# ANNUAL REPORT

Stock Code: 388





HKEX – the pioneer in connecting China and the international markets. HKEX is about connecting markets, connecting growth, and connecting opportunity.

We are creating the most effective platform for cross-border market access and building a unique market in Hong Kong for products with both Chinese and international relevance.

As we extend our value proposition, we aim to help Hong Kong become China's global wealth management centre, the offshore leader in China-related risk management and China's global asset pricing centre.

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

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# HIGHLIGHTS OF THE YEAR



# **5 December**

Launched Shenzhen Connect





# 16 August

Market regulators approved the establishment of mutual stock market access between Shenzhen and Hong Kong



# 11 October

Stock exchanges of Hong Kong and Shenzhen and the related clearing houses signed the four-party agreement

# 13 October

Kicked off international roadshows



# October -November

Completed connectivity tests and market rehearsals

# Other Corporate News



**14 June**Hosted fourth
LME Week Asia
in Hong Kong

# 香港交易所大宗商品交易平台前海落户仪式

# 6 September

Signed MOU with the Authority of Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone to explore potential cooperation in financial services and financial innovation

# 24 May

21 January

• Launched new corporate identity

Hosted third RMB FIC Conference

 Published Strategic Plan 2016-2018

# 24 September

Launched new HKEX Group website

# 31 December

Led world in IPO funds raised for second straight year

# Regulatory Framework

#### 17 June

Issued joint consultation on listing regulation with SFC

# 20 June

Announced the revised stock option position limit model after consulting market

# Products and Services

#### 9 May

Introduced futures on seven stock sectors

# 13 June

First batch of Leveraged and Inverse Products listed in Hong Kong

#### 23 June

Launched RMB indices with Thomson Reuters

# 15 August

OTC Clear launched clearing service for cross currency swaps

# **5 September**

Introduced Mini-Hang Seng China Enterprises Index Options

# Market Operations



# 18 February

LME unveiled its new Ring after relocating to a new headquarters

#### 25 July

Introduced Closing Auction Session in the securities market

# 22 August

Rolled out Volatility Control Mechanism in the securities market

# FINANCIAL HIGHLIGHTS

	2016 \$m	2015 \$m	Change
Revenue and other income	11,116	13,375	(17%)
Operating expenses	3,455	3,290	5%
EBITDA <sup>1</sup>	7,661	10,085	(24%)
Profit attributable to shareholders	5,769	7,956	(27%)
Basic earnings per share	\$4.76	\$6.70	(29%)
Interim dividend per share	\$2.21	\$3.08	(28%)
Final dividend per share	\$2.04	\$2.87	(29%)
	\$4.25	\$5.95	(29%)
Dividend payout ratio	90%	90%	_

#### Key messages

- Revenue and other income for 2016 was 17 per cent lower than 2015 or 14 per cent lower after excluding 2015 exceptional gains of \$514 million. This compares favourably to the significantly reduced levels of market activity experienced during the year.
- Group revenue for the year was significantly influenced by the following factors:
  - Subdued activity on the Cash Market in Hong Kong, which returned to pre-2015 levels;
  - Decreased Commodities trading activity on the LME; and
  - Increased trading of derivatives contracts on the Futures Exchange.
- Operating expenses increased by 5 per cent against the prior year or 3 per cent after eliminating a 2015 one-off recovery, of \$77 million, from the liquidators of Lehman Brothers Securities Asia Limited. Increased operating costs reflect the continued investment in strategic projects, which was substantially offset by expenditure control measures introduced during the year.
- The EBITDA margin of 69 per cent was 6 per cent lower than 2015, reflecting the decline of trading and clearing income as compared to the prior year.
- Profit attributable to shareholders decreased by 27 per cent against 2015 or 22 per cent after adjusting for the after tax effect of the 2015 exceptional gains and one-off recovery of \$591 million. In 2015 record high trading volume on the Cash Market delivered exceptional profits for the Group. Notwithstanding the difficult trading conditions in 2016, profit attributable to shareholders compares well with pre-2015 results and was 12 per cent higher than 2014.

	2016	2015	Change
KEY MARKET STATISTICS			
ADT of equity products traded on the Stock Exchange (\$bn)	50.2	79.9	(37%)
ADT of DWs, CBBCs and warrants traded on the Stock Exchange (\$bn)	16.7	25.7	(35%)
ADT traded on the Stock Exchange (\$bn)	66.9	105.6	(37%)
Average daily number of derivatives contracts traded on the Futures Exchange	463,841	394,174	18%
Average daily number of stock options contracts traded on the Stock Exchange	297,903	374,346	(20%)
Average daily volume of metals contracts traded on the LME (lots)	618,627	670,189	(8%)

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

# CHAIRMAN'S STATEMENT



2016 was a year of uncertainty and surprises. The global financial markets were volatile and overshadowed by political and economic uncertainties arising from the UK vote to leave the EU and the US presidential election. At home, there were concerns that Mainland China's economy was slowing down and that interest rates would rise in response to the US interest rate hikes. All these contributed to cautious sentiment among investors, and created a challenging market environment for the Group.

## **Performance and Dividend**

The Hong Kong securities market experienced subdued trading in 2016 compared with all-time high turnover the previous year. Our commodity business in the UK also had a difficult year due to weakened global demand.

Against this backdrop, it is encouraging that the Stock Exchange continued to rank first globally in terms of IPO fundraising and securitised derivatives<sup>2</sup> turnover. The Hong Kong derivatives market also stayed strong in 2016 with new records in our total futures trading and across various individual derivatives market products.

HKEX - World Leader in 2016 <sup>1</sup>	
IPO fundraising	\$195.3 billion
Total turnover of securitised derivatives <sup>2</sup>	\$4.1 trillion

- 1 Source: World Federation of Exchanges
- 2 DWs and CBBCs

The Group's total revenue and other income amounted to \$11.1 billion and the profit attributable to shareholders was \$5,769 million for the year ended 31 December 2016, down 17 per cent and 27 per cent respectively from the record-highs in 2015. The Board recommends a final dividend of \$2.04 per share, resulting in the full-year dividend of \$4.25 per share.

# Strategic Update

Notwithstanding the difficult environment, we have made good progress towards our strategic goals. The launch of Shenzhen-Hong Kong Stock Connect in early December was a major achievement as it has linked the secondary equity markets of Hong Kong, Shenzhen and Shanghai for the first time, resulting in a mutual stock market with a combined equity market value of about RMB70 trillion. We will continue to broaden our connectivity scheme to cover other asset classes in order to capture opportunities arising from the RMB's internationalisation and help further strengthen the role of Hong Kong as an international financial centre.

