Investment property, and Property, plant and equipment

18. Investment property, and Property, plant and equipment (continued)

	Owner occupied property			Furniture, fittings and office equipment \$'000	Computer hardware \$'000	Motor vehicles \$'000	Work-in- progress \$'000	Total \$'000
	Investment property \$'000	Freehold land \$'000	Building and plant \$'000	Leasehold improvements \$'000				
The Group								
2018								
Cost								
At 1 July 2017	26,362	5,880	6,015	35,592	7,582	60,904	384	14,025
Reclassification	–	–	–	6,223	64	2,375	–	(8,662)
Additions	150	–	364	619	58	4,891	401	4,131
Disposals	–	–	–	(49)	–	(1,114)	(384)	–
Currency translation	81	18	18	–	–	–	–	36
At 30 June 2018	<u>26,593</u>	<u>5,898</u>	<u>6,397</u>	<u>42,385</u>	<u>7,704</u>	<u>67,056</u>	<u>401</u>	<u>9,494</u>
Accumulated depreciation								
At 1 July 2017	169	–	337	17,874	3,754	27,612	384	–
Depreciation charge ^(a)	192	–	658	7,087	1,358	9,864	13	–
Disposals	–	–	–	(49)	–	(993)	(384)	–
Currency translation	(2)	–	(4)	–	–	–	–	(4)
At 30 June 2018	<u>359</u>	<u>–</u>	<u>991</u>	<u>24,912</u>	<u>5,112</u>	<u>36,483</u>	<u>13</u>	<u>–</u>
Net book value								
At 1 July 2017	<u>26,193</u>	<u>5,880</u>	<u>5,678</u>	<u>17,718</u>	<u>3,828</u>	<u>33,292</u>	<u>–</u>	<u>14,025</u>
Net book value								
At 30 June 2018	<u>26,234</u>	<u>5,898</u>	<u>5,406</u>	<u>17,473</u>	<u>2,592</u>	<u>30,573</u>	<u>388</u>	<u>9,494</u>
Market value								
At 30 June 2018	<u>26,442</u>							

The investment property held by the Group is leased to non-related parties under operating leases (Note 38(b)).

The following amounts are recognised in the statement of comprehensive income of the Group:

	The Group	
	2019 \$'000	2018 \$'000
Rental income	<u>2,292</u>	<u>2,461</u>
Direct operating expenses arising from the investment property	<u>(992)</u>	<u>(704)</u>

Details of the Group's investment property are as follows:

Location	Description	Tenure
The Baltic Exchange, 38 St Mary Axe, London EC3, United Kingdom	Office building	Freehold

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For the financial year ended 30 June 2019

18. Investment property, and Property, plant and equipment (continued)

The fair value of the investment property was independently appraised by an external valuer and is determined using the income method. The property is classified under Level 3 of the fair value hierarchy and the significant unobservable input used for valuation is market yield. As at 30 June 2019, there were no transfers in and out of Level 3 of the fair value hierarchy in relation to the investment property.

	Leasehold improvements \$'000	Furniture, fittings and office equipment \$'000	Computer hardware \$'000	Motor vehicles \$'000	Work-in- progress \$'000	Total \$'000
The Company						
2019						
Cost						
At 1 July 2018	41,979	7,343	40,940	401	2,681	93,344
Reclassification	–	231	2,646	–	(2,877)	–
Additions	29	534	5	–	7,241	7,809
Disposals	(1,004)	(11)	(1,739)	–	–	(2,754)
At 30 June 2019	41,004	8,097	41,852	401	7,045	98,399
Accumulated depreciation						
At 1 July 2018	24,593	4,879	20,918	13	–	50,403
Depreciation charge ^(a)	7,525	1,374	6,260	80	–	15,239
Disposals	(1,004)	(11)	(1,546)	–	–	(2,561)
At 30 June 2019	31,114	6,242	25,632	93	–	63,081
Net book value						
At 30 June 2019	9,890	1,855	16,220	308	7,045	35,318
2018						
Cost						
At 1 July 2017	35,186	7,221	37,457	384	10,888	91,136
Reclassification	6,223	64	2,298	–	(8,585)	–
Additions	619	58	2,994	401	362	4,434
Intercompany transfer	–	–	(877)	–	16	(861)
Disposals	(49)	–	(932)	(384)	–	(1,365)
At 30 June 2018	41,979	7,343	40,940	401	2,681	93,344
Accumulated depreciation						
At 1 July 2017	17,681	3,611	16,498	384	–	38,174
Depreciation charge ^(a)	6,961	1,268	6,059	13	–	14,301
Intercompany transfer	–	–	(820)	–	–	(820)
Disposals	(49)	–	(819)	(384)	–	(1,252)
At 30 June 2018	24,593	4,879	20,918	13	–	50,403
Net book value						
At 1 July 2017	17,505	3,610	20,959	–	10,888	52,962
Net book value						
At 30 June 2018	17,386	2,464	20,022	388	2,681	42,941

^(a) Depreciation of leasehold improvements in SGX's data centres amounting to \$804,000 (2018: \$825,000) is classified as depreciation and amortisation expense under Technology cost for both Group and Company.

19. Software

	Software \$'000	Work- in-progress \$'000	Total \$'000
The Group			
2019			
Cost			
At 1 July 2018	322,990	75,853	398,843
Reclassification	102,326	(102,152)	174
Additions	1,037	47,800	48,837
Write-off	(51,574)	—	(51,574)
Currency translation	(20)	—	(20)
At 30 June 2019	374,759	21,501	396,260
Accumulated amortisation			
At 1 July 2018	225,044	—	225,044
Amortisation charge	40,259	—	40,259
Write-off	(51,167)	—	(51,167)
Currency translation	34	—	34
At 30 June 2019	214,170	—	214,170
Net book value			
At 30 June 2019	160,589	21,501	182,090
2018			
Cost			
At 1 July 2017	307,823	44,332	352,155
Reclassification	17,436	(17,436)	—
Additions	5,159	49,288	54,447
Write-off	(7,429)	(331)	(7,760)
Currency translation	1	—	1
At 30 June 2018	322,990	75,853	398,843
Accumulated amortisation			
At 1 July 2017	192,678	—	192,678
Amortisation charge	39,422	—	39,422
Write-off	(7,055)	—	(7,055)
Currency translation	(1)	—	(1)
At 30 June 2018	225,044	—	225,044
Net book value			
At 1 July 2017	115,145	44,332	159,477
Net book value			
At 30 June 2018	97,946	75,853	173,799

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For the financial year ended 30 June 2019

19. Software (continued)

	Software \$'000	Work- in-progress \$'000	Total \$'000
The Company			
2019			
Cost			
At 1 July 2018	79,810	10,043	89,853
Reclassification	12,774	(12,774)	—
Additions	93	9,904	9,997
Write-off	(29,234)	—	(29,234)
At 30 June 2019	63,443	7,173	70,616
Accumulated amortisation			
At 1 July 2018	54,135	—	54,135
Amortisation charge	8,769	—	8,769
Write-off	(28,827)	—	(28,827)
At 30 June 2019	34,077	—	34,077
Net book value			
At 30 June 2019	29,366	7,173	36,539
 2018			
Cost			
At 1 July 2017	76,558	14,231	90,789
Reclassification	11,297	(11,297)	—
Additions	3,416	7,699	11,115
Intercompany transfer	(7,214)	(259)	(7,473)
Write-off	(4,247)	(331)	(4,578)
At 30 June 2018	79,810	10,043	89,853
Accumulated amortisation			
At 1 July 2017	53,307	—	53,307
Amortisation charge	10,940	—	10,940
Intercompany transfer	(6,238)	—	(6,238)
Write-off	(3,874)	—	(3,874)
At 30 June 2018	54,135	—	54,135
Net book value			
At 1 July 2017	23,251	14,231	37,482
Net book value			
At 30 June 2018	25,675	10,043	35,718

20. Intangible assets

	Right to operate Singapore electricity spot market \$'000	Trade name \$'000	Total \$'000
The Group			
2019			
Cost			
At 1 July 2018	27,140	39,895	67,035
Currency translation	—	(1,784)	(1,784)
At 30 June 2019	27,140	38,111	65,251
Accumulated amortisation			
At 1 July 2018	3,392	2,215	5,607
Amortisation charge (Note 8)	904	1,306	2,210
Currency translation	—	(132)	(132)
At 30 June 2019	4,296	3,389	7,685
Net book value			
At 30 June 2019	22,844	34,722	57,566
2018			
Cost			
At 1 July 2017	27,140	39,775	66,915
Currency translation	—	120	120
At 30 June 2018	27,140	39,895	67,035
Accumulated amortisation			
At 1 July 2017	2,488	883	3,371
Amortisation charge (Note 8)	904	1,340	2,244
Currency translation	—	(8)	(8)
At 30 June 2018	3,392	2,215	5,607
Net book value			
At 1 July 2017	24,652	38,892	63,544
Net book value			
At 30 June 2018	23,748	37,680	61,428

The intangible assets are the right to operate the Singapore electricity spot market, arising from the acquisition of EMC and The Baltic Exchange Limited ("BEL") trade name arising from the acquisition of BEL.

No impairment loss has been recognised as there is no objective evidence or indication that the carrying amounts may not be fully recoverable as at 30 June 2019 (2018: Nil).

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21. Goodwill

	The Group		
	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000
Beginning of financial year	88,628	88,401	9,614
Acquisition of subsidiary	—	—	76,224
Currency translation	(3,329)	227	2,563
Balance at end of financial year	85,299	88,628	88,401

The goodwill relates to the acquisition of EMC, a subsidiary operating the Singapore electricity spot market and acquisition of BEL, a subsidiary providing freight market indices and information as well as membership services.

For the purpose of impairment testing, goodwill is allocated to each of the Group's cash generating unit ("CGU") expected to benefit from synergies of the business combination. Goodwill arising from the acquisition of EMC is allocated to EMC CGU and goodwill arising from the acquisition of BEL is allocated to Derivatives CGU.

The carrying amounts of goodwill allocated to the following CGUs as at 30 June were as follows:

	The Group		
	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000
EMC	9,614	9,614	9,614
Derivatives	75,685	79,014	78,787
	85,299	88,628	88,401

The recoverable amount of the goodwill was determined based on value-in-use calculation using the discounted cash flow model. Key inputs of the computation are as follows:

CGU – EMC	Key Inputs	Basis
Free cash flows	Management's forecasts of earnings and capital expenditure over a ten-year period.	Past performance and market developments
Long term growth rate	2% – 3% (2018: 2% – 3%)	Long term inflation and growth rate of Singapore
Discount rate	10% (2018: 10%)	Cost of capital to operate the Singapore electricity spot market

CGU – Derivatives	Key Inputs	Basis
Free cash flows	Management's forecasts of earnings and capital expenditure over a ten-year period.	Past performance, expectations of growth in derivatives contract volumes and market developments
Long term growth rate	3% (2018: 3%)	Long term growth rate of developed economies
Discount rate	10% (2018: 10%)	Cost of capital to operate the Singapore derivatives market

Based on the value-in-use calculations, there is no impairment on goodwill (2018: Nil). While the estimated recoverable amount of the goodwill is sensitive to any change in key inputs to the value-in-use calculations, the change in the estimated recoverable amount from any reasonably possible change on the key input does not materially cause the recoverable amount to be lower than its carrying amount.

22. Investments in subsidiaries

	The Company		
	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000
Equity investments at cost			
Balance at beginning of financial year	697,851	682,701	573,501
Capital injection	128,890	15,150	164,000
Capital reduction	—	—	(54,800)
	826,741	697,851	682,701
Long-term receivables			
Amount due from subsidiary	40,989	40,989	40,989
Balance at end of financial year	867,730	738,840	723,690

The amount due from subsidiary is interest-free and has no fixed terms of repayment.

Details of the subsidiaries are as follows:

Name of subsidiary	Note	Principal activities	Country of business and incorporation	Equity held by					
				The Company			Subsidiaries		
				2019 %	2018 %	2017 %	2019 %	2018 %	2017 %
Singapore Exchange Securities Trading Limited	(a)	Operating a securities exchange	Singapore	100	100	100	—	—	—
Singapore Exchange Derivatives Trading Limited	(a)	Operating a derivatives exchange	Singapore	100	100	100	—	—	—
The Central Depository (Pte) Limited	(a)	Providing clearing, counterparty guarantee, depository and related services for securities transactions	Singapore	100	100	100	—	—	—
Singapore Exchange Derivatives Clearing Limited	(a)	Providing clearing, counterparty guarantee and related services for derivatives transactions	Singapore	100	100	100	—	—	—
SGX Bond Trading Pte. Ltd.	(a)	Providing bond trading services	Singapore	100	100	100	—	—	—
Singapore Exchange Regulation Pte. Ltd.	(a)	Providing front-line regulatory functions	Singapore	100	100	100	—	—	—
Singapore Exchange IT Solutions Pte Limited	(a)	Providing computer services and software maintenance	Singapore	100	100	100	—	—	—
Asian Gateway Investments Pte Ltd	(a)	Investment holding	Singapore	100	100	100	—	—	—
Singapore Commodity Exchange Limited	(a)	Dormant	Singapore	100	100	100	—	—	—
SGX International Pte. Ltd.	(a)	Dormant	Singapore	100	100	100	—	—	—
Securities Clearing and Computer Services (Pte) Limited	(a)	Dormant	Singapore	100	100	100	—	—	—
Asian Gateway Investments (China) Pte. Ltd.	(a)	Investment holding	Singapore	—	—	—	100	100	100
SGX Baltic Investments Pte Ltd	(a)	Investment holding	Singapore	—	—	—	100	100	100
The Baltic Exchange Limited	(b)	Investment holding, membership services and provision of management services to related corporations	United Kingdom	—	—	—	100	100	100

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22. Investments in subsidiaries (continued)

Name of subsidiary	Note	Principal activities	Country of business and incorporation	Equity held by					
				The Company			Subsidiaries		
				2019 %	2018 %	2017 %	2019 %	2018 %	2017 %
Baltic Exchange Derivatives Trading Limited	(b)	Dormant	United Kingdom	—	—	—	100	100	100
Baltic Exchange Information Services Limited	(b)	Providing and distributing bulk freight market indices and information	United Kingdom	—	—	—	100	100	100
The Baltic Exchange (Asia) Pte. Limited	(a)	Distributing bulk freight market indices and information in Asia and membership services	Singapore	—	—	—	100	100	100
Energy Market Company Pte Ltd	(a)	Operating an electricity market	Singapore	—	—	—	100	100	100
Asia Converge Pte Ltd	(a)	Dormant	Singapore	—	—	—	100	100	100
Asiaclear Pte Ltd	(a)	Dormant	Singapore	—	—	—	100	100	100
CDP Nominees Pte Ltd	(a)	Dormant	Singapore	—	—	—	100	100	100
Globalclear Pte Ltd	(a)	Dormant	Singapore	—	—	—	100	100	100
Joint Asian Derivatives Pte. Ltd.	(a)	Dormant	Singapore	—	—	—	100	100	100
SGX America Limited	(c)	Providing consultancy services	United States of America	—	—	—	100	100	100
Shanghai Yaxu Consultancy Company Limited	(d)(e)	Providing consultancy services	People's Republic of China	—	—	—	100	100	100

(a) Audited by PricewaterhouseCoopers LLP, Singapore.

(b) Audited by PricewaterhouseCoopers LLP, United Kingdom.

(c) Not required to be audited in the United States of America.

(d) Audited by PricewaterhouseCoopers Zhong Tian LLP, People's Republic of China.

(e) The subsidiary's financial year-end is 31 December.

23. Investments in associated companies

		The Group		The Company					
		30 June		1 July		30 June		1 July	
		2019 \$'000	2018 \$'000	2017 \$'000	2019 \$'000	2018 \$'000	2017 \$'000	2019 \$'000	2018 \$'000
Investments in associated companies		78,967		8,628	10,307	4,389		4,389	4,389

23. Investments in associated companies (continued)

Details of the associated companies held by the Group and the Company are as follows:

Name of company	Principal activity	Country of business and incorporation	Equity holding		
			30 June		1 July
			2019 %	2018 %	2017 %
Held by the Group through a subsidiary					
Capbridge Pte. Ltd.	Shares, stocks and bonds broking	Singapore	10.1 ^(a)	10.0 ^(a)	—
Capbridge Platform Pte. Ltd.	Operating private market platform	Singapore	12.5 ^(a)	10.0 ^(a)	—
Commodities Intelligence Centre Pte. Ltd.	Operating e-commerce platform	Singapore	10.0 ^(a)	10.0 ^(a)	—
ICHX Tech Pte. Ltd.	Operating capital markets platform	Singapore	4.6 ^(a)	—	—
Freightos Limited	Operating online freight marketplace	Hong Kong	14.4 ^(a)	—	—
BidFX Systems Limited	Operating global FX trading platform	United Kingdom	20.0	—	—
Held by the Company					
Philippines Dealing System Holdings Corp	Investment holding	Philippines	20.0	20.0	20.0

^(a) Where the voting rights are less than 20%, the presumption that the entity is not an associated company is overcome if the Group has significant influence including representation on the board of directors or participation in policy-making process of the investee.

There was no associated company that was individually material to the Group (2018: Nil).