Building on the resilience and growth of our derivatives markets, we continue to introduce new products to meet the needs of Mainland investors seeking international asset diversification and to give the market more tools for trading and risk management. We are pleased to see that our USD/CNH Futures and other RMB Currency Futures lead other exchanges in term of liquidity and distribution. OTC Clear has also become the first international clearing house to provide clearing services for USD/CNH cross currency swaps. These initiatives are an important part of our strategy to expand our product capabilities across asset classes to enhance HKEX's value proposition, and to help ensure that Hong Kong stays at the forefront of China's capital market development.

We are now preparing for the launch of our Qianhai commodities trading platform. Leveraging on HKEX's reputation and the LME's expertise, the platform will provide a credible and efficient trading venue with related infrastructure and facilities to serve the real economy, which in time could develop representative price benchmarks for Mainland China.

Details of the Group's performance and initiatives undertaken in 2016 are set out in the Chief Executive's Review and Business Review sections of this Annual Report.

# **Quality Market**

We recognise that market quality and efficiency are key elements to the Group's sustainability. We successfully implemented the Closing Auction Session and Volatility Control Mechanism (VCM) for the Hong Kong securities market in 2016, and the VCM for the derivatives market in January 2017. We also announced a plan to revise the stock option position limit model for the derivatives market to align with international practices. We are now working with the SFC to review and analyse responses to the proposed enhancements of the Exchange's decision-making and governance structure for listing regulation. In the UK, the LME decided to introduce caps on warehouse charges, effective 1 April 2017, to address concerns in and bring greater stability to the metals market. We will continue to work in close collaboration with our regulators and stakeholders to ensure our infrastructure and systems remain reliable and efficient, and our regulations and market structure remain updated and appropriate to converge with the ever changing market landscape.

# **Environmental, Social and Governance Performance**

We continually enhance our ESG efforts, our corporate governance and risk management practices with the aim to create and deliver sustainable value to all our stakeholders. In 2016, we conducted an independent review of our Board's composition to ensure we have the right balance of skills and expertise to lead the Company forward. Based on the consultant's recommendations, we have developed specific selection criteria for identifying potential Director candidates to stand for election at the 2017 AGM. During the year, we further enhanced our risk management approach by performing quarterly risk assessments on the Group, and organised a series of mandatory compliance training sessions for employees to reinforce a strong risk culture across the organisation. Details of our efforts in promoting sustainability in our marketplace, workplace, community and environment are set out in our 2016 CSR Report which will be available on the HKEX Group website together with this Annual Report.

# **Outlook**

Looking ahead into the rest of 2017, the operating environment for financial markets is expected to remain challenging. Despite some encouraging signs of better growth prospects in the US and Europe, many political and economic uncertainties remain. Capital markets in 2017 are likely to be volatile. At HKEX, we will stay vigilant along our strategic journey. We will continue to enhance our competitiveness to position the Group for future growth and success, and to realise our vision to transform Hong Kong into a global wealth management centre connecting China and the world.

# **Acknowledgements**

I would like to express my sincere gratitude to my fellow Board members for their commitment and valuable input. On behalf of the Board, I would like to extend special appreciation to Dr Bill Kwok and Mr Vincent Lee, who will retire from the Board at the conclusion of the 2017 AGM. Their experience in the financial services industry and instrumental advice have provided precious guidance to the Board and have contributed extensively to the development of HKEX from a local exchange into a reputable international exchange throughout their 17 years' service on the Board.

Finally, I would like to take this opportunity to thank our Shareholders and other stakeholders for their continuing support and confidence in HKEX, and also our employees for their dedication and hard work, which enable the Group to perform its public duty while maximising value for our Shareholders.

### **CHOW Chung Kong**

Chairman

Hong Kong, 27 February 2017



The year 2016 marked the opening chapter of our 2016–18 Strategic Plan. At the beginning of the year, we set out to build the most effective platform for cross-border market access and develop a unique destination market in Hong Kong for products with both Chinese and international relevance. With this vision in mind, we forged our strategies across equities, commodities and FIC, as well as our platforms and capabilities.

From a macro perspective, 2016 was also one of the most unpredictable years in recent memory, reflecting volatility in global financial markets due to political events such as the decision by voters in the UK to exit the EU and the US presidential election. Although market performance was generally less impressive than the previous year, we managed to react proactively and maintained our focus on important strategic projects. We also stepped up our efforts in launching new products and implemented significant enhancements to the market structures in Hong Kong and London. These achievements have strengthened HKEX's ability to make unique and important contributions to the gradual liberalisation of China's capital markets and the entrenchment of Hong Kong as a leading global financial centre.

#### **Market Performance**

Our primary market remained competitive despite heightened market volatility. HKEX continued to rank first globally in IPOs with 126 <sup>1</sup> companies listing and raising \$195.3 billion in total, representing a 26 per cent drop in IPO funds raised from 2015. Our existing listed companies also raised \$294.8 billion, a decrease of 65 per cent over 2015. Total funds raised reached \$490.1 billion.

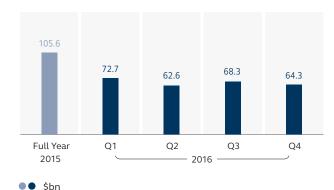
The subdued market conditions were reflected in weakened ADT in the secondary market. Compared with the exceptionally high ADT of over \$100 billion in 2015, Cash Market ADT fell below \$70 billion for the year. At \$66.9 billion, full-year 2016 ADT was down 37 per cent from 2015.

Trading in the derivatives market was strong, with a number of new records set in 2016. Total futures turnover reached 84,100,129 contracts, an increase of 14 per cent from 2015. Trading of various options, the open interest of various products and turnover in AHFT Sessions also rose to new record highs in 2016. Our strategy of transforming HKEX into a derivatives powerhouse across all asset classes is now a reality. Trading and clearing fees from derivatives products, including contracts traded on the LME, accounted for 60 per cent of the Group's total trading and clearing fee-based revenues in 2016.

ORGANISATION

<sup>1</sup> Includes transfers of listing from GEM to the Main Board

# Average Daily Turnover on Cash Market



# Average Daily Number of Contracts Traded on Derivatives Market



# **Business Development Review**

## **Enhancing the Competitiveness of Our Core Businesses**

We continued our efforts in maintaining and enhancing the competitiveness of our primary listings market in 2016. To streamline decision-making processes on listing matters and enhance coordination between the SFC and the Exchange, SEHK issued a joint consultation with the SFC on "Proposed Enhancements to the Stock Exchange's Decision-Making and Governance Structure for Listing Regulation" in June 2016. The consultation period ended on 18 November 2016 after a two-month extension. The SFC and HKEX are carefully considering and analysing all submissions. As part of our efforts to promote issuers' self-compliance with the Listing Rules, SEHK published a series of Guidance Letters on major areas concerning market quality and listed issuers, and announced decisions on interpretations of the Listing Rules.

We successfully rolled out several major initiatives to improve the secondary market microstructure and enhance market efficiency in 2016:

- Closing Auction Session was launched on 25 July to facilitate trade execution at securities' closing prices and has been operating smoothly.
- Volatility Control Mechanism (VCM) for the securities market was introduced on 22 August to prevent extreme price volatility arising from trading incidents. VCM for the derivatives market was rolled out on 16 January 2017. The mechanism has not been triggered to date.
- **Pre-Trade Risk Management System** for the derivatives market was introduced in April 2016 to help Participants manage pre-trade and in-house risk controls.
- Consultation on the proposed revision to stock option position limits (SOPL) was completed in June 2016 to align Hong Kong's SOPL regime more closely with international practices and ensure the relevance of the individual position limits at HKEX in the long run.

Building on our historically strong cash and equity derivatives businesses, we further expanded our product suite to address investor demand. New equity products launched in 2016 include (i) seven Sector Index Futures; (ii) Mini H-Shares Index options; and (iii) Leveraged and Inverse ETFs on Hong Kong and foreign indices.

The successful launch of Shenzhen Connect on 5 December 2016 took our mutual market access to a new horizon by opening up another Mainland market for international and Hong Kong investors. Shenzhen Connect links the secondary equity markets between Hong Kong, Shanghai and Shenzhen for the first time, creating an immense secondary equity market of RMB70 trillion when combined. Building on the solid foundation of Shanghai Connect, Shenzhen Connect proves the Connect programme is not only flexible and scalable, but also an important part of Hong Kong's market infrastructure and HKEX's strategy for the long term.

To further enrich the variety of traded products and provide more investment opportunities and convenience for domestic and overseas investors, we plan to include ETFs as eligible securities, subject to further discussion with our Mainland counterparts.

# **Pursuing Growth in Our Commodities Business**

Global commodities markets faced continuing challenges in 2016, reflected in a reduction in volumes. Total LME volumes of 156.5 million lots were recorded during the year, down 8 per cent from 2015. Trading in major base metals including LME Copper, Aluminium, Zinc, Tin and Lead declined across the board, with the exception of Nickel turnover which was flat compared to 2015. Year-end LME futures market open interest was at 2.2 million lots, down 4 per cent year-on-year.

Following a market-wide consultation, the LME concluded its three-year-long warehouse reform in 2016 by introducing transparent caps on maximum rates charged by registered warehouses. The first capped charges will come into effect on 1 April 2017.

As part of our efforts to explore new business opportunities and optimise market structure to support LME members, the LME implemented the following key initiatives and measures during 2016:

- LMEshield: To extend the LME's experience in secure warranting and improve confidence in global warehousing, LMEshield was launched in April for warehouse companies to issue and manage electronic receipts related to commodities stored off-warrant in about 20 jurisdictions across the globe.
- LMEprecious: In partnership with the World Gold Council and a group of leading industry players, the LME announced in August its plan to launch LMEprecious, an innovative new suite of exchange-traded, centrally-cleared precious metals products. LMEprecious will be launched in the first half of 2017, subject to regulatory approvals.
- Market Structure Enhancements: Following extensive discussions with LME members and the broader user base, the LME and LME Clear introduced a package of measures to strengthen metals trading in August. These measures include a rebalancing of member fees for short-dated carries, cap for position transfers, initial margin recalibration, as well as a review of incentive programmes. LME Clear also announced a reduction in charges for trade compression and a warrant as collateral service, which will be implemented in 2017.

An important new venture of our commodities strategy, the beginning of our establishment of a Mainland commodity trading platform in the Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone, also began in 2016. We aim to leverage the successful model of the LME to develop a credible, transparent and reliable commodities trading venue backed by physical delivery and a warehouse system to support the Mainland's real economy. Preparatory work is underway.

# **Transforming Our FIC Business**

2016 also marked a new era of volatility in the RMB for both onshore and offshore markets. Under these evolving market conditions, HKEX embraced opportunities and took a major step forward in our FIC business development with a view to strengthening Hong Kong's leadership in introducing RMB products for the offshore market.

Our USD/CNH Currency Futures contract, a proven risk management tool, continued to lead the world with the best liquidity and distribution among exchanges. Open interest of USD/CNH Currency Futures was 45,635 contracts on 30 December 2016, twice the previous high of 23,887 contracts in 2014. To diversify our product offerings, we launched additional cash-settled RMB currency pairs against the Japanese yen, Euro, Australian dollar and CNH/USD dollar in May 2016. We started to offer margin offsets for USD/CNH and CNH/USD currency futures in July to help our participants reduce their margin costs. New RMB Currency Options will be launched in the first quarter of 2017 to complement our existing currency futures, enabling investors to execute more trading strategies.

In June 2016, we collaborated with Thomson Reuters in launching a series of RMB currency (RXY) indices which measure the intraday performance of the RMB against a basket of key currencies. We are also preparing to launch RMB Currency Index Futures in 2017 subject to market readiness.

OTC Clear achieved an important milestone during the year by becoming the first international clearing house to provide clearing for USD/CNH cross currency swaps. Going forward, we will further expand OTC Clear's offering to cover clearing for wider types of RMB-based FX products.

# **Enhancing Platform Capabilities**

To maintain our long-term growth and enhance our ability to tap new opportunities ahead, we have been undertaking projects to upgrade the core systems in our Hong Kong securities and derivatives markets. We are working on the Orion Trading Platform (OTP) in the securities market, which will replace the current securities trading system. We completed the system development phase in the fourth quarter of 2016 and the OTP is scheduled for launch in the fourth quarter of 2017. For the derivatives market, we completed the planning process for the Genium upgrade of existing derivatives trading and clearing platforms in 2016 to ensure stability and scalability.