The following table summarises, in aggregate, the Group's share of profit and other comprehensive income of the associated companies accounted for using the equity method:

	The Group		
	2019 \$'000	2018 \$'000	
Profit from continuing operations	(1,500)	1,268	
Total comprehensive income	(1,500)	1,268	

There are no contingent liabilities relating to the Group's interest in the associated company (2018: Nil).

24. Investment in joint venture

	The Group		
	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000
Investment in joint venture	100	—	—

Details of the joint venture held by the Group through a subsidiary is as follows:

Name of company	Principal activity	Country of business and incorporation	Equity holding		
			30 June		1 July
			2019 %	2018 %	2017 %
SGX MySteel Index Company Private Limited	Indexation and benchmarking of commodities	Singapore	50	—	—

On 29 January 2019, Asian Gateway Investments Pte Ltd, a wholly owned subsidiary of the Company, entered into a joint venture agreement with Shanghai Ganglian E-Commerce Holdings to establish the joint venture, SGX MySteel Index Company Private Limited ("SGX MySteel"). SGX MySteel has not commenced operations.

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25. Trade and other payables

	The Group			The Company		
	30 June		1 July	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000	2019 \$'000	2018 \$'000	2017 \$'000
Current						
Trade payables (Note (a))	767,639	761,947	752,081	38	505	895
Other payables (Note (b))	143,867	128,715	139,485	57,303	56,444	70,908
Amount due to subsidiaries (non-trade) (Note (c))	—	—	—	222,678	237,072	249,921
	911,506	<u>890,662</u>	<u>891,566</u>	280,019	<u>294,021</u>	<u>321,724</u>
Non-current						
Trade and other payables:						
– Accrual for operating expenses	—	—	18	—	—	—
(a) Trade payables comprise:						
Payables to clearing members and settlement banks – Daily settlement of accounts for due contracts and rights (Note 13(a))	564,621	552,217	575,526	—	—	—
Payables under NEMS (Note 14)	149,898	176,622	146,318	—	—	—
Other trade payables	53,120	33,108	30,237	38	505	895
	767,639	<u>761,947</u>	<u>752,081</u>	38	<u>505</u>	<u>895</u>

The payables to clearing members and settlement banks represent the net settlement obligations by CDP. The corresponding net settlement obligations by clearing members and settlement banks to CDP are disclosed in Note 13(a).

	The Group			The Company		
	30 June		1 July	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000	2019 \$'000	2018 \$'000	2017 \$'000
(b) Other payables comprise:						
Accrual for operating expenses	69,742	60,964	80,738	21,891	18,868	32,464
Accrual for bonus	54,711	48,609	42,397	30,155	31,397	32,341
Defined contribution plans payable	1,714	1,699	1,609	1,045	953	970
Advance receipts	10,127	8,817	7,855	8	11	11
Others (non-trade)	7,573	8,626	6,886	4,204	5,215	5,122
	143,867	<u>128,715</u>	<u>139,485</u>	57,303	<u>56,444</u>	<u>70,908</u>

(c) The amounts due to subsidiaries are unsecured, non-interest bearing and repayable on demand.

26. Income taxes

(a) Income tax expense

	The Group		The Company	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Tax expense attributable to profit is made up of:				
– current income tax	76,645	81,988	4,095	4,521
– deferred income tax	6,507	(5,223)	(16)	437
	83,152	76,765	4,079	4,958
Under/(Over) provision in prior financial years:				
– current income tax	(1,301)	(2,495)	(443)	(988)
– deferred income tax	36	—	—	—
	81,887	74,270	3,636	3,970

26. Income taxes (continued)

(b) Tax reconciliation

The tax expense on profit differs from the amount that would arise using the Singapore rate of income tax due to the following:

	The Group		The Company	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Profit before tax and share of results of associated companies and joint venture	474,485	436,202	385,398	370,989
Tax calculated at a tax rate of 17% (2018: 17%)	80,662	74,154	65,518	63,068
Tax effect of:				
Singapore statutory income exemption	(148)	(208)	(17)	(26)
Income not subject to tax	(34)	(17)	(62,747)	(60,238)
Tax incentives and rebate	(387)	(465)	(379)	(389)
Expenses not deductible for tax purposes	1,954	2,580	1,115	1,723
Others	1,105	721	589	820
Over provision in prior financial years	(1,265)	(2,495)	(443)	(988)
	81,887	74,270	3,636	3,970

(c) Movements in provision for tax

	The Group		The Company	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Balance at beginning of financial year	82,440	71,398	3,896	3,733
Income tax paid	(79,694)	(65,285)	(3,338)	(3,370)
Tax expense on profit for the financial year	76,645	81,988	4,033	4,521
Over provision in prior financial years	(1,301)	(2,495)	(443)	(988)
Utilisation of losses and capital allowances ^(a)	(910)	(3,165)	—	—
Currency translation	(13)	(1)	—	—
Balance at end of financial year	77,167	82,440	4,148	3,896

^(a) This arises from transfer of prior year's tax losses and unutilised capital allowances between entities within the group.

(d) Deferred income tax

The following amounts, determined after appropriate offsetting, are shown in the statement of financial position:

	The Group			The Company		
	30 June		1 July	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000	2019 \$'000	2018 \$'000	2017 \$'000
Deferred tax assets:						
– to be recovered within 12 months	2,554	2,882	5,006	1,320	1,119	1,379
– to be recovered after 12 months	590	488	388	590	488	388
	3,144	3,370	5,394	1,910	1,607	1,767
– Effect of offsetting	(3,144)	(3,370)	(5,394)	(1,910)	(1,607)	(1,767)
	—	—	—	—	—	—
Deferred tax liabilities:						
– to be settled within 12 months	5,321	11,260	11,593	2,839	3,146	2,960
– to be settled after 12 months	37,789	24,784	29,065	5,824	5,173	5,162
	43,110	36,044	40,658	8,663	8,319	8,122
– Effect of offsetting	(3,144)	(3,370)	(5,394)	(1,910)	(1,607)	(1,767)
	39,966	32,674	35,264	6,753	6,712	6,355

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26. Income taxes (continued)

(d) Deferred income tax (continued)

The movements in the deferred tax assets and liabilities during the financial year are as follows:

The Group – deferred tax assets

	Unutilised tax losses		Unutilised capital allowances		Employee share plans		Total	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Balance at beginning of financial year	1,703	1,589	60	2,038	1,607	1,767	3,370	5,394
Credited/(charged) to profit or loss	441	811	(60)	490	289	(256)	670	1,045
Utilisation of losses and capital allowances ^(a)	(910)	(697)	–	(2,468)	–	–	(910)	(3,165)
Charged to equity	–	–	–	–	14	96	14	96
Balance at end of financial year	1,234	1,703	–	60	1,910	1,607	3,144	3,370

^(a) This arises from transfer of prior year's tax losses and unutilised capital allowances between entities within the group.

The Group – deferred tax liabilities

	Cash flow hedge reserve		Accelerated tax depreciation		Intangible assets arising from business combinations		Financial assets, at FVOCI/ Available-for-sale financial assets		Total	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Balance at beginning of financial year	(288)	218	22,109	25,845	14,200	14,595	23	–	36,044	40,658
Charged/(credited) to profit or loss	–	–	7,635	(3,749)	(422)	(429)	–	–	7,213	(4,178)
Charged/(credited) to equity	262	(506)	–	–	–	–	30	23	292	(483)
Currency translation	–	–	9	13	(448)	34	–	–	(439)	47
Balance at end of financial year	(26)	(288)	29,753	22,109	13,330	14,200	53	23	43,110	36,044

The Company – deferred tax assets

	Employee share plans	
	2019 \$'000	2018 \$'000
Balance at beginning of financial year	1,607	1,767
Credited/(charged) to profit or loss	289	(256)
Credited to equity	14	96
Balance at end of financial year	1,910	1,607

26. Income taxes (continued)

(d) Deferred income tax (continued)

The Company – deferred tax liabilities

	Cash flow hedge reserve		Financial assets, at FVOCI/ Available-for-sale financial assets		Accelerated tax depreciation		Total	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Balance at beginning of financial year	(7)	–	23	–	8,303	8,122	8,319	8,122
Charged to profit or loss	–	–	–	–	275	181	275	181
Charged/(credited) to equity	39	(7)	30	23	–	–	69	16
Balance at end of financial year	32	(7)	53	23	8,578	8,303	8,663	8,319

Deferred tax assets have not been recognised in respect of the following items:

	The Group	
	2019 \$'000	2018 \$'000
Tax losses	22,674	22,704

These items principally relate to four (2018: four) entities within the Group which are dormant.

Deferred tax assets have not been recognised in respect of these items as it is not probable that future taxable profits will be available against which the Group can utilise the benefits. The tax losses are subject to the relevant provisions of the Singapore Income Tax Act and confirmation by the tax authorities.

(e) Tax effects on other comprehensive income

	The Group			The Company		
	Before tax \$'000	Tax benefit/(liability) \$'000	Net of tax \$'000	Before tax \$'000	Tax benefit/(liability) \$'000	Net of tax \$'000
2019						
Other comprehensive income						
Foreign exchange translation	(6,161)	–	(6,161)	–	–	–
Fair value gains/(losses) and transferred to profit or loss on cash flow hedges	1,539	(262)	1,277	225	(39)	186
Fair value gains on financial assets, at FVOCI	8,838	(30)	8,808	168	(30)	138
	4,216	(292)	3,924	393	(69)	324
2018						
Other comprehensive income						
Foreign exchange translation	(108)	–	(108)	–	–	–
Fair value (losses)/gains and transferred to profit or loss on cash flow hedges	(2,980)	506	(2,474)	(39)	7	(32)
Fair value gains on available-for-sale financial assets	134	(23)	111	134	(23)	111
	(2,954)	483	(2,471)	95	(16)	79

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27. Provisions

	The Group			The Company		
	30 June		1 July	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000	2019 \$'000	2018 \$'000	2017 \$'000
Provision for SGX-MAS Market Development Scheme (Note (a))	1,802	1,802	1,802	—	—	—
Provision for unutilised leave (Note (b))	6,104	5,560	5,550	3,773	3,526	4,211
Provision for dismantlement, removal or restoration of property, plant and equipment (Note (c))	3,601	3,601	3,001	3,582	3,582	2,982
	11,507	10,963	10,353	7,355	7,108	7,193

(a) Provision for SGX-MAS Market Development Scheme

Provision for SGX-MAS Market Development Scheme is used to fund projects that raise awareness of the securities and derivatives market among investors.

The provision recorded at the Group as at 30 June 2019 is \$1,802,000 (2018: \$1,802,000).

(b) Provision for unutilised leave

Provision for unutilised leave is the estimated liability for annual leave as a result of services rendered by employees up to the balance sheet date.

	The Group		The Company	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Balance at beginning of financial year	5,560	5,550	3,526	4,211
Provision made during the financial year, net	544	10	247	(685)
Balance at end of financial year	6,104	5,560	3,773	3,526

(c) Provision for dismantlement, removal or restoration of property, plant and equipment

Provision for dismantlement, removal or restoration of leased premises is expected to be utilised upon return of these leased premises.

	The Group		The Company	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Balance at beginning of financial year	3,601	3,001	3,582	2,982
Provision made during the financial year, net	—	600	—	600
Balance at end of financial year	3,601	3,601	3,582	3,582

28. Share capital

(a) Share capital and treasury shares

The Group and The Company

	Number of shares		Amount	
	Issued shares '000	Treasury shares '000	Share capital \$'000	Treasury shares \$'000
2019				
Balance at beginning of financial year	1,071,642	1,536	429,236	(11,363)
Purchase of treasury shares	–	1,327	–	(9,502)
Vesting of shares under share-based remuneration plans	–	(979)	(109)	7,278
Vesting of shares under restricted share plan	–	(45)	(14)	340
Tax effect on treasury shares	–	–	–	14
Balance at end of financial year	1,071,642	1,839	429,113	(13,233)
2018				
Balance at beginning of financial year	1,071,642	1,694	428,031	(12,561)
Purchase of treasury shares	–	1,097	–	(8,192)
Vesting of shares under share-based remuneration plans	–	(1,255)	1,205	9,294
Tax effect on treasury shares	–	–	–	96
Balance at end of financial year	1,071,642	1,536	429,236	(11,363)

All issued ordinary shares are fully paid. There is no par value for these ordinary shares.

Fully paid ordinary shares carry one vote per share and carry a right to dividends as and when declared by the Company, except for shares held as treasury shares.

The Company purchased 1,327,000 of its shares (2018: 1,097,000) in the open market during the financial year. The total amount paid to purchase the shares was \$9,502,000 (2018: \$8,192,000). The Company holds the shares bought back as treasury shares and plans to use these shares to fulfil its obligations under the Company's share-based remuneration plans and restricted share plans.

(b) Performance share plans

(i) Outstanding performance shares

Details of performance shares awarded to participants at the balance sheet date are as follows:

Number of shares	The Group and The Company				
	FY2015 grants*	FY2016 grant**	FY2017 grant**	FY2018 grant**	FY2019 grant**
2019					
Balance at beginning of financial year	–	391,600	604,600	621,600	– 1,617,800
Granted	–	–	–	–	696,500 696,500
Balance at end of financial year	–	391,600	604,600	621,600	696,500 2,314,300
2018					
Balance at beginning of financial year	673,600	426,300	640,600	–	– 1,740,500
Granted	–	–	–	658,200	– 658,200
Vested	(191,800)	–	–	–	– (191,800)
Lapsed	(481,800)	(34,700)	(36,000)	(36,600)	– (589,100)
Balance at end of financial year	–	391,600	604,600	621,600	– 1,617,800

* The number of shares vested represents the level of achievement against the performance conditions.

** Represents the number of shares required if participants are to be awarded at 100% of the grant. However, the shares to be awarded at the vesting date may range from 0% to 150% of the grant, depending on the level of achievement against the performance conditions.

The terms of the performance share plans are set out in the Directors' Statement under the caption "SGX Performance Share Plan".

Notes to the Financial Statements

For the financial year ended 30 June 2019

28. Share capital (continued)

(b) Performance share plans (continued)

(ii) Fair value of performance shares

The fair value of the performance shares at grant date and the key assumptions of the fair value model for the grants were as follows:

	FY2019 grant	FY2018 grant	FY2017 grant	FY2016 grant	FY2015 grants
Date of grant	15.08.2018	15.09.2017	15.08.2016	30.10.2015	15.08.2014 and 30.06.2015
Vesting date	01.09.2022	01.09.2021	01.09.2020	01.09.2019	01.09.2017 and 01.06.2018
Number of performance shares at grant date	696,500	658,200	658,800	487,500	811,600
Fair value per performance share at grant date	\$7.46	\$7.25	\$6.68	\$6.30	\$5.27 to \$5.54

Assumptions under Monte-Carlo Model

Expected volatility

Shares of Singapore Exchange Limited	15.82%	17.30%	17.42%	16.30%	14.44% to 16.03%
FTSE Mondo Visione	—	—	—	—	11.77% to 18.94%
Shares of selected peer exchanges	15.62% to 31.96%	15.64% to 42.66%	16.60% to 48.79%	18.51% to 51.53%	—
Historical volatility period	36 months				

Risk-free interest rate

Date on which yield of Singapore government bond was based	15.08.2018	15.09.2017	15.08.2016	30.10.2015	15.08.2014 and 30.06.2015
Term (years)	3	3	3	3	3

Expected dividend yield based on management's forecast

Share price reference	4.04%	3.77%	4.18%	4.11%	3.97%
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Share price reference	\$7.43	\$7.42	\$7.58	\$7.38	\$7.08 to \$7.94
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28. Share capital (continued)

(c) Deferred long-term incentives scheme

(i) Outstanding deferred long-term incentives shares

Details of deferred long-term incentives shares awarded to recipients at the balance sheet date are as follows:

Number of shares	The Group and The Company					Total
	FY2015 awards	FY2016 award	FY2017 award	FY2018 award	FY2019 award	
2019						
Balance at beginning of financial year	–	268,870	683,508	1,136,500	–	2,088,878
Awarded	–	–	–	–	1,379,800	1,379,800
Lapsed	–	(3,234)	(15,904)	(30,003)	(41,200)	(90,341)
Vested	–	(265,636)	(338,292)	(375,455)	–	(979,383)
Balance at end of financial year	–	–	329,312	731,042	1,338,600	2,398,954
2018						
Balance at beginning of financial year	420,135	572,638	1,075,100	–	–	2,067,873
Awarded	–	–	–	1,174,000	–	1,174,000
Lapsed	–	(18,172)	(34,135)	(37,500)	–	(89,807)
Vested	(420,135)	(285,596)	(357,457)	–	–	(1,063,188)
Balance at end of financial year	–	268,870	683,508	1,136,500	–	2,088,878

The terms of the deferred long-term incentives scheme are set out in the Directors' Statement under the caption "SGX Deferred Long-Term Incentives Scheme".