We also released a revamped version of our Group website in 2016 by rebuilding the back-end infrastructure and content management system. We will launch our new market website in 2017 to provide detailed information on HKEX's Hong Kong market.

# Strategic Outlook - Mutual Market Access 2.0

The launch of Shenzhen Connect symbolises the beginning of Mutual Market Access 2.0. As outlined in the HKEX Strategic Plan 2016–18, we will continue to extend and deepen our value proposition against the backdrop of Mainland China's accelerating capital market internationalisation through entrenching the Connect model under the Mutual Market Access 2.0.

Apart from including ETFs, the exchanges and clearing houses on both sides are working closely with Mainland regulatory authorities to sort out the holiday arrangements and other trading enhancements under Shanghai Connect and Shenzhen Connect with a view to providing investors with greater market availability and convenience.

# **Appreciation**

risk management centre and global asset pricing centre.

In closing, I would like to express my greatest appreciation to the HKEX Group staff. They have not only maintained smooth operation of our markets in 2016 but also made great progress and breakthroughs under our Strategic Plan 2016–18. I would also like to take this opportunity to thank the senior executives who left us in 2016 and Mr Garry Jones, who retired from his position as the Chief Executive of the LME in January 2017, for their contributions to the HKEX Group.

I must also thank our regulators in Hong Kong and other markets, especially the SFC, as well as our market participants and other stakeholders for their generous support, in particular over the course of implementing Shenzhen Connect.

Last but not least, I would like to thank my fellow members of the Board for their unconditional trust and guidance, without which we would not have achieved another milestone in a challenging year. I am confident that with our strong conviction and perseverance, we will continue to turn challenges into opportunities.

LI Xiaojia, Charles

Director and Chief Executive

Hong Kong, 27 February 2017

# **BOARD AND COMMITTEES**



From left: Apurv Bagri, Fred Hu, John Williamson, Anita Fung, Chan Tze Ching, Bill Kwok and Charles Li

## **Board**

#### **INEDs**

CHOW Chung Kong \* 1 GBS, JP (Chairman) Apurv BAGRI<sup>2</sup> CHAN Tze Ching, Ignatius BBS, JP Timothy George FRESHWATER \* 3 FUNG Yuen Mei, Anita \* BBS, JP Rafael GIL-TIENDA \* John Barrie HARRISON \* HU Zuliu, Fred KWOK Chi Piu, Bill JP LEE Kwan Ho, Vincent Marshall BBS LEUNG KO May Yee, Margaret \* SBS, JP John Mackay McCulloch WILLIAMSON WONG Sai Hung, Oscar 4

#### **Executive Director**

LI Xiaojia, Charles (Chief Executive)

## **Audit Committee**

**Committees** 

John Barrie HARRISON (Chairman) CHAN Tze Ching, Ignatius FUNG Yuen Mei, Anita KWOK Chi Piu, Bill John Mackay McCulloch WILLIAMSON

# Environmental, Social and **Governance Committee**

CHOW Chung Kong <sup>5</sup> (Chairman) Apurv BAGRI 6 Rafael GIL-TIENDA 7 LEE Kwan Ho, Vincent Marshall LI Xiaojia, Charles John Mackay McCulloch WILLIAMSON

#### **Executive Committee**

CHOW Chung Kong 5 (Chairman) KWOK Chi Piu, Bill LEE Kwan Ho, Vincent Marshall LEUNG KO May Yee, Margaret LI Xiaojia, Charles

# **Investment Advisory Committee**

Timothy George FRESHWATER 8 (Chairman) WONG Sai Hung, Oscar 4 (ex-Chairman) FUNG Yuen Mei, Anita HU Zuliu, Fred LEE Kwan Ho, Vincent Marshall <sup>6</sup>

- 2 Elected as Director from 28 April 2016 until the conclusion of the AGM to be held in 2019
  - 3 Re-appointed as Director from 28 April 2016 until the conclusion of the AGM to be held in 2018
  - 4 Retired on 28 April 2016
  - 5 Re-appointment effective 10 May 2016 by virtue of being HKEX Chairman

<sup>\*</sup> Government Appointed Director

<sup>\*\*</sup> Appointed by the Financial Secretary

Δ Established under Section 65 of the SFO

<sup>1</sup> Re-appointed as Director and Chairman effective 28 April 2016 and 10 May 2016 respectively until the conclusion of the AGM to be held in 2018



From left

Chow Chung Kong, John Harrison, Vincent Lee, Timothy Freshwater, Margaret Leung and Rafael Gil-Tienda

#### **Nomination Committee**

CHOW Chung Kong <sup>9</sup> (Chairman)
CHAN Tze Ching, Ignatius
Timothy George FRESHWATER <sup>9</sup>
HU Zuliu, Fred
John Mackay McCulloch WILLIAMSON

#### **Panel Member Nomination Committee**

CHAN Tze Ching, Ignatius (Chairman) FUNG Yuen Mei, Anita Rafael GIL-TIENDA <sup>6</sup> KWOK Chi Piu, Bill LEE Kwan Ho, Vincent Marshall WONG Sai Hung, Oscar <sup>4</sup>

# **Project Oversight Committee 10**

FUNG Yuen Mei, Anita <sup>6</sup> (Chairman) Apurv BAGRI <sup>6</sup> Rafael GIL-TIENDA <sup>6</sup> HU Zuliu, Fred <sup>6</sup> KWOK Chi Piu, Bill <sup>6</sup>

#### **Remuneration Committee**

CHOW Chung Kong <sup>9</sup> (Chairman)
Timothy George FRESHWATER <sup>9</sup>
KWOK Chi Piu, Bill
LEE Kwan Ho, Vincent Marshall
John Mackay McCulloch WILLIAMSON

#### **Risk Committee**

CHOW Chung Kong <sup>5</sup> (Chairman) CHAN Tze Ching, Ignatius Rafael GIL-TIENDA John Barrie HARRISON LEUNG KO May Yee, Margaret

# Risk Management Committee (statutory) <sup>Δ</sup>

CHOW Chung Kong <sup>5</sup> (Chairman) CHAN Tze Ching, Ignatius CHENG Fat, Henry \*\* <sup>11</sup> CHENG Siu Hong, Raymond \*\* <sup>12</sup> LAM Yuk Kun, Lawrence \*\* LEE Tat Chi, Howard \*\* <sup>13</sup> LEUNG KO May Yee, Margaret LUI Kei Kwong, Keith \*\* <sup>14</sup> Barbara SHIU \*\* TAN Siew Boi, May \*\* <sup>15</sup>