(ii) Fair value of deferred long-term incentives shares

The fair value of deferred long-term incentives shares was estimated by the present value of the share price adjusted for future expected dividends. The fair value of shares at award date and the key assumptions of the fair value model for the awards were as follows:

FY2019 Award

Date of award	↔ 15.08.2018 ↔		
Vesting date	01.09.2019	01.09.2020	01.09.2021
Number of shares at award date	459,896	459,896	460,008
Fair value per deferred long-term incentives share at award date	\$7.14	\$6.84	\$6.56

Assumptions used in fair value model

Risk-free interest rate	1.74%	1.95%	2.07%
Date on which yield of Singapore government bond was based	15.08.2018	15.08.2018	15.08.2018
Expected dividend yield based on management's forecast	4.04%	4.04%	4.04%
Share price reference	\$7.43	\$7.43	\$7.43

Notes to the Financial Statements

For the financial year ended 30 June 2019

28. Share capital (continued)

(c) Deferred long-term incentives scheme (continued)

(ii) Fair value of deferred long-term incentives shares (continued)

FY2018 Award

Date of award	15.08.2017		
Vesting date	01.09.2018	01.09.2019	01.09.2020
Number of shares at award date	391,286	391,286	391,428
Fair value per deferred long-term incentives share at award date	\$7.25	\$6.98	\$6.71
Assumptions used in fair value model			
Risk-free interest rate	1.18%	1.31%	1.46%
Date on which yield of Singapore government bond was based	15.08.2017	15.08.2017	15.08.2017
Expected dividend yield based on management's forecast	3.77%	3.77%	3.77%
Share price reference	\$7.57	\$7.57	\$7.57

FY2017 Award

Date of award	17.08.2016		
Vesting date	01.09.2017	01.09.2018	01.09.2019
Number of shares at award date	371,853	371,853	371,994
Fair value per deferred long-term incentives share at award date	\$7.38	\$7.10	\$6.79
Assumptions used in fair value model			
Risk-free interest rate	0.80%	0.89%	1.03%
Date on which yield of Singapore government bond was based	15.08.2016	15.08.2016	15.08.2016
Expected dividend yield based on management's forecast	3.69%	4.22%	4.62%
Share price reference	\$7.66	\$7.66	\$7.66

28. Share capital (continued)

(c) Deferred long-term incentives scheme (continued)

(ii) Fair value of deferred long-term incentives shares (continued)

FY2016 Award

Date of award	17.08.2015		
Vesting date	01.09.2016	01.09.2017	01.09.2018
Number of shares at award date	318,690	318,690	318,820
Fair value per deferred long-term incentives share at award date	\$7.72	\$7.74	\$7.69

Assumptions used in fair value model

Risk-free interest rate	0.97%	1.17%	1.43%
Date on which yield of Singapore government bond was based	17.08.2015	17.08.2015	17.08.2015
Expected dividend yield based on management's forecast	3.91%	3.65%	4.36%
Share price reference	\$8.02	\$8.02	\$8.02

FY2015 Awards

Date of award	15.08.2014 and 30.06.2015			
Vesting date	01.09.2015	01.09.2016	01.09.2017	01.06.2018
Number of shares at award date	386,460	427,893	428,013	41,434
Fair value per deferred long-term incentives share at award date	\$6.88	\$6.82 to \$7.48	\$6.77 to \$7.50	\$7.45

Assumptions used in fair value model

Risk-free interest rate	0.34%	0.47% to 0.86%	0.69% to 0.99%	1.28%
Date on which yield of Singapore government bond was based	14.08.2014	14.08.2014 and 29.06.2015	14.08.2014 and 29.06.2015	29.06.2015
Expected dividend yield based on management's forecast	4.35%	3.91%	3.65%	4.36%
Share price reference	\$7.21	\$7.21 to \$7.83	\$7.21 to \$7.83	\$7.83

Notes to the Financial Statements

For the financial year ended 30 June 2019

28. Share capital (continued)

(d) Restricted Share Plan

Details of restricted share plan ("RSP") awarded to recipients at the balance sheet date are as follows:

	The Group and The Company
Number of shares	
2019	
Balance at beginning of financial year	—
Awarded	44,848
Vested	(44,848)
Balance at end of financial year	—

RSP was adopted in FY2019. Accordingly, there is no RSP in FY2018. The terms of the RSP are set out in the Directors' Statement under the caption "SGX Restricted Share Plan".

FY2019 award relates to approximately one-quarter of the Group Chairman FY2019 fees and approximately one-quarter of selected non-executive directors FY2019 basic fees ("Fees") which were paid in shares in lieu of cash.

The number of shares to be awarded was estimated by Fees divided by volume weighted average share price of SGX share listed on the Singapore Exchange Securities Trading Limited over the 14 trading days immediately following the date of the Nineteenth Annual General Meeting on 20 September 2018.

29. Dividends

	The Group and The Company	
	2019 \$'000	2018 \$'000
Interim tax exempt dividends of 22.5 cents per share (2018: 15.0 cents)	240,802	160,614
Proposed final tax exempt dividends of 7.5 cents per share (2018: 15.0 cents)	80,235	160,516
	321,037	321,130

The directors have proposed a final tax exempt dividend for FY2019 of 7.5 cents (2018: 15.0 cents) per share amounting to a total of \$80,235,000 (2018: \$160,516,000). The proposed dividend has been transferred from retained profits to the proposed dividends reserve.

30. Segment information

Management determines the operating segments based on the reports reviewed and used by the Executive Management Committee for performance assessment and resources allocation.

The Group operates primarily in Singapore and is organised into four segments as follows:

- (i) Equities and Fixed Income – provision of issuer services, securities trading and clearing, post trade services, membership and collateral management.
- (ii) Derivatives – provision of derivatives trading and clearing services, membership and collateral management.
- (iii) Market Data and Connectivity – provision of market data and connectivity services.
- (iv) Corporate – A non-operating segment comprising corporate activities which are not allocated to the three operating segments described above.

Segment performance is evaluated based on operating profits of the segment. Management monitors the operating results of the segments for the purpose of making decisions on performance assessment and resource allocation.

On 27 June 2019, SGX announced a new organisation structure that capitalises on its strength as an international multi-asset exchange to pursue growth opportunities and build scale in multiple asset classes.

The new organisation structure will take effect on 1 July 2019 and will comprise of three business units – Fixed Income, Currencies and Commodities; Equities (Cash and Derivatives); and Data, Connectivity and Indices. As a result of the new organisation structure, segment reporting will be updated accordingly from FY2020.

30. Segment information (continued)

	Equities and Fixed Income \$'000	Derivatives \$'000	Market Data and Connectivity \$'000	Corporate \$'000	The Group \$'000
2019					
Operating Revenue	347,529	459,749	102,530	–	909,808
Operating profits	156,063	250,382	54,572	–	461,017
Other gains – net	–	–	–	13,468	13,468
Share of results of associated companies and joint venture	–	–	–	(1,500)	(1,500)
Tax	–	–	–	(81,887)	(81,887)
Net profit after tax					391,098
Segment Assets	769,469	500,916	25,630	836,273	2,132,288
Segment assets includes:					
– Investments in associated companies and joint venture	–	–	–	79,067	79,067
Additions to:					
– Property, plant and equipment and software	36,977	17,294	4,080	–	58,351
Segment Liabilities	664,785	241,285	9,305	126,064	1,041,439
Other Information					
Depreciation and amortisation	29,964	27,733	4,815	–	62,512
2018					
Operating Revenue	406,600	339,812	98,266	–	844,678
Operating profits	224,166	148,402	52,328	–	424,896
Other gains – net	–	–	–	11,306	11,306
Share of results of associated companies	–	–	–	1,268	1,268
Tax	–	–	–	(74,270)	(74,270)
Net profit after tax					363,200
Segment Assets	725,711	481,384	41,645	866,198	2,114,938
Segment assets includes:					
– Investments in associated companies	–	–	–	8,628	8,628
Additions to:					
– Property, plant and equipment and software	40,684	18,655	5,572	–	64,911
– Investment property	–	150	–	–	150
Segment Liabilities	630,892	253,879	11,003	122,932	1,018,706
Other Information					
Depreciation and amortisation	27,483	28,634	4,721	–	60,838

Notes to the Financial Statements

For the financial year ended 30 June 2019

31. Securities Clearing Fund

The Securities Clearing Fund was established under the clearing rules of the securities clearing subsidiary, CDP. The clearing fund is to provide resources to enable CDP to discharge its obligations and the liabilities of defaulting clearing members arising from transactions in approved securities and futures.

The Securities Clearing Fund uses a scalable structure to better align members' contributions to their clearing risk exposure with CDP. Contributions by clearing members will vary with the value of securities and futures traded.

The Securities Clearing Fund comprised contributions from both CDP and its clearing members as follows:

(a) Contribution by CDP

	The Group		
	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000
Cash at bank – contributed by CDP	60,000	60,000	60,000

Cash contributions by CDP are denominated in SGD and placed in interest bearing accounts with 2 banks (2018: 1 bank). The initial \$25,000,000 contribution by CDP into the Securities Clearing Fund is recorded in the securities clearing fund reserve.

(b) Contribution by Clearing Members

The cash contributions from CDP clearing members are not recorded in the statement of financial position of the Group as these contributions are held in trust by the Group.

	The Group		
	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000
Contributions by CDP clearing members			
- cash at bank, held in trust	47,154	46,622	46,120

The Securities Clearing Fund is a trust asset held subject to the trust purposes set out in CDP Clearing Rule 7.1.2.

Payments out of the Securities Clearing Fund shall be made in the following order:

- (1) Contributions by defaulting clearing members;
- (2) Contributions by CDP of an amount not less than 15% of the Securities Clearing Fund size or \$30,000,000, whichever is higher;
- (3) Collateralised contributions by all other non-defaulting clearing members on a pro-rata basis in the proportion of each clearing member's required Collateralised Contribution to the total required Collateralised Contributions of all other non-defaulting clearing members at the time of default;
- (4) Contingent contributions by all other non-defaulting clearing members on a pro-rata basis in the proportion of each clearing member's required Contingent Contributions to the total required Contingent Contributions of all other non-defaulting clearing members;
- (5) Insurance (if any); and
- (6) Any other contributions (the last layer of the Securities Clearing Fund contributed by CDP amounted to \$30,000,000 (2018: \$30,000,000)).

32. Singapore Exchange Derivatives Clearing Limited ("SGX-DC") Clearing Fund

The SGX-DC Clearing Fund structure specifies the apportionment and sequence of use of resources in the event of single and multiple defaults.

The enhanced SGX-DC Clearing Fund framework was implemented in November 2018 to achieve a more efficient and responsive sizing of clearing fund resources. Consequentially, clearing members' contributions have been reduced (Note 33(b) (iii)). SGX-DC remains committed to maintaining a substantive contribution to its clearing fund of at least 25% of the fund size.

Accordingly, the Group has reduced its committed cash by \$50,000,000, amounting to \$150,021,000 (2018: \$200,021,000) (Note 12) to support the SGX-DC Clearing Fund. The SGX-DC Clearing Fund is made up of the following:

	2019 \$'000	2018 \$'000
SGX-DC share capital earmarked for SGX-DC Clearing Fund	102,000	152,000
Derivatives clearing fund reserve (Note a)	34,021	34,021
Other SGX-DC's contributions	14,000	14,000
	150,021	200,021

Except for the \$150,021,000 (2018: \$200,021,000) mentioned above, other resources available for the SGX-DC Clearing Fund are not included in the statement of financial position of the Group. These are third party obligations towards the SGX-DC Clearing Fund and where they are held by SGX-DC, these resources are held in trust (Note 33(b)).

(a) Derivatives clearing fund reserve

Upon the dissolution of the SGX-DT Compensation Fund on 24 November 2006, the cash proceeds of \$34,021,000 were set aside as the Group's derivatives clearing fund reserve to support the SGX-DC Clearing Fund. This reserve is not available for distribution as dividend.

(b) Utilisation of SGX-DC Clearing Fund

The SGX-DC clearing rules enable resources to be mobilised should any derivatives clearing member be unable to meet its obligations. Under the SGX-DC Clearing Fund structure, the resources available would be utilised in the following priority:

- (1) the defaulting derivatives clearing member's collateral deposited with or provided to SGX-DC;
- (2) SGX-DC's contributions of an amount equivalent to 15% of its Clearing Fund size;
- (3) security deposits of non-defaulting derivatives clearing members participating in the same Contract Class as the defaulted derivatives clearing member;
- (4) further assessments on non-defaulting derivatives clearing members participating in the same Contract Class as the defaulted derivatives clearing member;
- (5) SGX-DC's contributions of an amount equivalent to 10% of its Clearing Fund size;
- (6) security deposits of other non-defaulting derivatives clearing members not participating in the same Contract Class as the defaulted derivatives clearing member;
- (7) further assessments on other non-defaulting derivatives clearing members not participating in the same Contract Class as the defaulted derivatives clearing member; and
- (8) any other contributions to the SGX-DC Clearing Fund.

The rules of SGX-DC provide for SGX-DC to continually draw down resources in the above sequence in the event of multiple defaults occurring within a period of 90 days. Upon utilisation of the SGX-DC Clearing Fund, SGX-DC will be obliged to contribute at least 25% of the SGX-DC Clearing Fund size in relation to paragraph 32(b)(2) and 32(b)(5) above.

Notes to the Financial Statements

For the financial year ended 30 June 2019

33. Clearing fund, margin and other deposits

The Group, in its normal course of business, through subsidiaries operating as clearing houses, holds assets in trust or contingent assets such as irrevocable letters of credit, government securities or on-demand guarantees. None of these assets or contingent assets, together with the corresponding liabilities, are included in the statement of financial position of the Group.

(a) The Central Depository (Pte) Limited (“CDP”)

(i) Margin and other deposits

As the clearing house for securities traded on Singapore Exchange Securities Trading Limited (“SGX-ST”), CDP becomes the novated counterparty for these instruments.

The rules of CDP require its clearing members to provide collateral in the form acceptable to CDP as margin deposits to guarantee the performance of the obligations associated with securities traded on SGX-ST. The total collateral required by CDP as at 30 June 2019 were approximately \$56,299,000 (2018: \$45,779,000).

In addition, the CDP Clearing Rules provides that CDP may request its clearing members to place additional collateral with CDP in respect of its securities clearing activities from time to time.

Forms of collateral acceptable by CDP as margins include cash, government securities, selected common stocks and other instruments as approved by CDP from time to time.

As at the reporting date, clearing members had lodged the following collateral with CDP:

	2019 \$'000	2018 \$'000
Margin deposits		
Cash	145,274	151,541
Quoted government securities, at fair value	<u>12,624</u>	—
Other collateral		
Irrevocable letters of credit	20,000	20,000

All cash deposits in the financial year are placed in interest-bearing accounts with banks. Interest earned on the cash deposits is credited to the securities clearing members, with a portion retained by CDP.

(b) Singapore Exchange Derivatives Clearing Limited (“SGX-DC”)

(i) Margin deposits

As the clearing house for futures and options traded on Singapore Exchange Derivatives Trading Limited (“SGX-DT”), Over-The-Counter (“OTC”) commodities contracts, and Over-The-Counter Financial (“OTCF”) derivatives contracts, SGX-DC becomes the novated counterparty for these derivative instruments.

The rules of SGX-DC require its derivatives clearing members to provide collateral in the form acceptable to SGX-DC as margin deposits to guarantee the performance of the obligations associated with derivative instruments positions.

The total margins required by SGX-DC as at 30 June 2019 were approximately \$11,314,282,000 (2018: \$7,364,527,000).

As at the reporting date, clearing members had lodged the following collateral with SGX-DC:

	2019 \$'000	2018 \$'000
Margin deposits		
Cash	11,154,908	7,793,764
Quoted government securities, at fair value	<u>2,218,698</u>	928,554

All cash deposits are placed in interest-bearing accounts with banks and/or in reverse repurchase agreements. Interest earned on the cash deposits is credited to the derivatives clearing members, with a portion retained by SGX-DC.

33. Clearing fund, margin and other deposits (continued)

(b) Singapore Exchange Derivatives Clearing Limited ("SGX-DC") (continued)

(ii) Performance deposits and deposits received for contract value

For commodities contracts which are physically-settled, the rules of SGX-DC and its contract specifications require its clearing members to provide collateral in the form acceptable to SGX-DC as performance deposits to secure the performance of a delivery contract. In its capacity as escrow agent to the physical delivery of the contract, SGX-DC also collects the contract value of the commodities to be delivered through the exchange.

As at the reporting date, the following were lodged with SGX-DC for performance deposits purposes:

	2019 \$'000	2018 \$'000
Performance deposits and deposits received for contract value		
Cash	3,374	—

(iii) Clearing fund and other deposits

The rules of SGX-DC require its clearing members to deposit clearing fund contributions for their derivatives clearing obligations to SGX-DC:

- (1) Clearing Members who clear exchange-traded derivatives and OTC commodities contracts are required to post up to 4.5% (currently 3.3%) of the daily average of risk margin during the preceding three-month period, subject to a minimum of S\$1,000,000, in cash, government securities or any forms of collateral acceptable to SGX-DC;
- (2) Clearing Members who clear OTCF derivatives contracts are required to post 6.0% of the daily average of risk margin during the preceding three-month period, subject to a minimum of US\$5,000,000, in cash or government securities or any forms of collateral acceptable to SGX-DC;
- (3) Clearing Members who clear exchange-traded derivatives, OTC commodities contracts and OTCF derivatives contracts will be required to post the aggregate of (1) and (2).

Effective from 12 November 2018, clearing member's clearing fund contributions will be determined based on their proportionate share of the total clearing fund requirement. The proportionate share is determined based on the exposure that member brings to SGX-DC, taking into account of its average margins over the preceding three months' period, subject to a minimum as stated in (1) and (2).

As at the reporting date, the following clearing fund and other deposits were lodged with SGX-DC for clearing fund purpose:

	2019 \$'000	2018 \$'000
Clearing fund and other deposits		
Cash	484,505	531,806
Quoted government securities, at fair value	32,245	43,529

(iv) Collateral for Mutual Offset Settlement Agreement

As at 30 June 2019, irrevocable letters of credit amounting to approximately \$453,119,000 (2018: \$388,368,000) were lodged by The Chicago Mercantile Exchange with SGX-DC. This is to fulfill collateral requirements under the Mutual Offset Settlement Agreement.

34. Financial requirements

(a) CDP

The rules of CDP impose financial requirements on its clearing members. With effect from 22 April 2019, clearing members are no longer required to lodge collateral with CDP following the revision of rules. As at 30 June 2019, collaterals lodged with CDP have been withdrawn.

	2019 \$'000	2018 \$'000
Cash	—	10,000

None of these assets or contingent assets nor the corresponding liabilities are included in the statement of financial position of the Group.

Notes to the Financial Statements

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34. Financial requirements (continued)

(b) SGX-DC

The rules of SGX-DC impose financial requirements on its clearing members. With effect from 22 April 2019, clearing members are no longer required to lodge collateral with SGX-DC following the revision of rules. As at 30 June 2019, collaterals lodged with SGX-DC have been withdrawn.

	2019 \$'000	2018 \$'000
Cash	—	986,048

None of these assets or contingent assets nor the corresponding liabilities are included in the statement of financial position of the Group.

35. Collaterals for Securities Borrowing and Lending

CDP operates a Securities Borrowing and Lending ("SBL") programme for its Depositors and Depositary Agents. SBL involves a temporary transfer of securities from a lender to a borrower, via CDP, for a fee. The SBL programme requires the borrowers of securities to provide collateral in the form of cash and/or certain designated securities.

As at the reporting date, borrowers had lodged the following collateral with CDP for SBL purpose:

	2019 \$'000	2018 \$'000
Cash	30,094	22,203
Securities, at fair value	29,642	20,358

None of these assets or contingent assets nor the corresponding liabilities are included in the statement of financial position of the Group.

36. Securities and Derivatives Fidelity Funds

The Fidelity Funds are administered by Singapore Exchange Securities Trading Limited ("SGX-ST") and Singapore Exchange Derivatives Trading Limited ("SGX-DT"), as required by Section 176 of the Securities and Futures Act. The assets of the Funds are kept separate from all other assets, and are held in trust for the purposes set out in the Securities and Futures Act. The balances of the Fidelity Funds are as follows:

	2019 \$'000	2018 \$'000
Securities Exchange Fidelity Fund	36,970	36,445
Derivatives Exchange Fidelity Fund	25,126	24,772
	62,096	61,217

The purposes of the fidelity funds pursuant to Section 186 of the Securities and Futures Act are as follows:

- (a) to compensate any person (other than an accredited investor) who has suffered a pecuniary loss from any defalcation committed:
 - (i) in the course of, or in connection with, dealing in securities, or the trading of a futures contract;
 - (ii) by a member of a securities exchange or a futures exchange or by any agent of such member; and
 - (iii) in relation to any money or other property entrusted to or received:
 - by that member or any of its agents; or
 - by that member or any of its agents as trustee or on behalf of the trustees of that money or property.
- (b) to pay the Official Assignee or a trustee in bankruptcy within the meaning of the Bankruptcy Act (Cap. 20) if the available assets of a bankrupt, who is a member of SGX-ST or SGX-DT, are insufficient to satisfy any debts arising from dealings in securities or trading in futures contracts which have been proved in the bankruptcy by creditors of the bankrupt member.
- (c) to pay a liquidator of a member of SGX-ST or SGX-DT which is being wound up if the available assets of a member are insufficient to satisfy any debts arising from dealings in securities or trading in futures contracts which have been proved in the liquidation of the member.

36. Securities and Derivatives Fidelity Funds (continued)

Any reference to dealing in securities or trading of a futures contract refers to such dealing or trading through the exchange which establishes, keeps and administers the fidelity fund or through a trading linkage of the exchange with an overseas securities exchange or an overseas futures exchange.

No further provision has been made in the financial year ended 30 June 2019 for contribution to be paid to the securities and derivatives fidelity funds as the minimum sum of \$20,000,000 (2018: \$20,000,000) for each fund as currently required under the Securities and Futures Act has been met.

	2019 \$'000	2018 \$'000
The assets and liabilities of the Funds are as follows:		
Assets		
Fixed deposits with banks	61,200	60,600
Bank balance	1,167	717
Interest receivable	41	35
	62,408	61,352
Liabilities		
Other payables and accruals	3	7
Taxation	302	123
Deferred tax liabilities	7	5
	312	135
Net assets	62,096	61,217

The assets and liabilities of the Funds are not included in the statement of financial position of the Group as they are held in trust.

37. Contingent liabilities

At the balance sheet date, the Group and the Company's contingent liabilities are as follows:

	The Group		The Company	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Unsecured guarantees by SGX-DC to banks for standby letters of credit issued by the banks to Chicago Mercantile Exchange ("CME") for members' open positions on CME. These guarantees are supported by members' collateral balances	324,623	205,767	—	—

38. Commitments

(a) Operating lease commitments – Where the Group and the Company is a lessee

The Group and Company lease its office premises, data centres and equipment from non-related parties under non-cancellable operating lease agreements. The leases have varying terms, escalation clauses and renewal rights.

The future aggregate minimum lease payments payable under non-cancellable operating leases contracted for at the reporting date but not recognised as liabilities, are as follows:

	The Group			The Company		
	30 June		1 July	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000	2019 \$'000	2018 \$'000	2017 \$'000
Not later than one financial year	31,228	23,129	22,779	30,623	22,555	22,357
Later than one financial year but not later than five financial years	50,282	35,504	55,374	50,176	34,925	55,072
Later than five financial years	—	1,272	2,760	—	1,272	2,760
	81,510	59,905	80,913	80,799	58,752	80,189

Notes to the Financial Statements

For the financial year ended 30 June 2019

38. Commitments (continued)

(b) Operating lease commitments – Where the Group is a lessor

The Group leases out office space to non-related parties under non-cancellable operating leases. The leases have varying terms and renewal rights.

The future minimum lease receivables under non-cancellable operating leases contracted for at the balance sheet date but not recognised as receivables are as follows:

	The Group		
	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000
Not later than one financial year	1,584	1,698	1,712
Later than one financial year but not later than five financial years	2,209	3,239	4,747
Later than five financial years	288	335	943
	4,081	5,272	7,402

(c) Capital commitments

Capital commitments contracted for at year end but not recognised in the financial statements are as follows:

	The Group			The Company		
	30 June		1 July	30 June		1 July
	2019 \$'000	2018 \$'000	2017 \$'000	2019 \$'000	2018 \$'000	2017 \$'000
Property, plant and equipment	300	–	30	–	–	–
Software	2,123	14,756	6,994	1,342	–	2,615
	2,423	14,756	7,024	1,342	–	2,615

39. Related party transactions

In addition to the information disclosed elsewhere in the financial statements, the following transactions took place between the Group and related parties at terms agreed between the parties:

Directors' fees and key management's remuneration

Key management's remuneration included fees, salary, bonus, commission and other emoluments (including benefits-in-kind) computed based on the cost incurred by the Group and the Company, and where the Group or the Company did not incur any costs, the value of the benefit is included. The directors' fees and key management's remuneration are as follows:

	The Group	
	2019 \$'000	2018 \$'000
Salaries and other short-term employee benefits	15,425	13,890
Employer's contribution to Central Provident Fund	130	137
Share-based payment to key management	4,058	4,621
	19,613	18,648

During the financial year, 443,600 shares (2018: 393,500 shares) under SGX performance share plan and 443,600 shares (2018: 393,500 shares) under SGX deferred long-term incentives scheme were granted to key management of the Group. The shares were granted under the same terms and conditions as those offered to other employees of the Company.

40. Financial risk management

Financial risk management objectives and policies

The Group is exposed to market risk (including currency risk, price risk and interest rate risk), credit risk and liquidity risk arising from its business activities. The Group's overall risk management strategy seeks to minimise adverse effects from the unpredictability of financial markets on the Group's financial performance.

The Board of Directors has overall responsibility for the oversight of financial risk management for the Group. The Risk Management Committee ("RMC") assists the Board in discharging its oversight responsibility. The RMC's primary function is to review, recommend to the Board for approval, and where authority is delegated by the Board, approve:

- (1) the type and level of business risks (risk appetite) that the Group undertakes on an integrated basis to achieve its business strategy; and
- (2) the frameworks and policies for managing risks that are consistent with its risk appetite.

Management is responsible for identifying, monitoring and managing the Group's financial risk exposures.

The main financial risks that the Group is exposed to and how they are managed are set out below.

Market risk – Currency risk

The Group manages its main currency exposure as follows:

**(a) Revenue receivables from clearing of derivative products
Interest receivables from placements of margin deposits**

The Group's revenue from the clearing of derivative products is mainly in USD. Interest receivables from placements of margin deposits with banks are mainly denominated in USD. For these receivables denominated in USD, the Group manages the currency exposure through currency forward contracts which are designated as cash flow hedges. Upon settlement of the currency forward contracts and payment obligations denominated in foreign currency, any excess foreign currencies are converted back to SGD in a timely manner to minimise currency exposure. As at the reporting date, there is no significant currency risk exposure arising from these receivables.

(b) Net assets in foreign operations

The Group is exposed to currency risk on the net assets in foreign operations mainly in GBP. Management monitors the Group's currency exposure by tracking the GBP currency movement on a regular basis. As this investment is long-term in nature, the Group does not hedge the currency risk of the net assets in foreign operations. As at the reporting date, there is no significant currency risk exposure arising from net assets in foreign operations.

(c) Investments in financial assets, at FVOCI

For investment in financial assets, at FVOCI classified as current assets, the Group and the Company have investments in equity securities and bonds mainly denominated in SGD, USD and EUR. To minimise foreign currency exposure, the Group and the Company enters into currency forward contracts to manage its exposure.

For investment in financial assets, at FVOCI classified as non-current assets, the Group holds the investments on a long term basis and does not hedge the currency exposure of these investments. The Group has investments in unquoted equity securities denominated in GBP and USD. Management monitors the currency exposure by tracking the GBP and USD currency movement on a regular basis.

As at the reporting date, there is no significant currency risk exposures arising from financial assets, at FVOCI.

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For the financial year ended 30 June 2019

40. Financial risk management (continued)

Market risk – Currency risk (continued)

(d) Cash and cash equivalents

As at the reporting date, the cash balances of the Group and the Company are mainly denominated in SGD, USD and GBP. USD and GBP cash balances placed in banks to meet the short-term payment obligations were not hedged.

The Group and Company's currency exposures are as follows:

	The Group At 30 June 2019						
	SGD ^(a) \$'000	USD \$'000	GBP \$'000	EUR \$'000	JPY \$'000	Others \$'000	Total \$'000
Financial assets							
Cash and cash equivalents	644,395	15,243	5,329	73	253	1,377	666,670
Trade and other receivables							
– Daily settlement of accounts for due contracts and rights	515,689	43,142	–	5,054	–	736	564,621
– Receivables under NEMS	138,761	–	–	–	–	–	138,761
– Others	86,565	68,736	2,126	349	2,690	1,183	161,649
Financial assets, at FVOCI	11,523	65,983	3,648	920	591	898	83,563
Financial liabilities							
Trade and other payables							
– Daily settlement of accounts for due contracts and rights	(515,689)	(43,142)	–	(5,054)	–	(736)	(564,621)
– Payables under NEMS	(149,898)	–	–	–	–	–	(149,898)
– Others	(157,951)	(29,998)	(7,990)	(69)	(426)	(553)	(196,987)
Net financial assets/liabilities	573,395	119,964	3,113	1,273	3,108	2,905	703,758
Net non-financial assets of foreign subsidiaries							
	18	–	14,794	–	–	5	14,817
Currency exposure	573,413	119,964	17,907	1,273	3,108	2,910	718,575
Currency forward contracts	–	(118,804)	–	–	(3,346)	(437)	(122,587)

^(a) The SGD balances have been included for completeness.

40. Financial risk management (continued)

Market risk – Currency risk (continued)

	The Group At 30 June 2018						
	SGD ^(a) \$'000	USD \$'000	GBP \$'000	EUR \$'000	JPY \$'000	Others \$'000	Total \$'000
Financial assets							
Cash and cash equivalents	810,587	13,811	4,681	58	385	2,065	831,587
Trade and other receivables							
– Daily settlement of accounts for due contracts and rights	506,461	45,151	–	495	–	110	552,217
– Receivables under NEMS	154,653	–	–	–	–	–	154,653
– Others	65,227	24,871	4,556	256	1,249	551	96,710
Available-for-sale financial assets	10,328	9,791	3,648	600	555	729	25,651
Financial liabilities							
Trade and other payables							
– Daily settlement of accounts for due contracts and rights	(506,461)	(45,151)	–	(495)	–	(110)	(552,217)
– Payables under NEMS	(176,622)	–	–	–	–	–	(176,622)
– Others	(129,957)	(23,085)	(7,602)	(246)	(417)	(516)	(161,823)
Net financial assets/liabilities	734,216	25,388	5,283	668	1,772	2,829	770,156
Net non-financial assets of foreign subsidiaries							
	–	–	16,243	–	–	–	16,243
Currency exposure	734,216	25,388	21,526	668	1,772	2,829	786,399
Currency forward contracts	–	(86,274)	–	(400)	–	–	(86,674)

^(a) The SGD balances have been included for completeness.

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For the financial year ended 30 June 2019

40. Financial risk management (continued)

Market risk – Currency risk (continued)

	The Group At 1 July 2017						
	SGD ^(a) \$'000	USD \$'000	GBP \$'000	EUR \$'000	JPY \$'000	Others \$'000	Total \$'000
Financial assets							
Cash and cash equivalents	783,155	8,060	4,142	51	195	789	796,392
Trade and other receivables							
– Daily settlement of accounts for due contracts and rights	535,731	39,205	–	–	–	590	575,526
– Receivables under NEMS	130,270	–	–	–	–	–	130,270
– Others	77,891	4,217	4,268	–	21	497	86,894
Financial liabilities							
Trade and other payables							
– Daily settlement of accounts for due contracts and rights	(535,731)	(39,205)	–	–	–	(590)	(575,526)
– Payables under NEMS	(146,318)	–	–	–	–	–	(146,318)
– Others	(138,366)	(23,751)	(6,880)	–	–	(743)	(169,740)
Net financial assets/liabilities	706,632	(11,474)	1,530	51	216	543	697,498
Net non-financial assets of foreign subsidiaries	(40)	–	16,174	–	–	–	16,134
Currency exposure	706,592	(11,474)	17,704	51	216	543	713,632
Currency forward contracts	–	(81,140)	–	(1,360)	–	–	(82,500)

^(a) The SGD balances have been included for completeness.

	The Company At 30 June 2019						
	SGD ^(a) \$'000	USD \$'000	GBP \$'000	EUR \$'000	JPY \$'000	Others \$'000	Total \$'000
Financial assets							
Cash and cash equivalents	255,413	1,612	1	–	–	396	257,422
Trade and other receivables	6,787	148	4,661	–	6	35	11,637
Financial assets, at FVOCI	11,523	10,849	–	920	591	897	24,780
Financial liabilities							
Trade and other payables	(279,012)	(835)	(101)	(1)	–	(70)	(280,019)
Currency exposure	(5,289)	11,774	4,561	919	597	1,258	13,820
Currency forward contracts	–	(9,406)	–	–	–	–	(9,406)

^(a) The SGD balances have been included for completeness.

40. Financial risk management (continued)

Market risk – Currency risk (continued)

	The Company At 30 June 2018						
	SGD ^(a) \$'000	USD \$'000	GBP \$'000	EUR \$'000	JPY \$'000	Others \$'000	Total \$'000
Financial assets							
Cash and cash equivalents	408,349	3,508	132	–	–	1,023	413,012
Trade and other receivables	8,459	29	6,104	–	7	32	14,631
Available-for-sale financial assets	10,328	9,791	–	600	555	729	22,003
Financial liabilities							
Trade and other payables	(293,994)	(27)	–	–	–	–	(294,021)
Currency exposure	133,142	13,301	6,236	600	562	1,784	155,625
Currency forward contracts	–	(8,654)	–	(400)	–	–	(9,054)

(a) The SGD balances have been included for completeness.

	The Company At 1 July 2017						
	SGD ^(a) \$'000	USD \$'000	GBP \$'000	INR \$'000	Others \$'000	Total \$'000	
Financial assets							
Cash and cash equivalents	389,685	3,684	132	–	253	393,754	
Trade and other receivables	8,264	43	6,241	8	48	14,604	
Financial liabilities							
Trade and other payables	(321,634)	(14)	–	–	(76)	(321,724)	
Currency exposure	76,315	3,713	6,373	8	225	86,634	
Currency forward contracts	–	–	–	–	–	–	–

(a) The SGD balances have been included for completeness.

A currency risk sensitivity analysis is not provided as the Group and the Company do not have significant foreign currency exposures.

Market risk – Price risk

The Group and the Company is exposed to price risk arising from its investments in financial assets, at FVOCI that were classified as current assets. To manage the price risk arising from its investments, the Group and the Company diversifies its multi-asset portfolio comprising of equities and bonds across developed markets and sectors, in accordance with limits set in the investment mandate. For financial assets, at FVOCI classified as non-current assets, these investments are held as strategic investments. Performance of these investments are regularly monitored by the Management.