- 6 Appointment effective 29 April 2016
- 7 Appointment ceased to be effective on 29 April 2016
- 8 Appointed as the chairman effective 29 April 2016
- 9 Re-appointment effective 29 April 2016
- 10 Established on 29 April 2016
- 11 Appointment effective 26 February 2016 by virtue of being Executive Director (Monetary Management) of the Hong Kong Monetary Authority
- 12 Appointment effective 20 January 2016 by virtue of being the Chairman of Hong Kong Interbank Clearing Limited
- 13 Appointment ceased to be effective on 26 February 2016
- 14 Member by virtue of being Executive Director (Supervision of Markets) of the SFC
- 15 Appointment ceased to be effective on 20 January 2016

# BOARD OF DIRECTORS AND SENIOR MANAGEMENT

#### **Board of Directors**



CHOW Chung Kong GBS, JP

Chairman, INED Aged 66

Director since 23 April 2012 Chairman since 27 April 2012 Term of office: 28 April 2016 (re-appointed) to 2018 AGM

#### Other positions held with the Group

**HKEX** – chairman of Environmental, Social and Governance Committee, Executive Committee, Nomination Committee, Remuneration Committee, Risk Committee and Risk Management Committee (statutory)

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

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

LMEH - independent non-executive director

#### Other major offices

AIA Group Limited \* - independent non-executive director (2010~)

Ernst & Young Global Limited – independent non-executive representative of global governance council  $(2016-)^1$ 

The Hong Kong Jockey Club – steward (2011~)

World Federation of Exchanges - director (2012~)

#### **Past offices**

**Anglo American plc** (listed on the London Stock Exchange and Johannesburg Stock Exchange) – independent non-executive director (2008-2014)

Brambles Industries plc - chief executive (2001-2003)

GKN plc - chief executive (1997-2001)

MTR Corporation Limited \* - chief executive officer (2003-2011)

#### **Public service**

Advisory Committee on Admission of Quality Migrants and Professionals – chairman (2016~)

Commission on Strategic Development - non-official member (2013~)

Council of the Queen Elizabeth Foundation for the Mentally Handicapped – member (2015~)

**Economic Development Commission** – non-official member and convenor of Working Group on Transportation (2013~)

Executive Council of the HKSAR - non-official member (2012~)

**Independent Commission Against Corruption** – chairman of Advisory Committee on Corruption (2013~)

#### Qualifications

Chartered Engineer (The Institution of Chemical Engineers, UK)

Bachelor of Science (Chemical Engineering) (University of Wisconsin, US)

Master of Science (Chemical Engineering) (University of California, US)

Master of Business Administration (The Chinese University of Hong Kong)

Honorary Doctor of Engineering (The University of Bath, UK)

Honorary Fellow (The Chinese University of Hong Kong,

The Hong Kong Institution of Engineers, and

The Institution of Engineering and Technology)

Fellow (City & Guilds of London Institute, Hong Kong Academy of Engineering Sciences,

The Chartered Institute of Logistics and Transport in Hong Kong,

The Institution of Chemical Engineers, and The Royal Academy of Engineering)

- ${}^{\star} \;\; \text{Currently listed on the Stock Exchange}$
- 1 Appointment effective 1 March 2016



LI Xiaojia, Charles

Executive Director, Chief Executive Aged 55

Joined on 16 October 2009

Chief Executive since 16 January 2010 Ex-officio member of the Board Term of office: renewed up to 15 October 2018

## Other positions held with the Group

**HKEX** – member of Environmental, Social and Governance Committee, and Executive Committee

SEHK - member of Listing Committee and GEM Listing Committee

HKCC, HKFE, HKSCC, SEHK and SEOCH - chairman

**LME** – member of Nomination Committee

HKEX's certain subsidiaries - director

## Other major offices

China Entrepreneurs Forum - director (2005~)

#### Past offices

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

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

JP Morgan China - chairman (2003-2009)

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

#### **Public service**

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

#### Qualifications

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

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

Juris Doctor (Columbia University, US)



Apurv BAGRI

INED Aged 57

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

#### Other positions held with the Group

**HKEX** – member of Environmental, Social and Governance Committee, and Project Oversight Committee

#### Other major offices

International Wrought Copper Council - director (2013~)

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

# **Public service**

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

**Dubai Financial Services Authority** – director (2004~)

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

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

Royal Parks Board, England - chairman (2008~)

#### Qualifications

Bachelor of Science in Business Administration

(Cass Business School, City University London, UK)

**Doctor of Science (Honoris Cause)** (City University London, UK)



**CHAN Tze Ching, Ignatius** BBS, JP

Director since 23 April 2009 Term of office: 29 April 2015 (re-elected) to 2018 AGM

#### Other positions held with the Group

**HKEX** – chairman of Panel Member Nomination Committee, member of Audit Committee, Nomination Committee, Risk Committee and Risk Management Committee (statutory), and chairman of Clearing Consultative Panel

**HKSCC** – chairman of Disciplinary Appeals Committee

#### Other major offices

AFFIN Holdings Berhad (listed on Bursa Malaysia) - non-executive director (2013~)

CVC Capital Partners Limited - senior adviser (2010~)

Mongolian Mining Corporation \* – independent non-executive director (2010~)

**Rizal Commercial Banking Corporation** (listed on the Philippine Stock Exchange) – non-executive director (2011~)

The Bank of East Asia Limited \* - senior adviser (2009~)

#### **Past offices**

Bank of China (Hong Kong) Limited - deputy chief executive (2008)

**Citigroup** (1980-2007: Citigroup country officer for Hong Kong and head of corporate and investment banking business for Greater China (2005-2007), chief operating officer for Greater China (2004-2005), and Citigroup country officer for Taiwan (2003-2005))

#### Larry Jewelry International Company Limited \*

- independent non-executive director (2012-2014)

#### **Public service**

Financial Reporting Council - member (2014~)

Hong Kong Tourism Board - member (2013~)

**Investor Education Centre** (established by the SFC)

- member of Executive Committee (2012~)

Standing Commission on Civil Service Salaries and Conditions of Service

- member (2014~)

Standing Committee on Judicial Salaries and Conditions of Services - member (2017~) <sup>1</sup>

The Hong Kong Polytechnic University – chairman of council (2016~)

#### Qualifications

Bachelor of Business Administration and Master of Business Administration (University of Hawaii, US)

Certified Public Accountant (American Institute of Certified Public Accountants)

- \* Currently listed on the Stock Exchange
- 1 Appointment effective 1 January 2017



Timothy George FRESHWATER

Director since 23 April 2012 Term of office: 28 April 2016 (re-appointed) to 2018 AGM

#### Other positions held with the Group

**HKEX** – chairman of Investment Advisory Committee, and member of Nomination Committee and Remuneration Committee

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

#### Other major offices

Goldman Sachs (Asia) LLC - advisory director (2012~)

Savills plc (listed on the London Stock Exchange)

- independent non-executive director (2012~)

Swire Pacific Limited \* - independent non-executive director (2008~)

#### **Past offices**

**Aquarius Platinum Limited** (formerly listed on the Australian Securities Exchange, Johannesburg Stock Exchange, and London Stock Exchange)

- independent non-executive director (2006-2016)

**COSCO SHIPPING Ports Limited** \* <sup>1</sup> – independent non-executive director (2005-2015)

**Goldman Sachs (Asia) LLC** (2001-2012: director (2001-2012), vice chairman (2005-2012), and chairman, corporate finance (2001-2004))

HKEX - INED (2000-2006)

Jardine Fleming (1996-2000: chairman (1999-2000))

**Slaughter and May** (1967-1996: head of worldwide corporate practice (1993-1996) and partner (1975-1996))

#### **Public service**

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

#### Qualifications

Solicitor (Hong Kong, and England & Wales)

Bachelor of Laws and Master of Arts (University of Cambridge, UK)

- \* Currently listed on the Stock Exchange
- 1 Formerly known as COSCO Pacific Limited



FUNG Yuen Mei, Anita BBS, JP

Director since 29 April 2015 Term of office: 29 April 2015 (appointed) to 2017 AGM

#### Other positions held with the Group

**HKEX** – chairman of Project Oversight Committee, member of Audit Committee, Investment Advisory Committee and Panel Member Nomination Committee, and deputy chairman of Derivatives Market Consultative Panel

HKFE - member of Disciplinary Appeals Committee

#### Other major offices

China Construction Bank Corporation \* – independent non-executive director (2016~) <sup>1</sup> Hang Lung Properties Limited \* – independent non-executive director (2015~)

#### **Past offices**

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

Hang Seng Bank Limited \* - non-executive director (2011-2014)

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

The Hongkong and Shanghai Banking Corporation Limited (1996-2015: chief executive officer Hong Kong (2011-2015),

head of global banking and markets, Asia Pacific (2010-2011), and treasurer and head of global markets, Asia Pacific (2005-2010))

#### **Public service**

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

Hong Kong Housing Authority - non-official member (2012~)

**Hong Kong Monetary Authority** – member of Financial Infrastructure Sub-Committee of the Exchange Fund Advisory Committee (2011~)

Museum Advisory Committee – member (2016~)<sup>2</sup>

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

West Kowloon Cultural District Authority - board member (2016~) 3

#### Qualifications

Bachelor of Social Science (The University of Hong Kong)

Master of Applied Finance (Macquarie University, Australia)

- \* Currently listed on the Stock Exchange
- 1 Appointment effective 14 October 2016
- 2 Appointment effective 20 October 2016
- 3 Appointment effective 23 October 2016



Rafael GIL-TIENDA

INED Aged 64

Director since 29 April 2015 Term of office: 29 April 2015 (appointed) to 2017 AGM

#### Other positions held with the Group

**HKEX** – member of Panel Member Nomination Committee, Project Oversight Committee and Risk Committee, and deputy chairman of Cash Market Consultative Panel and Clearing Consultative Panel

**HKSCC** - member of Disciplinary Appeals Committee

**SEHK** - member of Disciplinary Appeals Committee

#### Other major offices 1

Oliver Wyman - chairman of Asia Pacific region (2012~)

#### **Past offices**

**Citibank** (1977-1998: country manager of Citibank for Spain (1992-1998), for Malaysia (1988-1992) and for China (1984-1988))

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

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

#### Qualifications

**Bachelor of Arts (Philosophy, Politics and Economics)** (University of Oxford, UK) **Master of Business Administration** (University of California, Berkeley, US)

1 Ceased to be an independent non-executive director of China CITIC Bank International Limited and CITIC International Financial Holdings Limited both effective 1 December 2016



John Barrie HARRISON

Director since 20 April 2011 Term of office: 29 April 2015 (re-appointed) to 2017 AGM

#### Other positions held with the Group

HKEX - chairman of Audit Committee and member of Risk Committee

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

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

#### Other major offices

AIA Group Limited \* – independent non-executive director (2011~)

BW Group Limited – independent non-executive director (2010~)

**BW LPG Limited** (listed on Oslo Borse) – vice-chairman and independent non-executive director (2013~)

Cathay Pacific Airways Limited \* - independent non-executive director (2015~)

#### **Past offices**

**KPMG** (1977-2010: deputy chairman of KPMG International (2008-2010), chairman of KPMG's Asia Pacific region and chairman of KPMG China and Hong Kong (2003-2009), and partner of KPMG Hong Kong (1987-2009))

#### **Oualifications**

**Bachelor of Science (Mathematics)** (Durham University, UK)

 $\textbf{Fellow} \ (\textbf{The Institute of Chartered Accountants in England \& Wales)}$ 

Member (HKICPA)

\* Currently listed on the Stock Exchange



HU Zuliu, Fred

INED Aged 53

Director since 10 November 2014 Term of office: 29 April 2015 (elected) to 2018 AGM

#### Other positions held with the Group

**HKEX** – member of Investment Advisory Committee, Nomination Committee and Project Oversight Committee

#### Other major offices

**Dalian Wanda Commercial Properties Co Ltd** (formerly listed on the Stock Exchange) <sup>1</sup> – independent non-executive director (2014~)

Hang Seng Bank Limited \* - independent non-executive director (2011~)

**Lloyd's** – council member (2014~)

Primavera Capital Limited - founder and chairman (2011~)

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

Yum China Holdings, Inc (listed on the New York Stock Exchange)

- non-executive chairman (2016~)<sup>2</sup>

#### **Past offices**

**Goldman Sachs Group Inc** (1997-2010: chairman of Greater China (2008-2010) and managing director (2000-2010))

**Great Wall Pan Asia Holdings Limited** \* <sup>3</sup> – independent non-executive director (2010-2016) **International Monetary Fund, Washington DC** – economist (1991-1996)