A change of 5% (2018: 5%) in prices for investments at the reporting date would affect other comprehensive income by the amounts shown below. This analysis assumes that all other variables remain constant.

	Impact to other comprehensive income		
	At 30 June 2019 \$'000	At 30 June 2018 \$'000	At 1 July 2017 \$'000
Group			
– Price increase	3,468	1,065	–
– Price decrease	(3,468)	(1,065)	–
Company			
– Price increase	1,028	913	–
– Price decrease	(1,028)	(913)	–

Notes to the Financial Statements

For the financial year ended 30 June 2019

40. Financial risk management (continued)

Market risk – Interest rate risk

Cash flow interest rate risk is the risk that the future cash flows of a financial instrument will fluctuate because of changes in market interest rates. Fair value interest rate risk is the risk that the fair value of a financial instrument will fluctuate due to changes in market interest rates.

The Group and the Company's fixed deposit placements are mainly short-term in nature and placed with banks that offer the most competitive interest rates. The Group and the Company manages its interest rate risks arising from investments in bonds by placing such balances on varying maturities and interest rate terms.

The tables below set out the Group and the Company's financial assets and liabilities at carrying amounts, categorised by the earlier of contractual re-pricing or maturity dates.

The Group

	Variable rates			Fixed rates			Non-interest bearing \$'000	Total \$'000		
	Less than 6 months \$'000	6 to 12 months \$'000	Over 1 year \$'000	Less than 6 months \$'000	6 to 12 months \$'000	Over 1 year \$'000				
At 30 June 2019										
Financial assets										
Cash and cash equivalents	46,958	–	–	507,984	102,000	–	9,728	666,670		
Trade and other receivables	–	–	–	6	1	–	865,024	865,031		
Financial assets, at FVOCI	–	–	1,750	504	2,188	15,415	63,706	83,563		
Financial liabilities										
Trade and other payables	–	–	–	–	–	–	(911,506)	(911,506)		
Net financial assets/(liabilities)	46,958	–	1,750	508,494	104,189	15,415	26,952	703,758		
At 30 June 2018										
Financial assets										
Cash and cash equivalents	54,079	–	–	474,280	288,712	–	14,516	831,587		
Trade and other receivables	–	–	–	7	2	–	803,571	803,580		
Available-for-sale financial assets	1,033	–	–	–	–	17,419	7,199	25,651		
Financial liabilities										
Trade and other payables	–	–	–	–	–	–	(890,662)	(890,662)		
Net financial assets/(liabilities)	55,112	–	–	474,287	288,714	17,419	(65,376)	770,156		
At 1 July 2017										
Financial assets										
Cash and cash equivalents	29,689	–	–	509,344	240,000	–	17,359	796,392		
Trade and other receivables	–	–	–	9	3	–	792,678	792,690		
Financial liabilities										
Trade and other payables	–	–	–	–	–	–	(891,584)	(891,584)		
Net financial assets/(liabilities)	29,689	–	–	509,353	240,003	–	(81,547)	697,498		

40. Financial risk management (continued)

Market risk – Interest rate risk (continued)

The Company

	Variable rates			Fixed rates			Non-interest bearing \$'000	Total \$'000		
	Less than 6 months \$'000	6 to 12 months \$'000	Over 1 year \$'000	Less than 6 months \$'000	6 to 12 months \$'000	Over 1 year \$'000				
At 30 June 2019										
Financial assets										
Cash and cash equivalents	18,911	–	–	237,902	–	–	609	257,422		
Trade and other receivables	–	–	–	6	1	4,545	7,085	11,637		
Financial assets, at FVOCI	–	–	1,750	504	2,188	15,415	4,923	24,780		
Financial liabilities										
Trade and other payables	–	–	–	–	–	–	(280,019)	(280,019)		
Net financial assets/(liabilities)	18,911	–	1,750	238,412	2,189	19,960	(267,402)	13,820		
At 30 June 2018										
Financial assets										
Cash and cash equivalents	12,292	–	–	353,209	36,700	–	10,811	413,012		
Trade and other receivables	–	–	–	7	2	6,104	8,518	14,631		
Available-for-sale financial assets	1,033	–	–	–	–	17,419	3,551	22,003		
Financial liabilities										
Trade and other payables	–	–	–	–	–	–	(294,021)	(294,021)		
Net financial assets/(liabilities)	13,325	–	–	353,216	36,702	23,523	(271,141)	155,625		
At 1 July 2017										
Financial assets										
Cash and cash equivalents	970	–	–	340,344	44,000	–	8,440	393,754		
Trade and other receivables	–	–	–	5	1	6,086	8,512	14,604		
Financial liabilities										
Trade and other payables	–	–	–	–	–	–	(321,724)	(321,724)		
Net financial assets/(liabilities)	970	–	–	340,349	44,001	6,086	(304,772)	86,634		

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For the financial year ended 30 June 2019

40. Financial risk management (continued)

Market risk – Interest rate risk (continued)

A change of 0.5% (2018: 0.5%) in interest rate for the Group's and the Company's investment in bonds at the reporting date would affect profit after tax and other comprehensive income by the amounts shown below. This analysis assumes that all other variables remain constant.

	30 June 2019		30 June 2018		1 July 2017	
	Impact to profit after tax \$'000	Impact to other comprehensive income \$'000	Impact to profit after tax \$'000	Impact to other comprehensive income \$'000	Impact to profit after tax \$'000	Impact to other comprehensive income \$'000
2019						
Group						
– Interest rate increase	7	(157)	4	(203)	–	–
– Interest rate decrease	(7)	157	(4)	203	–	–
Company						
– Interest rate increase	7	(157)	4	(203)	–	–
– Interest rate decrease	(7)	157	(4)	203	–	–

Credit risk

Credit risk refers to the risk that counterparty will default on its contractual obligations resulting in financial loss to the Group and the Company. The major classes of financial assets of the Group with credit exposures are: receivables from clearing and settlement, receivables under NEMS, trade and interest receivables, cash deposits and investments in debt instruments.

The Group manages its credit exposures as follows:

(a) Clearing and settlement

In the normal course of business as clearing houses, SGX-DC and CDP act as central counterparties ("CCP") for every transaction received by or matched through the Group's facilities. As CCP, each clearing house substitutes itself as the buyer to the selling clearing member, and seller to the buying clearing member, and assumes all rights and obligations to the counterparty. As a result, each clearing house faces considerable credit risk exposure should any of its clearing members be unable to meet its settlement obligations to the clearing house, resulting in a default. The Group has in place a sound and transparent risk management and regulatory framework governing the operations of securities and derivatives markets. On an on-going basis, the Group mitigates its counterparty risk through active monitoring and management of its exposures to clearing members by having in place a system of financial safeguards.

Credit risk management practices

The Group mitigates its exposures to risk by admitting clearing members which meet prescribed capital and financial requirements and have risk management systems to monitor their exposures. On an on-going basis, a clearing member must continue to comply with the financial requirements, and also set aside capital commensurate with its risk exposures. In addition, the clearing member must ensure that it has the necessary systems and procedures to preserve sound liquidity and financial position at all times.

Both SGX-DC and CDP have well-established risk management systems to monitor and measure the risk exposures of its members. In addition, SGX-DC and CDP require all cleared positions and contracts to be sufficiently collateralised at all times to protect SGX-DC and CDP against potential losses. SGX-DC also revalue and settles the daily mark-to-market variations with clearing members to prevent losses from accumulating. For CDP, it also requires clearing members to monitor compliance with risk management measures such as monitoring for large exposures.

Financial safeguards

A clearing fund has been established for each of the securities and derivatives markets to be used in support of the clearing houses' roles as CCP. The Group and the relevant clearing members are required to contribute to the respective clearing funds.

40. Financial risk management (continued)

Credit risk (continued)

(a) Clearing and settlement (continued)

Trade receivables arising from settlement of securities trades

Settlement for all securities transactions of securities clearing members are effected through the Group's subsidiary, CDP, and effected through designated settlement banks.

The "Receivables from clearing members and settlement banks" included in trade receivables represent the aggregate of net settlement obligations of each of the clearing members and settlement banks to CDP for the last two trading days of the financial year ended 30 June 2019 following the implementation of new securities settlement and depository framework and system on 10 December 2018 (2018: last three trading days). As at 30 June 2019, there were 25 (2018: 25) securities clearing members and 8 (2018: 7) designated settlement banks. The Group may have concentration risk exposure to these securities clearing members and settlement banks with regards to their net settlement obligations to CDP. The settlement exposure of CDP to each securities clearing member or settlement bank fluctuates daily according to the net trading position (net buy or net sell) of each securities clearing member and the extent to which these settlement obligations are effected through the settlement banks.

(b) Receivables under NEMS

In relation to NEMS receivables in Note 14, EMC is required to ensure that market participants maintain certain levels of prudential security in discharging its obligations under the NEMS Market Rules ("Market Rules"). EMC is entitled to recover any default receivables from all market participants under the Market Rule and credit risk exposure to NEMS receivables is minimised.

Under the Market Rules, each market participant has to provide credit support which is not less than 30 times of individual estimated average daily exposure. The Market Rules specify the type of credit support to be provided and assigned to EMC. These include bankers' guarantees or irrevocable commercial letter of credit from reputable financial institutions, cash deposits and Singapore Government Treasury bills. The credit support received as at 30 June 2019 were in the form of bankers' guarantees and cash deposits and have an aggregate value of \$276,213,000 (2018: \$279,880,000). There is no significant concentration of credit risk for receivables under NEMS.

(c) Trade receivables (excluding balances arising from clearing and settlement of securities trades and NEMS)

Trade receivables (excluding balances arising from clearing and settlement of securities trades and NEMS) of the Group and the Company comprise receivables from trading and clearing members, listed companies and other entities.

(d) Cash deposits and interest receivables

Cash balances of the Group and the Company are mainly placed in fixed deposits with financial institutions of high credit quality. The Board has approved policies that limit the maximum credit exposure to each financial institution. Exposure and compliance with counterparty limits set by the RMC are monitored by the relevant business units and reported by the Risk Management unit to the RMC.

(e) Financial assets, at FVOCI

The bond instruments invested by the Group and the Company are restricted to fixed income securities with minimum credit rating of BBB+ or equivalent with ratings by Standard & Poor's, Moody's or Fitch. These are considered "low credit risk" as they are of investment grade credit rating with at least one major rating agency.

(f) Credit loss allowance

For receivables from clearing and settlement and receivables under NEMS, the expected credit loss is minimal as these receivables were due from clearing members and settlement banks as well as NEMS participants. The admission of these clearing members, settlement banks and NEMS participants are subject to the Group's admission criteria, compliance monitoring and risk management measures. These receivables had no recent history of default and there were no unfavourable current conditions and forecast future economic conditions at the reporting date.

For trade receivables excluding balances arising from clearing and settlement of securities trades and NEMS, the Group applied the simplified approach permitted by SFRS(I) 9 which requires expected lifetime losses to be recognised from initial recognition of the receivables.

Expected loss rates are based on the payment profiles of customers and the corresponding historical credit losses experienced. The historical loss rates are adjusted to reflect current and forward-looking information on macroeconomics factors affecting the ability of the customers to settle the receivables.

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40. Financial risk management (continued)

Credit risk (continued)

(f) Credit loss allowance (continued)

On this basis, the loss allowance for trade receivables as at 30 June 2019 and 1 July 2018 (on the date of initial adoption of SFRS(I) 9) was determined as not material. The gross carrying amount of trade receivables subject to expected credit loss provision that are more than 360 days past due as at 30 June 2019 and 1 July 2018 is \$823,000 and \$4,550,000 respectively.

Trade receivables excluding balances arising from clearing and settlement of securities trades and NEMS are considered in default if the counterparty fails to make contractual payments within 360 days when they fall due, and are written off when there is no reasonable expectation of recovery. Where receivables are written off, the Group continues to engage in enforcement activity to attempt to recover the receivables due. Where recoveries are made, these are recognised in profit or loss.

Financial assets, at FVOCI comprised of bond instruments invested by the Group and the Company restricted to fixed income securities at investment grade with minimum credit rating of BBB+ or equivalent with ratings by Standard & Poor's, Moody's or Fitch. Loss allowance is recognised on these assets measured at the 12-month expected credit losses. These financial assets had no recent history of default and none had been below the minimum credit rating of BBB+.

Cash deposits, loan to subsidiary, staff advances and other receivables are subject to immaterial credit loss.

The movements in credit loss allowance for the financial year ended 30 June 2019 are as follows:

The Group	Trade receivables \$'000
Balance at beginning of financial year	4,550
Allowance made	1,489
Allowance utilised	(4,440)
Allowance written back	(786)
Foreign currency translation	10
Balance at end of financial year	823

Exposures from receivables from clearing and settlement and receivables under NEMS are managed by risk management systems and collateralised as described above.

The maximum exposure to credit risk to trade receivables, cash deposits and investment in debt instruments is the carrying amount presented on the statement of financial position of the Group and the Company. The Group and the Company do not hold any collateral against these financial instruments. In addition, clearing houses, SGX-DC and CDP, also have general lien on all monies and other properties deposited by clearing members. The clearing house may combine any account of the clearing member with its liabilities to the clearing house. Such funds may be applied towards satisfaction of liabilities of the clearing member to the clearing house.

(g) Accounting policy for impairment of trade receivables before 1 July 2018

For the financial year ended 30 June 2018, the impairment of financial assets was assessed based on an incurred loss impairment model. An allowance for impairment of trade and other receivables is recognised when there is objective evidence that the Group and the Company will not be able to collect amounts due according to the original terms of the receivables.

The Group's and the Company's credit risk exposure in relation to trade receivables under FRS 39 *Financial Instruments: Recognition and Measurement* as at 30 June 2018 and 1 July 2017 is as follows:

40. Financial risk management (continued)

Credit risk (continued)

(g) Accounting policy for impairment of trade receivables before 1 July 2018 (continued)

Financial assets that are past due and/or impaired

The age analysis of trade receivables past due but not impaired is as follows:

	The Group		The Company	
	As at 30 June 2018 \$'000	As at 1 July 2017 \$'000	As at 30 June 2018 \$'000	As at 1 July 2017 \$'000
Past due up to 90 days	2,384	1,431	528	28
Past due 91 days to 360 days	3,611	3,033	485	25
	5,995	4,464	1,013	53

The carrying amount of trade receivables individually determined to be impaired and the movement in the related allowance for impairment are as follows:

	The Group		The Company	
	As at 30 June 2018 \$'000	As at 1 July 2017 \$'000	As at 30 June 2018 \$'000	As at 1 July 2017 \$'000
Gross amount	4,550	2,753	3	18
Less: Allowance for impairment	(4,550)	(2,753)	(3)	(18)
	—	—	—	—
Balance at beginning of financial year	2,753	1,668	18	1
Allowance made	2,211	1,848	3	18
Allowance utilised	(41)	(363)	—	—
Allowance written back	(373)	(400)	(18)	(1)
Balance at end of financial year	4,550	2,753	3	18

Financial assets that are neither past due nor impaired

Trade receivables that are neither past due nor impaired comprise companies with good collection track record with the Group and the Company.

All of the Group's cash deposits are not impaired as the deposits are placed with banks of high credit quality.

Other than the above, there are no credit loss allowance for other financial assets at amortised costs as at 30 June 2018 and 1 July 2017.

Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset.

(a) Liabilities related risk

The Group and the Company has minimal liquidity risk as it maintains sufficient cash for daily operations through prudent liquidity risk management. The Group and Company has no external borrowings.

Notes to the Financial Statements

For the financial year ended 30 June 2019

40. Financial risk management (continued)

Liquidity risk (continued)

(a) Liabilities related risk (continued)

The financial liabilities of the Group and the Company are analysed into the relevant maturity buckets based on the remaining period from the balance sheet date to the contractual maturity dates. The amounts disclosed in the table below are contractual undiscounted cash flows.

The Group

	Up to 3 months \$'000	> 3 months to 1 year \$'000	Above 1 year \$'000	Total \$'000
At 30 June 2019				
Financial liabilities				
Trade and other payables ^(a)	908,690	2,803	13	911,506
At 30 June 2018				
Financial liabilities				
Trade and other payables ^(b)	890,206	456	—	890,662
At 1 July 2017				
Financial liabilities				
Trade and other payables ^(c)	891,545	21	18	891,584

(a) Included the following:

- \$564,621,000 payables to clearing members and settlement banks for daily settlement of accounts for due contracts and rights with a corresponding amount in trade receivables; and
- \$149,898,000 payables under NEMS with corresponding amounts in cash and cash equivalents and trade receivables.

(b) Included the following:

- \$552,217,000 payables to clearing members and settlement banks for daily settlement of accounts for due contracts and rights with a corresponding amount in trade receivables; and
- \$176,622,000 payables under NEMS with corresponding amounts in cash and cash equivalents and trade receivables.

(c) Included the following:

- \$575,526,000 payables to clearing members and settlement banks for daily settlement of accounts for due contracts and rights with a corresponding amount in trade receivables; and
- \$146,318,000 payables under NEMS with corresponding amounts in cash and cash equivalents and trade receivables.

The Company

	Up to 3 months \$'000	> 3 months to 1 year \$'000	Above 1 year \$'000	Total \$'000
At 30 June 2019				
Financial liabilities				
Trade and other payables	280,019	—	—	280,019
At 30 June 2018				
Financial liabilities				
Trade and other payables	294,021	—	—	294,021
At 1 July 2017				
Financial liabilities				
Trade and other payables	321,724	—	—	321,724

40. Financial risk management (continued)

Liquidity risk (continued)

(a) Liabilities related risk (continued)

As at 30 June 2019, the gross notional value of outstanding currency forward contracts held by the Group and Company were \$122,587,000 (2018: \$86,674,000) and \$9,406,000 (2018: \$9,054,000) respectively. The Group's outstanding currency forward contracts that would be settled on a gross basis are analysed into relevant maturity buckets based on the remaining contractual maturity dates as follows:

The Group

	Up to 3 months \$'000	> 3 months to 1 year \$'000	Total \$'000
At 30 June 2019			
Currency forward contracts			
– gross outflows	62,183	60,259	122,442
– gross inflows	62,277	60,034	122,311
At 30 June 2018			
Currency forward contracts			
– gross outflows	46,544	40,044	86,588
– gross inflows	45,612	39,049	84,661
At 1 July 2017			
Currency forward contracts			
– gross outflows	39,957	36,643	76,600
– gross inflows	40,646	37,325	77,971

The Company

	Up to 3 months \$'000	> 3 months to 1 year \$'000	Total \$'000
At 30 June 2019			
Currency forward contracts			
– gross outflows	9,209	–	9,209
– gross inflows	9,407	–	9,407
At 30 June 2018			
Currency forward contracts			
– gross outflows	9,096	–	9,096
– gross inflows	9,057	–	9,057
At 1 July 2017			
Currency forward contracts			
– gross outflows	–	–	–
– gross inflows	–	–	–

Notes to the Financial Statements

For the financial year ended 30 June 2019

40. Financial risk management (continued)

Liquidity risk (continued)

(b) Contingent liabilities related risk

At the balance sheet date, the following guarantees may impact the liquidity positions in the earliest period in which the guarantees are called upon:

	The Group		The Company	
	2019 \$'000	2018 \$'000	2019 \$'000	2018 \$'000
Unsecured guarantees by SGX-DC to banks for standby letters of credit issued by the banks to Chicago Mercantile Exchange (Note 37)	324,623	205,767	—	—

The settlement obligation of the above contingent liabilities is not determinable as the obligation arises from the occurrence of future events that are not within the control of the Group and the Company.

(c) Clearing and settlement-related risk

The clearing houses of the Group, CDP and SGX-DC, act as the novated counterparty for transactions of approved securities and derivatives. The Group is exposed to liquidity risk should any clearing member default. The Group has put in place sufficient committed bank credit facilities of \$554,310,000 (2018: \$405,663,000), comprising committed unsecured credit lines for prudent risk management and to maintain adequate liquid resources.

Fair value measurements

The following table presents assets and liabilities measured at fair value and classified by level of the following fair value measurement hierarchy:

- (a) quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1);
- (b) inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices) (Level 2); and
- (c) inputs for the asset or liability that are not based on observable market data (unobservable inputs) (Level 3).

	Level 1 \$'000	Level 2 \$'000	Level 3 \$'000	Total \$'000
The Group				
At 30 June 2019				
Assets				
Derivative financial instruments	—	256	5,851	6,107
Financial assets, at FVOCI	4,923	78,640	—	83,563
Liabilities				
Derivative financial instruments	—	387	906	1,293
At 30 June 2018				
Assets				
Derivative financial instruments	—	40	—	40
Available-for-sale financial assets	3,551	18,452	3,648	25,651
Liabilities				
Derivative financial instruments	—	1,967	—	1,967
At 1 July 2017				
Assets				
Derivative financial instruments	—	1,450	—	1,450
Liabilities				
Derivative financial instruments	—	79	—	79

40. Financial risk management (continued)

Fair value measurements (continued)

	Level 1 \$'000	Level 2 \$'000	Level 3 \$'000	Total \$'000
The Company				
At 30 June 2019				
Assets				
Derivatives financial instruments	—	198	—	198
Financial assets, at FVOCI	4,923	19,857	—	24,780
Liabilities				
Derivative financial instruments	—	—	—	—
At 30 June 2018				
Assets				
Available-for-sale financial assets	3,551	18,452	—	22,003
Liabilities				
Derivative financial instruments	—	39	—	39
At 1 July 2017				
Assets				
Available-for-sale financial assets	—	—	—	—
Liabilities				
Derivative financial instruments	—	—	—	—

There were no transfers between Level 1 and 2 during the year for the Group (2018: Nil). During the year, there is a transfer from Level 3 to Level 2 for an unquoted equity security. The fair value of this financial asset is measured using the last transacted price during FY2019.

No transfers were made between Level 1, 2 and 3 during the financial year for the Company (2018: Nil).

The fair value of financial instruments traded in active markets is based on quoted market prices at the balance sheet date. The quoted market price used for financial assets held by the Group and the Company is the current bid price. These instruments are included in Level 1.

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. The Group and the Company use a variety of methods and makes assumptions that are based on market conditions existing at each balance sheet date. Quoted market prices or dealer quotes for similar instruments are used to estimate fair value for debt instruments. The fair value of currency forward contracts is determined using quoted forward currency rates at the balance sheet date. Unquoted equity securities classified as financial assets, at FVOCI, are valued using latest transacted price. These instruments are classified as Level 2 and comprise of debt instruments, derivatives financial instruments and unquoted equity securities.

Where a valuation technique for these instruments is based on significant unobservable inputs, such instruments are classified as Level 3. The following table presents the valuation techniques and key inputs that were used to determine the fair value of financial instruments categorised under Level 3.

Notes to the Financial Statements

For the financial year ended 30 June 2019

40. Financial risk management (continued)

Fair value measurements (continued)

Description	Fair Value as at 30 June 2019 \$'000	Valuation Techniques	Unobservable Inputs	Range of Unobservable Inputs
Call option	5,851 (2018: Nil)	Black-Scholes option pricing model	Standard deviation	30% (2018: Nil)
			Risk-free rate	2.75% to 3% (2018: Nil)
Sale of call option	906 (2018: Nil)	Binomial option model	Volatility	30% (2018: Nil)
			Risk-free rate	2.75% to 3% (2018: Nil)

The following table presents the reconciliation of financial instruments measured at fair value based on significant unobservable inputs (Level 3).

The Group

	Available-for-sale financial assets \$'000	Financial assets, at FVOCI \$'000	Derivative financial instruments \$'000
2019			
At 1 July 2018	3,648	–	–
Adjustment on initial application of SFRS(I) 9	(3,648)	3,648	–
Adjusted balance as at 1 July 2018	–	3,648	–
Transfer to Level 2	–	(3,648)	–
Additions	–	–	4,945
As at 30 June 2019	–	–	4,945

There is no unrealised gains/losses recognised in the profit or loss and other comprehensive income for assets and liabilities held at the end of the financial year.

The fair values of current financial assets and liabilities carried at amortised cost approximate their carrying amounts.

Offsetting financial assets and financial liabilities

The Group reports financial assets and financial liabilities on a net basis on the statement of financial position where there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or to realise the asset and settle the liabilities simultaneously.

The following table shows the effect of netting arrangements on financial assets and liabilities that are reported net on the statement of financial position.

(a) Financial assets subject to offsetting arrangements

At 30 June 2019

	Gross amounts of recognised financial assets \$'000	Less: Gross amounts of recognised financial liabilities set off in the statement of financial position \$'000	Net amounts of financial assets presented in the statement of financial position ⁽¹⁾ \$'000
Receivables from clearing members and settlement banks – Daily settlement of accounts for due contracts and rights	2,649,264	(2,084,643)	564,621

40. Financial risk management (continued)

Offsetting financial assets and financial liabilities (continued)

(a) Financial assets subject to offsetting arrangements (continued)

At 30 June 2018

	Gross amounts of recognised financial assets \$'000	Less: Gross amounts of recognised financial liabilities set off in the statement of financial position \$'000	Net amounts of financial assets presented in the statement of financial position ⁽¹⁾ \$'000
Receivables from clearing members and settlement banks – Daily settlement of accounts for due contracts and rights	5,464,748	(4,912,531)	552,217

At 1 July 2017

	Gross amounts of recognised financial assets \$'000	Less: Gross amounts of recognised financial liabilities set off in the statement of financial position \$'000	Net amounts of financial assets presented in the statement of financial position ⁽¹⁾ \$'000
Receivables from clearing members and settlement banks – Daily settlement of accounts for due contracts and rights	5,437,043	(4,861,517)	575,526

⁽¹⁾ The collaterals deposited by clearing members and settlement banks cannot be attributed directly to the individual transactions. For information on the collaterals, please refer to Note 33(a).

(b) Financial liabilities subject to offsetting arrangements

At 30 June 2019

	Gross amounts of recognised financial liabilities \$'000	Less: Gross amounts of recognised financial assets set off in the statement of financial position \$'000	Net amounts of financial liabilities presented in the statement of financial position ⁽¹⁾ \$'000
Payables to clearing members and settlement banks – Daily settlement of accounts for due contracts and rights	2,649,264	(2,084,643)	564,621

At 30 June 2018

	Gross amounts of recognised financial liabilities \$'000	Less: Gross amounts of recognised financial assets set off in the statement of financial position \$'000	Net amounts of financial liabilities presented in the statement of financial position ⁽¹⁾ \$'000
Payables to clearing members and settlement banks – Daily settlement of accounts for due contracts and rights	5,464,748	(4,912,531)	552,217

At 1 July 2017

	Gross amounts of recognised financial liabilities \$'000	Less: Gross amounts of recognised financial assets set off in the statement of financial position \$'000	Net amounts of financial liabilities presented in the statement of financial position ⁽¹⁾ \$'000
Payables to clearing members and settlement banks – Daily settlement of accounts for due contracts and rights	5,437,043	(4,861,517)	575,526

⁽¹⁾ The collaterals deposited by clearing members and settlement banks cannot be attributed directly to the individual transactions. For information on the collaterals, please refer to Note 33(a).

Notes to the Financial Statements

For the financial year ended 30 June 2019

41. Capital requirement and management

The Group's capital management objectives are to optimise returns to shareholders whilst supporting the growth requirements of the business and fulfilling its obligations to the relevant regulatory authorities and other stakeholders.

Effective 1 July 2008, the Group is required, under the Regulatory Capital Framework ("the Framework") formalised by the Monetary Authority of Singapore to maintain adequate financial resources to meet prudential requirements that commensurate with the operational risk, investment risk and the counterparty default risk arising from its central counterparty clearing and settlement activities. With respect to the counterparty default risk, each of the Group's clearing house subsidiaries is required to contribute capital to maintain a clearing fund that is sufficient to cover simultaneous default of the member that is responsible for largest credit exposure, its affiliates and the two financially weakest members under simulated extreme but plausible market conditions. The Group has been in compliance with the Framework since 1 July 2008.

Given the dynamic nature of the Group's business and the framework, the Group regularly reviews and monitors its capital position to ensure that the business activities and growth are prudently funded. In addition, the Group will seek opportunities to optimise shareholders' returns by creating a more efficient capital structure to reduce the overall cost of capital. SGX aims to pay a sustainable and growing dividend over time, consistent with the company's long-term growth prospects.

42. New accounting standards and FRS interpretations

SFRS(I) 16 Leases

SFRS(I) 16 will result in leases being recognised on the balance sheet as the distinction between operating and finance leases is removed. Under the new standard, an asset recognising the right to use of the leased item and a financial liability to pay rentals are recognised. The only exceptions are short-term and low-value leases. The accounting for lessors will not change significantly.

The Group will apply the standard from 1 July 2019 and intends to apply the simplified transition approach and will not restate comparative amounts for the year prior to first adoption.

The Group expects to recognise right-of-use assets approximately \$85,801,000 on 1 July 2019 and lease liabilities of \$85,801,000. It expects that the adoption of SFRS(I) 16 will have no material impact on the income statement in the year of initial application.

43. Authorisation of financial statements

These financial statements have been authorised for issue by the Board of Directors on 31 July 2019.

Statistics of Shareholdings

As at 13 August 2019

Share Capital : S\$410,553,725.94

Number of Issued and Paid-up Shares : 1,071,642,400

Class of Shares : Ordinary shares

Voting Rights : One vote per share

The Company cannot exercise any voting rights in respect of shares held by it as treasury shares.

Subject to the Companies Act, Chapter 50, subsidiaries cannot exercise any voting rights in respect of shares held by them as subsidiary holdings¹.

Distribution of Shareholdings

Size of shareholdings	No. of shareholders	%	No. of shares (excluding treasury shares)	% ²
1 – 99	87	0.24	2,884	0.00
100 – 1,000	11,032	30.92	10,275,178	0.96
1,001 – 10,000	20,876	58.51	81,918,536	7.66
10,001 – 1,000,000	3,661	10.26	138,208,776	12.92
1,000,001 and above	25	0.07	839,397,740	78.46
Total	35,681	100.00	1,069,803,114	100.00

Based on information available to the Company as at 13 August 2019 approximately 99.85% of the issued ordinary shares of the Company are held by the public and, therefore, Rule 723 of the Listing Manual issued by the Singapore Exchange Securities Trading Limited is complied with.

Twenty Largest Shareholders

No.	Name	No. of shares	% ²
1	SEL HOLDINGS PTE LTD ³	249,991,184	23.37
2	CITIBANK NOMINEES SINGAPORE PTE LTD	200,844,050	18.77
3	DBS NOMINEES (PRIVATE) LIMITED	134,971,923	12.62
4	DBSN SERVICES PTE. LTD.	88,646,971	8.29
5	HSBC (SINGAPORE) NOMINEES PTE LTD	58,797,913	5.50
6	RAFFLES NOMINEES (PTE.) LIMITED	30,385,640	2.84
7	BPSS NOMINEES SINGAPORE (PTE.) LTD.	14,972,478	1.40
8	PHILLIP SECURITIES PTE LTD	14,106,397	1.32
9	UNITED OVERSEAS BANK NOMINEES (PRIVATE) LIMITED	7,578,550	0.71
10	MORGAN STANLEY ASIA (SINGAPORE) SECURITIES PTE LTD	5,054,069	0.47
11	MERRILL LYNCH (SINGAPORE) PTE. LTD.	4,507,595	0.42
12	CGS-CIMB SECURITIES (SINGAPORE) PTE. LTD.	3,696,072	0.35
13	OCBC NOMINEES SINGAPORE PRIVATE LIMITED	3,645,077	0.34
14	UOB KAY HIAN PRIVATE LIMITED	2,852,566	0.27
15	SOCIETE GENERALE SPORE BRANCH	2,581,448	0.24
16	OCBC SECURITIES PRIVATE LIMITED	2,433,916	0.23
17	WAN FOKK WENG	2,100,000	0.20
18	DB NOMINEES (SINGAPORE) PTE LTD	1,990,899	0.19
19	BNP PARIBAS NOMINEES SINGAPORE PTE. LTD.	1,894,786	0.18
20	DBS VICKERS SECURITIES (SINGAPORE) PTE LTD	1,853,700	0.17
Total		832,905,234	77.88

Treasury Shares and Subsidiary Holdings

Number of treasury shares: 1,839,286

Number of subsidiary holdings: Nil

Percentage of treasury shares against the total number of issued ordinary shares: 0.17%²

Percentage of subsidiary holdings against the total number of issued ordinary shares: 0%

Substantial Shareholders

According to the Register of Substantial Shareholders maintained by the Company, the Company had no substantial shareholders as at 13 August 2019.

¹ "Subsidiary holdings" is defined in the Listing Manual to mean shares referred to in Sections 21(4), 21(4B), 21(6A) and 21(6C) of the Companies Act, Chapter 50.

² Percentage is calculated based on the total number of issued shares, excluding treasury shares.

³ Pursuant to section 11(2)(b) of the Exchanges (Demutualisation & Merger) Act 1999 (the "Merger Act"), SEL Holdings Pte Ltd ("SEL"), being the special purpose company set up under the Merger Act to hold the SGX shares for the benefit of the Financial Sector Development Fund, shall not exercise or control the exercise of votes attached to the SGX shares. Owing to the restriction in the exercise of votes attached to the shares, SEL is not regarded as a substantial shareholder of SGX.

Notice of Annual General Meeting

Singapore Exchange Limited

Company Registration No. 199904940D
(Incorporated in the Republic of Singapore)

NOTICE IS HEREBY GIVEN that the Twentieth Annual General Meeting of Singapore Exchange Limited (the "Company") will be held at Raffles City Convention Centre, Level 4, Fairmont Ballroom, 80 Bras Basah Road, Singapore 189560 on Thursday, 3 October 2019 at 10.00 a.m. to transact the following business:

ROUTINE BUSINESS

Ordinary Resolution 1 To receive and adopt the Directors' Statement and Audited Financial Statements for the financial year ended 30 June 2019 and the Auditor's Report thereon.

Ordinary Resolution 2 To declare a final tax exempt dividend of 7.5 cents per share for the financial year ended 30 June 2019 ("Final Dividend"). (FY2018: 15 cents per share)

To re-elect the following directors who will be retiring by rotation under Article 97 of the Constitution of the Company and who, being eligible, offer themselves for re-election:

Ordinary Resolution 3(a) ▪ Ms Chew Gek Khim;

Ordinary Resolution 3(b) ▪ Ms Jane Diplock AO; and

Ordinary Resolution 3(c) ▪ Ms Lim Sok Hui.