Shanghai Pudong Development Bank Co Ltd (listed on the Shanghai Stock Exchange) – external supervisor (2008-2016)  $^4$ 

#### Qualifications

Master and Doctor of Philosophy (Economics) (Harvard University, US)
Master of Science (Engineering Science) (Tsinghua University, China)

- \* Currently listed on the Stock Exchange
- 1 Withdrawal from listing on the Stock Exchange effective 20 September 2016
- 2 Appointment effective 2 November 2016
- 3 Formerly known as Armada Holdings Limited
- 4 Appointment ceased effective 28 April 2016



KWOK Chi Piu, Bill

Director since 3 April 2000 Term of office: 16 April 2014 (re-elected) to 2017 AGM

#### Other positions held with the Group

**HKEX** – member of Audit Committee, Executive Committee, Panel Member Nomination Committee, Project Oversight Committee and Remuneration Committee, and chairman of Derivatives Market Consultative Panel

**HKFE** – chairman of Disciplinary Appeals Committee

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

#### Other major offices

Wing On Company International Limited \* - non-executive director (1992~)
Wing On International Holdings Limited - executive director (1991~)

Wocom Holdings Limited - managing director (1992~)

#### **Past offices**

HKFE - director (1991-2000) and vice-chairman (1997-2000)

#### **Public service**

SFC - member of Committee on Real Estate Investment Trusts (2011~)

#### Qualifications

Bachelor of Science (Chemistry) and Bachelor of Arts (Economics)

(Stanford University, US)

**Doctor of Philosophy (Biochemistry)** (University of Chicago, US)

Senior Fellow (Hong Kong Securities and Investment Institute)

\* Currently listed on the Stock Exchange



LEE Kwan Ho, Vincent Marshall BBS, Officer of the Order of the Crown (Belgium)

INED Aged 61

Director since 3 April 2000 Term of office: 16 April 2014 (re-elected) to 2017 AGM

# Other positions held with the Group

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

**SEHK** – chairman of Disciplinary Appeals Committee

#### Other major offices

 $\label{lem:Guangdong Land Holdings Limited * - independent non-executive director (2009~) \\ \textbf{LT Commercial Real Estate Limited * - non-executive director (2013~)}$ 

Tung Tai Group of Companies - chairman (2010~)

#### **Past offices**

Coopers and Lybrand, Los Angeles & Boston – certified public accountant (1978-1981)

HSBC Group, Hong Kong & Vancouver – senior banker (1981-1990)

Tung Tai Group of Companies – managing director (1990-2010)

#### Public service 1

Correctional Services Children's Education Trust Investment Advisory Board – member (2017~)  $^{2}$ 

Financial Services Development Council – member (2013~) and member of Policy Research Committee (2014~)

Payment Systems and Stored Value Facilities Appeals Tribunal – member (2013~)
Sir Murray MacLehose Trust Fund Investment Advisory Committee – chairman (2012~)

# Qualifications

Bachelor of Science (Accounting and International Finance) (Magna Cum Laude) (University of Southern California, US)

Master of Economics (London School of Economics and Political Science, UK)
Certified Public Accountant (State of California, US)

Fellow (HKICPA)

- \* Currently listed on the Stock Exchange
- 1 Ceased to be a member of the Correctional Services Children's Education Trust Committee effective 1 January 2017
- 2 Appointment effective 1 January 2017



**LEUNG KO May Yee, Margaret**SBS, JP

Director since 24 April 2013 Term of office: 29 April 2015 (re-appointed) to 2017 AGM

#### Other positions held with the Group

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

**SEHK** - member of Listing Nominating Committee

#### Other major offices

Chong Hing Bank Limited \* – deputy chairman, executive director and managing director (2014~), and chief executive (2016~)

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

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

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

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

The Hong Kong Jockey Club - steward (2014~)

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

#### **Past offices**

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

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

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

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

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

#### **Public service**

Steering Committee on Strategic Review on Healthcare Manpower Planning and Professional Development – member (2012 $\sim$ )

The Guangzhou Municipal Committee of the Chinese People's Political Consultative Conference – member (2008~)

The Henan Provincial Committee of the Chinese People's Political Consultative Conference – member of Standing Committee (2009~)

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

## Qualifications

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

\* Currently listed on the Stock Exchange



John Mackay McCulloch WILLIAMSON

INED Aged 58

Director since 18 June 2008 Term of office: 29 April 2015 (re-elected) to 2018 AGM

#### Other positions held with the Group

**HKEX** – member of Audit Committee, Environmental, Social and Governance Committee, Nomination Committee and Remuneration Committee

#### Other major offices

SAIL Advisors Limited - chief executive officer (2011~)

**Search Investment Group Limited** – senior managing director (2012~) and chief financial officer (2007~)

#### Past offices

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

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

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

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

Search Investment Group Limited - managing director (2007-2011)

#### **Oualifications**

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

Chartered Accountant (The Institute of Chartered Accountants of Scotland)

**Fellow** (Chartered Institute for Securities and Investment, UK)

**Senior Fellow** (Hong Kong Securities and Investment Institute)

# **Company Secretary**



MAU Kam Shing, Joseph

Company Secretary and Head of Secretarial Services Aged 58

Joined in June 2000

#### **Past offices**

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

#### Qualifications

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

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

Associate (HKICPA)

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

# **Senior Management**



Matthew James CHAMBERLAIN

Interim Chief Executive, LME (effective 21 February 2017) Aged 35

Joined in November 2012

# Other positions held with the Group

**LME** – chairman of Executive Committee, and member of Charity Committee, Enforcement Committee, Trustee Committee (LME Pension Scheme) and User Committee

#### **Past offices**

**LME** – chief operating officer (2016-2017), head of Business Development (2013-2016) and head of Strategy and Implementation (2012-2013)

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

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

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

#### Qualifications

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



CHAU Yee Wah, Eva

Group Head of Human Resources Aged 54

Joined in August 2016

#### **Past offices**

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

JP Morgan – vice president, investment banking (1994-1996)

#### Qualifications

Diploma in Business Studies (The Hong Kong Polytechnic University)



## CHOW Tang Bill, Bill

Chief Technology Officer and Co-head of Information Technology Aged 60

Joined in May 1993



Systek Information Technology Limited – senior project manager (1991-1993)