Ordinary Resolution 4 To approve the sum of S\$930,000 to be paid to the Chairman as director's fees for the financial year ending 30 June 2020. (Same as for FY2019: S\$930,000 for Chairman)

Ordinary Resolution 5 To approve the sum of up to S\$1,600,000 to be paid to all directors (other than the Chief Executive Officer) as directors' fees for the financial year ending 30 June 2020. (Same as for FY2019: up to S\$1,600,000 for all directors other than the Chief Executive Officer)

Ordinary Resolution 6 To appoint KPMG LLP as Auditor of the Company in place of the retiring Auditor, PricewaterhouseCoopers LLP, and to authorise the directors to fix its remuneration.

SPECIAL BUSINESS

To consider and, if thought fit, to pass with or without modifications, the following resolutions, which will be proposed as Ordinary Resolutions:

Ordinary Resolution 7 That authority be and is hereby given to the directors of the Company to:

- (a) (i) issue shares of the Company ("shares") whether by way of rights, bonus or otherwise; and/or
 - (ii) make or grant offers, agreements or options (collectively, "Instruments") that might or would require shares to be issued, including but not limited to the creation and issue of (as well as adjustments to) warrants, debentures or other instruments convertible into shares,

at any time and upon such terms and conditions and for such purposes and to such persons as the directors may in their absolute discretion deem fit; and

- (b) (notwithstanding the authority conferred by this Resolution may have ceased to be in force) issue shares in pursuance of any Instrument made or granted by the directors while this Resolution was in force,

provided that:

- (1) the aggregate number of shares to be issued pursuant to this Resolution (including shares to be issued in pursuance of Instruments made or granted pursuant to this Resolution) does not exceed 50 per cent. of the total number of issued shares (excluding treasury shares and subsidiary holdings) (as calculated in accordance with sub-paragraph (2) below), of which the aggregate number of shares to be issued other than on a *pro rata* basis to shareholders of the Company (including shares to be issued in pursuance of Instruments made or granted pursuant to this Resolution) does not exceed 10 per cent. of the total number of issued shares (excluding treasury shares and subsidiary holdings) (as calculated in accordance with sub-paragraph (2) below);

- (2) (subject to such manner of calculation as may be prescribed by the Singapore Exchange Securities Trading Limited ("SGX-ST") for the purpose of determining the aggregate number of shares that may be issued under sub-paragraph (1) above, the percentage of issued shares shall be based on the total number of issued shares (excluding treasury shares and subsidiary holdings) at the time this Resolution is passed, after adjusting for:
- (i) new shares arising from the conversion or exercise of any convertible securities or share options or vesting of share awards which are outstanding or subsisting at the time this Resolution is passed; and
 - (ii) any subsequent bonus issue or consolidation or subdivision of shares,
- and, in sub-paragraph (1) above and this sub-paragraph (2), "subsidiary holdings" has the meaning given to it in the Listing Manual of the SGX-ST;
- (3) in exercising the authority conferred by this Resolution, the Company shall comply with the provisions of the Listing Manual of the SGX-ST for the time being in force (unless such compliance has been waived by the Monetary Authority of Singapore) and the Constitution for the time being of the Company; and
- (4) (unless revoked or varied by the Company in general meeting) the authority conferred by this Resolution shall continue in force until the conclusion of the next Annual General Meeting of the Company or the date by which the next Annual General Meeting of the Company is required by law to be held, whichever is the earlier.

Ordinary Resolution 8

That:

- (a) for the purposes of Sections 76C and 76E of the Companies Act, Chapter 50 of Singapore (the "Companies Act"), the exercise by the directors of the Company of all the powers of the Company to purchase or otherwise acquire issued ordinary shares of the Company ("Shares") not exceeding in aggregate the Maximum Percentage (as hereafter defined), at such price or prices as may be determined by the directors from time to time up to the Maximum Price (as hereafter defined), whether by way of:
 - (i) market purchase(s) on the SGX-ST and/or any other securities exchange on which the Shares may for the time being be listed and quoted ("Other Exchange"); and/or
 - (ii) off-market purchase(s) (if effected otherwise than on the SGX-ST or, as the case may be, Other Exchange) in accordance with any equal access scheme(s) as may be determined or formulated by the directors as they consider fit, which scheme(s) shall satisfy all the conditions prescribed by the Companies Act,
- and otherwise in accordance with all other laws and regulations and rules of the SGX-ST or, as the case may be, Other Exchange, as may for the time being be applicable, be and is hereby authorised and approved generally and unconditionally (the "Share Purchase Mandate");
- (b) unless varied or revoked by the Company in general meeting, the authority conferred on the directors of the Company pursuant to the Share Purchase Mandate may be exercised by the directors at any time and from time to time during the period commencing from the date of the passing of this Resolution and expiring on the earliest of:
 - (i) the date on which the next Annual General Meeting of the Company is held;
 - (ii) the date by which the next Annual General Meeting of the Company is required by law to be held; and
 - (iii) the date on which purchases and acquisitions of Shares pursuant to the Share Purchase Mandate are carried out to the full extent mandated;

Notice of Annual General Meeting

Singapore Exchange Limited
Company Registration No. 199904940D
(Incorporated in the Republic of Singapore)

- (c) in this Resolution:

"Average Closing Price" means the average of the closing market prices of a Share over the five consecutive trading days on which the Shares are transacted on the SGX-ST or, as the case may be, Other Exchange, immediately preceding the date of the market purchase by the Company or, as the case may be, the date of the making of the offer pursuant to the off-market purchase, and deemed to be adjusted, in accordance with the listing rules of the SGX-ST, for any corporate action that occurs after the relevant five-day period;

"date of the making of the offer" means the date on which the Company makes an offer for the purchase or acquisition of Shares from holders of Shares stating therein the relevant terms of the equal access scheme for effecting the off-market purchase;

"Maximum Percentage" means that number of issued Shares representing 10 per cent. of the total number of issued Shares as at the date of the passing of this Resolution (excluding treasury shares and subsidiary holdings (as defined in the Listing Manual of the SGX-ST)); and

"Maximum Price" in relation to a Share to be purchased or acquired, means the purchase price (excluding brokerage, commission, applicable goods and services tax and other related expenses) which shall not exceed, whether pursuant to a market purchase or an off-market purchase, 105 per cent. of the Average Closing Price of the Shares; and

- (d) the directors of the Company and/or any of them be and are hereby authorised to complete and do all such acts and things (including executing such documents as may be required) as they and/or he/she may consider expedient or necessary or in the interests of the Company to give effect to the transactions contemplated and/or authorised by this Resolution.

By Order of the Board

Ding Hui Yun (Ms)
Seah Kim Ming Glenn (Mr)
Company Secretaries
Singapore Exchange Limited
10 September 2019

EXPLANATORY NOTES

Routine Business

Ordinary Resolutions 3(a), 3(b) and 3(c) are to re-elect Ms Chew Gek Khim, Ms Jane Diplock AO and Ms Lim Sok Hui who will be retiring by rotation under Article 97 of the Constitution of the Company.

Ms Chew Gek Khim will, upon re-election, continue to serve as a member of the Nominating & Governance Committee and Remuneration & Staff Development Committee. Ms Jane Diplock AO will, upon re-election, continue to serve as a member of the Audit Committee and Risk Management Committee. Ms Lim Sok Hui will, upon re-election, continue to serve as the Chairman of the Risk Management Committee. Ms Chew and Ms Diplock AO are each considered an independent director. Ms Lim is considered a non-executive non-independent director. Detailed information on these directors (including information as set out in Appendix 7.4.1 of the Listing Manual of the Singapore Exchange Securities Trading Limited) can be found under "Board of Directors" and "Supplemental Information on Directors Seeking Re-election" in the Company's Annual Report 2019.

Mr Liew Mun Leong is also retiring from office by rotation, but has decided not to offer himself for re-election.

Ordinary Resolution 4 is to seek approval for the payment of S\$930,000 to the Chairman as director's fees for undertaking duties and responsibilities as Chairman of the Board for the financial year ending 30 June 2020 ("FY2020") (which is the same as that approved for the preceding financial year ended 30 June 2019 ("FY2019")). The fee structure for the non-executive directors (including the Chairman) remains unchanged from the fee structure for FY2019.

The sum of S\$930,000 does not include any director's fees payable for serving as chairman or member of any Board committee(s). However, there will be no other emoluments or separate attendance fees payable to the Chairman. In arriving at the proposed Chairman's fee of S\$930,000, the Company took into account:

- (a) the significant leadership role played by the Chairman on the Board, and in providing clear oversight and guidance to management;
- (b) the amount of time the Chairman spends on Company matters, including providing input and guidance on strategy and supporting management in engaging with a wide range of other stakeholders such as partners, governments and regulators, as well as travelling to visit with industry global peers; and
- (c) comparable benchmarks from other large listed companies and peers in the financial industry in Singapore that have chairmen with similar roles and responsibilities, as well as benchmarks from global bourses.

Additional information on the role of the Chairman can be found under "Corporate Governance" in the Company's Annual Report 2019.

Approximately three-quarters of the Chairman's fee of S\$930,000 for FY2020 will be paid in cash and approximately one-quarter will be delivered in SGX shares in the form of a share award to be granted under the SGX Restricted Share Plan for the Chairman, who, on the date of grant of the share award, has served for at least 12 months. All fees payable for serving as chairman or member of any Board committee(s) will be paid entirely in cash. The actual number of shares to be awarded will be determined by reference to the volume-weighted average price of a share on the Singapore Exchange Securities Trading Limited over the 14 trading days immediately following the date of the Twentieth Annual General Meeting, rounded down to the nearest share. The award will consist of fully paid shares, with no performance conditions attached and no vesting period imposed, but it is currently intended that there will be a moratorium on the sale of such shares for a period of up to one year after the grant of the award (this will be lifted if the Chairman steps off the Board before the end of the moratorium period).

Ordinary Resolution 5 is to seek approval for the payment of up to S\$1,600,000 to all directors (other than the Chief Executive Officer) as directors' fees for the financial year ending 30 June 2020 ("FY2020") (which is the same as that approved for the preceding financial year ended 30 June 2019 ("FY2019")). The fee structure for the non-executive directors (including the Chairman) remains unchanged from the fee structure for FY2019.

The directors' fees are calculated based on, among other things, the number of directors expected to hold office during the course of that year.

Approximately three-quarters of the basic fee for the non-executive directors for FY2020 will be paid in cash and approximately one-quarter will be delivered in SGX shares in the form of a share award to be granted under the SGX Restricted Share Plan, for the non-executive directors (other than Mr Thaddeus Beczak and Ms Lim Sok Hui) who, on the date of grant of the share awards, have served for at least 12 months. All fees payable for serving as chairman or member of any Board committee(s) will be paid entirely in cash. The actual number of shares to be awarded will be determined by reference to the volume-weighted average price of a share on the Singapore Exchange Securities Trading Limited over the 14 trading days immediately following the date of the Twentieth Annual General Meeting, rounded down to the nearest share. The award will consist of fully paid shares, with no performance conditions attached and no vesting period imposed, but it is currently intended that there will be a moratorium on the sale of such shares for a period of up to one year after the grant of the award (this will be lifted if the non-executive director steps off the Board before the end of the moratorium period).

The following persons will receive all of their directors' fees for FY2020 in cash (calculated on a pro-rated basis): (i) Mr Liew Mun Leong, who is retiring from office by rotation at the Twentieth Annual General Meeting but will not be offering himself for re-election, and (ii) any other non-executive director who steps down before the date of grant of the share awards. The directors' fees for FY2020 for Mr Thaddeus Beczak and Ms Lim Sok Hui will be paid in cash to their respective employers, Old Peak Investments Ltd and DBS Bank Ltd.

The exact amount of director's fees received by each non-executive director for FY2019 is disclosed in full in the Company's Annual Report 2019.

Notice of Annual General Meeting

Singapore Exchange Limited
Company Registration No. 199904940D
(Incorporated in the Republic of Singapore)

Ordinary Resolution 6 is to approve the appointment of KPMG LLP as the Auditor of the Company in place of the retiring Auditor, PricewaterhouseCoopers LLP, and to authorise the directors to fix its remuneration. PricewaterhouseCoopers LLP has served as external Auditor of the Company since 1999. The directors are accordingly of the view that it would be timely to effect a change of external Auditor with effect from the financial year ending 30 June 2020. PricewaterhouseCoopers LLP will not be seeking re-appointment at the forthcoming Annual General Meeting. The Company had previously disclosed in its Annual Report 2018 that a request for proposal exercise would be conducted for the appointment of an external Auditor to provide audit services. KPMG LLP was selected for the proposed appointment after the Audit Committee invited and evaluated competitive proposals from various audit firms. Please refer to the Letter to Shareholders dated 10 September 2019 for more details.

Special Business

Ordinary Resolution 7 is to empower the directors to issue shares and to make or grant instruments (such as warrants or debentures) convertible into shares, and to issue shares in pursuance of such instruments, up to a number not exceeding 50 per cent. of the total number of issued shares (excluding treasury shares and subsidiary holdings) (the "50% Limit"), with a sub-limit of 10 per cent. for issues other than on a *pro rata* basis to shareholders. The sub-limit of 10 per cent. for non *pro rata* issues is lower than the 20 per cent. sub-limit allowed under the Listing Manual of the SGX-ST. The Company believes that the lower limit sought for the issue of shares made on a non *pro rata* basis to shareholders is adequate for the time being and will review this limit annually. For the purpose of determining the aggregate number of shares that may be issued, the percentage of issued shares shall be based on the total number of issued shares (excluding treasury shares and subsidiary holdings) at the time that Ordinary Resolution 7 is passed, after adjusting for (a) new shares arising from the conversion or exercise of any convertible securities or share options or vesting of share awards which are outstanding or subsisting at the time that Ordinary Resolution 7 is passed, and (b) any subsequent bonus issue or consolidation or subdivision of shares. As at 13 August 2019, the Company had 1,839,286 treasury shares and no subsidiary holdings.

Ordinary Resolution 8 is to renew the mandate to allow the Company to purchase or otherwise acquire Shares, on the terms and subject to the conditions set out in the Resolution.

The Company may use internal or external sources of funds or a combination of both to finance its purchase or acquisition of its Shares. The amount of financing required for the Company to purchase or acquire its Shares, and the impact on the Company's financial position, cannot be ascertained as at the date of this Notice as these will depend on whether the Shares are purchased or acquired out of capital and/or retained profits of the Company, the number of Shares purchased or acquired, the consideration paid for such Shares and whether the Shares purchased or acquired are held as treasury shares or cancelled.

Based on the existing issued Shares (excluding treasury shares) as at 13 August 2019 (the "Latest Practicable Date"), and assuming that on or prior to the Annual General Meeting (i) no further Shares are issued or repurchased, or held by the Company as treasury shares, and (ii) no Shares are held as subsidiary holdings, the purchase by the Company of up to the maximum limit of 10 per cent. of its issued Shares (excluding treasury shares) will result in the purchase or acquisition of 106,980,311 Shares.

In the case of both market purchases and off-market purchases by the Company, assuming that the Maximum Price is S\$8.38 for one Share (being the price equivalent to 5 per cent. above the Average Closing Price of the Shares immediately preceding the Latest Practicable Date), having regard to the Company's share capital and cash and cash equivalents of approximately S\$429,113,000 and S\$257,422,000 respectively, the maximum number of Shares the Company is able to purchase or acquire out of capital to be held as treasury shares or to be cancelled for the duration of the proposed Share Purchase Mandate is 30,718,616 Shares representing 2.87 per cent. of the total number of issued Shares (excluding treasury shares) as at the Latest Practicable Date.

In the case of both market purchases and off-market purchases by the Company, assuming that the Maximum Price is S\$8.38 for one Share (being the price equivalent to 5 per cent. above the Average Closing Price of the Shares immediately preceding the Latest Practicable Date), having regard to the Company's retained profits and cash and cash equivalents of approximately S\$437,163,000 and S\$257,422,000 respectively, the maximum number of Shares the Company is able to purchase or acquire out of retained profits to be held as treasury shares or to be cancelled for the duration of the proposed Share Purchase Mandate is 30,718,616 Shares representing 2.87 per cent. of the total number of issued Shares (excluding treasury shares) as at the Latest Practicable Date.

The financial effects of the purchase or acquisition of such Shares by the Company pursuant to the proposed Share Purchase Mandate on the audited financial statements of the Company and the Group for the financial year ended 30 June 2019 based on the assumptions set out above are set out in paragraph 3.7 of the Letter to Shareholders dated 10 September 2019.

NOTES

- (1) Each of the resolutions to be put to the vote of members at the Annual General Meeting (and at any adjournment thereof) will be voted on by way of a poll.
 - (2) (a) A member who is not a relevant intermediary is entitled to appoint not more than two proxies to attend, speak and vote at the Annual General Meeting. Where such member's form of proxy appoints more than one proxy, the proportion of the shareholding concerned to be represented by each proxy shall be specified in the form of proxy.
 (b) A member who is a relevant intermediary is entitled to appoint more than two proxies to attend, speak and vote at the Annual General Meeting, but each proxy must be appointed to exercise the rights attached to a different share or shares held by such member. Where such member's form of proxy appoints more than two proxies, the number and class of shares in relation to which each proxy has been appointed shall be specified in the form of proxy.
- "Relevant intermediary" has the meaning ascribed to it in Section 181 of the Companies Act, Chapter 50 of Singapore.
- (3) A proxy need not be a member of the Company.
 - (4) Completion and return of the instrument appointing a proxy or proxies by a member will not prevent him/her from attending, speaking and voting at the Annual General Meeting if he/she so wishes. The appointment of the proxy(ies) for the Annual General Meeting will be deemed to be revoked if the member attends the Annual General Meeting in person and in such event, the Company reserves the right to refuse to admit any person or persons appointed under the relevant instrument appointing a proxy or proxies to the Annual General Meeting.
 - (5) The instrument appointing a proxy or proxies (together with the power of attorney, if any, under which it is signed or a certified copy thereof) must, if sent personally or by post, be deposited at the office of the Company's Share Registrar, Boardroom Corporate & Advisory Services Pte. Ltd. at 50 Raffles Place #32-01, Singapore Land Tower, Singapore 048623 or, if submitted by electronic communication (where the member has signed up for the electronic service provided by the Company to its members to receive notices of meetings, annual reports and other shareholder communications electronically, for online proxy appointment and for the access and use of an SGX-designated website (collectively "Electronic Service") and where such service has been made available), be received via the online proxy appointment process through the Electronic Service, in either case not less than 72 hours before the time appointed for holding the Annual General Meeting.

PERSONAL DATA PRIVACY

By submitting an instrument appointing a proxy(ies) and/or representative(s) to attend, speak and vote at the Annual General Meeting and/or any adjournment thereof, a member of the Company (i) consents to the collection, use and disclosure of the member's personal data by the Company (or its agents or service providers) for the purpose of the processing, administration and analysis by the Company (or its agents or service providers) of proxies and representatives appointed for the Annual General Meeting (including any adjournment thereof) and the preparation and compilation of the attendance lists, minutes and other documents relating to the Annual General Meeting (including any adjournment thereof), and in order for the Company (or its agents or service providers) to comply with any applicable laws, listing rules, take-over rules, regulations and/or guidelines (collectively, the "Purposes"), (ii) warrants that where the member discloses the personal data of the member's proxy(ies) and/or representative(s) to the Company (or its agents or service providers), the member has obtained the prior consent of such proxy(ies) and/or representative(s) for the collection, use and disclosure by the Company (or its agents or service providers) of the personal data of such proxy(ies) and/or representative(s) for the Purposes, and (iii) agrees that the member will indemnify the Company in respect of any penalties, liabilities, claims, demands, losses and damages as a result of the member's breach of warranty.

NOTICE OF BOOKS CLOSURE

NOTICE IS ALSO HEREBY GIVEN that, subject to the approval of shareholders for the Final Dividend being obtained at the Twentieth Annual General Meeting, the Transfer Books and Register of Members of the Company will be closed from 5.00 p.m. on Friday, 11 October 2019 up to (and including) Monday, 14 October 2019 for the preparation of dividend warrants. Duly completed registrable transfers of ordinary shares of the Company received by the Company's Share Registrar, Boardroom Corporate & Advisory Services Pte. Ltd. at 50 Raffles Place #32-01, Singapore Land Tower, Singapore 048623 up to 5.00 p.m. on Friday, 11 October 2019 will be registered to determine shareholders' entitlements to the proposed Final Dividend. Shareholders whose Securities Accounts with The Central Depository (Pte) Limited are credited with ordinary shares of the Company at 5.00 p.m. on Friday, 11 October 2019 will be entitled to the proposed Final Dividend. Payment of the Final Dividend, if approved by shareholders at the Twentieth Annual General Meeting, will be made on Friday, 18 October 2019.

Supplemental Information on Directors Seeking Re-election

at the 2019 AGM on Thursday, 3 October 2019
 [pursuant to SGX-ST Listing Manual – Rule 720(6) and Appendix 7.4.1.]

Name of Director	Ms Jane Diplock AO	Ms Chew Gek Khim	Ms Lim Sok Hui (Mrs Chng)
Date of Appointment	25 July 2011	1 December 2013	1 December 2015
Date of last re-appointment (if applicable)	22 September 2016	22 September 2016	22 September 2016
Age	70	58	58
Country of principal residence	New Zealand	Singapore	Singapore
The Board's comments on this appointment (including rationale, selection criteria, and the search and nomination process)	<p>The Board has considered the Nominating & Governance Committee's recommendation and assessments of Ms Diplock's qualifications and experiences and is satisfied that she will continue to contribute relevant knowledge, skills and experience to the Board.</p>	<p>The Board has considered the Nominating & Governance Committee's ("NGCs") recommendation and assessments of Ms Chew's qualifications and experiences and is satisfied that she will continue to contribute relevant knowledge, skills and experience to the Board.</p> <p>Although Ms Chew serves as an Executive Chairman of The Straits Trading Company Limited, Non-Executive Chairman of ARA Trust Management (Suntec) Limited and Non-Independent and Non-Executive Chairman of Malaysia Smelting Corporation Berhad, Ms Chew has continuously demonstrated her ability to discharge her duties adequately. She has, without exception, attended and participated effectively in all Board and Board committee meetings. She has unstintingly shared valuable insights and constructively challenged Management on strategy. The NGC recommends Ms Chew's re-election on account of her wealth of business knowledge and commercial experience, as well as her significant contributions to the SGX Board and Board committees. The Board concurs with the NGC.</p>	<p>The Board has considered the Nominating & Governance Committee's recommendation and assessments of Mrs Chng's qualifications and experiences and is satisfied that she will continue to contribute relevant knowledge, skills and experience to the Board.</p>
Whether appointment is executive, and if so, the area of responsibility	Non-Executive	Non-Executive	Non-Executive
Job Title (e.g. Lead ID, AC Chairman, AC Member etc.)	<ul style="list-style-type: none"> ■ Independent Director ■ Member of the Audit Committee ■ Member of the Risk Management Committee 	<ul style="list-style-type: none"> ■ Independent Director ■ Member of the Nominating & Governance Committee ■ Member of the Remuneration & Staff Development Committee 	<ul style="list-style-type: none"> ■ Non-Independent Director ■ Chairperson of the Risk Management Committee
Professional qualifications	<ul style="list-style-type: none"> ■ Bachelor of Arts (Honours), LL.B, Dip Ed, Sydney University ■ Dip. Int. Law, Australian National University ■ Chartered Fellow of the New Zealand Institute of Directors ■ Fellow of the Australian Institute of Company Directors 	<ul style="list-style-type: none"> ■ LL.B (Honours), National University of Singapore 	<ul style="list-style-type: none"> ■ Bachelor of Accountancy (Honours), National University of Singapore ■ Chartered Financial Analyst (CFA) ■ Certified Financial Risk Manager (FRM) ■ Fellow Chartered Accountant of Singapore ■ IBF Distinguished Fellow
Working experience and occupation(s) during the past 10 years	<ul style="list-style-type: none"> ■ Member of International Advisory Board of the Securities and Exchange of India ■ Member of International Advisory Committee of the China Securities Regulatory Commission ■ Deputy Chairman & Lead Independent Director of International Integrated Reporting Council Board (From 2012 to 2018) ■ Member of Public Interest Oversight Board ■ Chairman of Securities Commission, New Zealand (From September 2001 to April 2011) ■ Chairman of Executive Committee, International Organisation of Securities Commissions (From May 2004 to April 2011) ■ Deputy Chairman of Asia Pacific Regional Committee of IOSCO (From May 2004 to April 2011) ■ Member of Australia New Zealand Leadership Forum (From May 2004 to April 2011) ■ Member of Financial Crisis Advisory Forum ■ Member of Steering Committee of International Integrated Reporting Committee (From May 2010 to April 2011) 	<ul style="list-style-type: none"> ■ Deputy Chairman of The Tan Chin Tuan Foundation (From July 2003 to present) ■ Executive Chairman of Tocity Group (From November 2004 to present) ■ Executive Chairman of The Straits Trading Company Limited (From November 2009 to present) 	<ul style="list-style-type: none"> ■ Managing Director & Group Chief Financial Officer of DBS Group (From October 2008 to present) ■ Managing Director & Head, Group Risk of DBS Group (From July 2002 to September 2008)

Name of Director	Ms Jane Diplock AO	Ms Chew Gek Khim	Ms Lim Sok Hui (Mrs Chng)
Shareholding interest in the listed issuer and its subsidiaries	2,577 of SGX shares	2,577 of SGX shares	Nil. The director's fees for Mrs Chng is paid in cash to her employer, DBS Bank Ltd.
Any relationship (including immediate family relationships) with any existing director, existing executive officer, the issuer and/or substantial shareholder of the listed issuer or of any of its principal subsidiaries	Nil	Nil	Nil
Conflict of interest (including any competing business)	Nil	Nil	Nil
Undertaking (in the format set out in Appendix 7.7) under Rule 720(1) has been submitted to the listed issuer	Yes	Yes	Yes
Other Principal Commitments¹ including Directorships			
Past (for the last 5 years)	<ul style="list-style-type: none"> ▪ International Integrated Reporting Council Board (Deputy Chairman & Lead Independent Director) 	<ul style="list-style-type: none"> ▪ Amalgamated Holdings Private Limited ▪ ARA Asset Management Limited (Non-Executive Deputy Chairman) ▪ Cairnhill Rock Pte. Ltd. ▪ Morriston Pte. Ltd. ▪ Selected Properties Pte. Ltd. 	<ul style="list-style-type: none"> ▪ Accounting Standards Council (Council Member) ▪ Asian Financial Cooperation Association (Vice Chairman) ▪ DBS Bank China Ltd (Supervisor) ▪ Housing & Development Board (Director) ▪ Industry Advisory Board, NUS Centre for Future-Ready Graduates (Member) ▪ Inland Revenue Authority of Singapore (Director)⁴
Present	<p>Listed Company Nil</p> <p>Others (Non-listed company)</p> <ul style="list-style-type: none"> ▪ Australian Financial Services Group Pty Limited ▪ Singapore Exchange Regulation Pte. Ltd. <p>Major Appointment (other than Directorship)</p> <ul style="list-style-type: none"> ▪ Abu Dhabi Global Market Regulatory Committee (Chairman) ▪ International Advisory Board of the Securities and Exchange Board of India (Member) ▪ International Advisory Committee of the China Securities Regulatory Commission (Member) ▪ International Integrated Reporting Council (Chairman Governance and Nominations Committee) ▪ Public Interest Oversight Board (Member) 	<p>Listed Company</p> <ul style="list-style-type: none"> ▪ ARA Trust Management (Suntec) Limited (Non-Executive Chairman) ▪ Malaysia Smelting Corporation Berhad (Non-Independent and Non-Executive Chairman) ▪ The Straits Trading Company Limited (Executive Chairman) <p>Others (Non-listed Company)</p> <ul style="list-style-type: none"> ▪ ARA Asset Management Holdings Pte. Ltd. ▪ Rahman Hydraulic Tin Sdn Bhd ▪ Straits Real Estate Pte. Ltd. ▪ Tan Chin Tuan Pte. Ltd.² (Deputy Executive Chairman) ▪ Tecity Pte Ltd³ (Executive Chairman) <p>Major Appointment (other than Directorship)</p> <ul style="list-style-type: none"> ▪ Honour (Singapore) Ltd (Member) ▪ RSIS Board of Governors (Member) ▪ MAS Securities Industry Council (Member) ▪ The Tan Chin Tuan Foundation (Deputy Executive Chairman) ▪ The Tan Sri Tan Foundation (undergoing liquidation) (Chairman) 	<p>Listed Company Nil</p> <p>Others (Non-listed company) Nil</p> <p>Major Appointment (other than Directorship)</p> <ul style="list-style-type: none"> ▪ DBS Group (Chief Financial Officer) ▪ DBS Bank India Ltd (Non-Executive Chairman) ▪ International Integrated Reporting Council (Council Member) ▪ International Women's Forum (Singapore) (Member)

¹ "Principal Commitments" has the same meaning as defined in the Code.

² Including its subsidiaries & associates, namely Consultants Services (Private) Limited (Executive Chairman), Tecity Management Pte. Ltd. (Executive Chairman), Grange Investments Holdings Private Limited, Kambau Pte. Ltd. (Executive Chairman), Tiong Cheng Pte Ltd (Deputy Executive Chairman), Amberlight Limited, Siong Lim Private Limited (Executive Chairman), Choice Equities Pte Ltd, Integrated Holdings Private Limited (Executive Chairman) Nxford Holdings Pte Ltd, Aequitas Pte. Ltd., Raffles Investments Private Limited, Raffles Investments (1993) Pte Ltd, Sigford Pte. Ltd..

³ Including its subsidiaries & associates, namely Ho Peng Holdings Private Limited, Selected Holdings Private Limited, Mellford Pte. Ltd. and The Cairns Pte. Ltd.

⁴ Mrs Chng stepped down from the Board of the Inland Revenue Authority of Singapore in August 2019.

Supplemental Information on Directors Seeking Re-election

at the 2019 AGM on Thursday, 3 October 2019
 [pursuant to SGX-ST Listing Manual – Rule 720(6) and Appendix 7.4.1.]

Name of Director	Ms Jane Diplock AO	Ms Chew Gek Khim	Ms Lim Sok Hui (Mrs Chng)
Information required			
Disclose the following matters concerning an appointment of director, chief executive officer, chief financial officer, chief operating officer, general manager or other officer of equivalent rank. If the answer to any question is "yes", full details must be given.			
(a) Whether at any time during the last 10 years, an application or a petition under any bankruptcy law of any jurisdiction was filed against him/her or against a partnership of which he/she was a partner at the time when he/she was a partner or at any time within 2 years from the date he/she ceased to be a partner?	No	No	No
(b) Whether at any time during the last 10 years, an application or a petition under any law of any jurisdiction was filed against an entity (not being a partnership) of which he/she was a director or an equivalent person or a key executive, at the time when he/she was a director or an equivalent person or a key executive of that entity or at any time within 2 years from the date he/she ceased to be a director or an equivalent person or a key executive of that entity, for the winding up or dissolution of that entity or, where that entity is the trustee of a business trust, that business trust, on the ground of insolvency?	No	No	No
(c) Whether there is any unsatisfied judgment against him/her?	No	No	No
(d) Whether he/she has ever been convicted of any offence, in Singapore or elsewhere, involving fraud or dishonesty which is punishable with imprisonment, or has been the subject of any criminal proceedings (including any pending criminal proceedings of which he/she is aware) for such purpose?	No	No	No
(e) Whether he/she has ever been convicted of any offence, in Singapore or elsewhere, involving a breach of any law or regulatory requirement that relates to the securities or futures industry in Singapore or elsewhere, or has been the subject of any criminal proceedings (including any pending criminal proceedings of which he/she is aware) for such breach?	No	No	No
(f) Whether at any time during the last 10 years, judgment has been entered against him/her in any civil proceedings in Singapore or elsewhere involving a breach of any law or regulatory requirement that relates to the securities or futures industry in Singapore or elsewhere, or a finding of fraud, misrepresentation or dishonesty on his/her part, or he/she has been the subject of any civil proceedings (including any pending civil proceedings of which he/she is aware) involving an allegation of fraud, misrepresentation or dishonesty on his/her part?	No	No	No
(g) Whether he/she has ever been convicted in Singapore or elsewhere of any offence in connection with the formation or management of any entity or business trust?	No	No	No
(h) Whether he/she has ever been disqualified from acting as a director or an equivalent person of any entity (including the trustee of a business trust), or from taking part directly or indirectly in the management of any entity or business trust?	No	No	No
(i) Whether he/she has ever been the subject of any order, judgment or ruling of any court, tribunal or governmental body, permanently or temporarily enjoining him/her from engaging in any type of business practice or activity?	No	No	No
(j) Whether he/she has ever, to his/her knowledge, been concerned with the management or conduct, in Singapore or elsewhere, of the affairs of:			
(i) any corporation which has been investigated for a breach of any law or regulatory requirement governing corporations in Singapore or elsewhere; or	No	Yes On February 1993, the Commercial Affairs Department investigated the affairs of two companies of which Ms Chew Gek Khim was a director. In June 1993, after completion of the investigation, the matter was closed. No charges were brought against Ms Chew and the two companies in connection with the investigations.	No
(ii) any entity (not being a corporation) which has been investigated for a breach of any law or regulatory requirement governing such entities in Singapore or elsewhere; or	No	No	No
(iii) any business trust which has been investigated for a breach of any law or regulatory requirement governing business trusts in Singapore or elsewhere; or	No	No	No
(iv) any entity or business trust which has been investigated for a breach of any law or regulatory requirement that relates to the securities or futures industry in Singapore or elsewhere,	No	No	No
in connection with any matter occurring or arising during that period when he/she was so concerned with the entity or business trust?			
(k) Whether he/she has been the subject of any current or past investigation or disciplinary proceedings, or has been reprimanded or issued any warning, by the Monetary Authority of Singapore or any other regulatory authority, exchange, professional body or government agency, whether in Singapore or elsewhere?	No	Yes On February 1993, the Commercial Affairs Department investigated the affairs of two companies of which Ms Chew Gek Khim was a director. In June 1993, after completion of the investigation, the matter was closed. No charges were brought against Ms Chew and the two companies in connection with the investigations.	No

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