Westpac Banking Corporation (Australia) – consultant applications engineer (1987-1991)

China Light & Power Company Limited – senior systems analyst (1985-1987)

Qualifications

**Bachelor of Science (Computer Science & Chemistry)** (The University of Hong Kong) **Master of Science (Electronic Commerce)** (City University of Hong Kong)



Adrian John Winston FARNHAM

Chief Executive, LME Clear (effective 1 January 2016) Aged 52

Joined in January 2013

## Other positions held with the Group

 $\ensuremath{\textbf{LME}}$  – member of Charity Committee and Executive Committee

LME Clear - chairman of Executive Committee

#### **Past offices**

**LME Clear** – chief operating officer (2013-2015)

**Turquoise Global Holdings Limited** (2008-2012: chief executive officer (2010-2012) and chief operating officer (2008-2009))

**Morgan Stanley** – executive director of operations and several senior positions in audit, finance and operations (1994-2007)

#### Qualifications

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



# **David GRAHAM**

Chief Regulatory Officer and Head of Listing Aged 58

Joined in January 2013

# Other positions held with the Group

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

#### Past offices

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

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

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

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

#### **Public service**

SFC - member of Advisory Committee (2013~)

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

#### Qualifications

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

**Solicitor** (Hong Kong, and England & Wales)



Paul Michael KENNEDY

Group Chief Financial Officer Aged 59

Joined in January 2013

#### **Past offices**

HKEX - special adviser to HKEX's Chief Executive (2012-2013)

The Hongkong and Shanghai Banking Corporation Limited

– managing director, financial institutions group of Hong Kong's global banking division (2010-2012)

**SFC** – several senior positions including chief operating officer and executive director (2006-2010)

**KPMG** (1983-2006: financial services partner of KPMG Hong Kong (1991-2006) and managing partner of KPMG's Shanghai office (2000-2005))

#### **Qualifications**

Bachelor of Arts (Accounting and Financial Administration) (Bangor University, UK)

Fellow (HKICPA, and The Institute of Chartered Accountants in England & Wales)



Romnesh LAMBA

Co-head of Market Development (effective 1 January 2016) Aged 53

Joined in February 2010

#### **Past offices**

HKFE - chief executive (2013-2016)

SEHK - chief executive (2013-2016)

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

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

Merrill Lynch (Asia Pacific) (2000-2008: managing director, investment banking, and chief operating officer of China origination business (2006-2008), and head of Asia energy and power team (2003-2006))

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

#### Qualifications

Bachelor of Science in Economics (Magna Cum Laude) and Master of Business Administration (Distinction)

(The Wharton School, University of Pennsylvania, US)



LEE Kwok Keung, Roger

Head of Markets (effective 1 January 2016) Aged 58

Joined in March 1997

#### Other positions held with the Group

HKFE - chief executive

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

#### **Past offices**

**HKEX** – Deputy Head of Global Markets, Asia and Head of Market Operations (2014-2015), Head of Structured Products, Fixed Income and Primary Market Information of the Listing and Regulatory Affairs Division (2013-2014), Co-head of Information Technology (2010-2011), Head of Listing Operations (2007-2010 and 2012-2013), Head of Cash Market (2005-2007), and Head of Information Services (2000-2005)

SEHK - director of Trading and Information Services (1997-2000)

# **Public service**

SFC – member of Securities Compensation Fund Committee and Investor Compensation Fund Committee (2014~) and member of the Advisory Committee of the Investor Education Centre (2015~)

**Vocational Training Council** – member of Banking and Finance Industry Training Board (2013~)

## Qualifications

Bachelor of Business Administration (The Chinese University of Hong Kong)

Master of Business Administration (The University of Hong Kong)

Fellow (CPA Australia)

Senior Fellow (Hong Kong Securities and Investment Institute)



LEUNG Chung Kwong, Richard

Co-head of Information Technology Aged 53

Joined in October 2011



LI Gang

Co-head of Market Development (effective 1 January 2016) Aged 51

Joined in March 2013



# Ferheen MAHOMED

Group General Counsel Aged 51

Joined in February 2017

#### **Past offices**

Chi-X Global - chief technology officer (2008-2011)

Cicada Corporation - chief technology officer (1999-2008)

**Telerate Inc** – regional technical development manager, Asia Pacific (1985-1999)

#### Qualifications

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

#### **Past offices**

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

#### Qualifications

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

# Past offices

Pacific Century Group – executive vice president of business development (2014-2017)

CLSA Limited – group general counsel (2010-2014)

Societe Generale – general counsel for Asia Pacific (1997-2010)

#### Qualifications

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



**MAO Zhirong** 

Head of Mainland Development (effective 9 September 2016) Aged 53

Joined in March 2013

#### Other major offices

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

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

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

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

#### Qualifications

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

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



#### Past offices

HKEX - Head of Global Clearing (Europe) (2014-2015)

LME Clear - member of Nomination Committee

LME Clear - chief executive (2013-2015)

Other positions held with the Group

LME - managing director of Post Trade Services (2011-2013)

European Central Counterparty Ltd (EuroCCP) - chief operating officer (2007-2011)

Merrill Lynch Europe - managing director (European) and head of transaction and custody services (2001-2006)

**UBS AG** – managing director (global operations and logistics division) (1996-2001)

# Trevor William SPANNER

Chief Operating Officer and Group Risk Officer (effective 1 January and 3 March 2016 respectively) Aged 57

Joined the LME in November 2011

#### Qualifications

Bachelor of Arts (University of Kent, UK)

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



TAI Chi Kin, Calvin

Head of Clearing (effective 1 January 2016) Aged 54

Joined in July 1998

#### Other positions held with the Group

HKSCC - chief executive and member of Risk Management Committee

OTC Clear - chief executive and chairman of User Committee

#### Other major offices

China Exchanges Services Company Limited - director (2012~)

HKEX - Head of Global Clearing (Asia) (2014-2015), Co-head of the Equities and Fixed Income and Currency Business (2013-2014), Head of Trading Division (2010-2013), and Head of Derivatives Market Development and Operations (2003-2010)

HKFE - head of products (1998-2000)

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

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

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

#### Qualifications

Bachelor of Social Sciences (The University of Hong Kong)

Matthew Chamberlain, Adrian Farnham, David Graham, Paul Kennedy, Romnesh Lamba, Roger Lee, Richard Leung, Li Gang, Mao Zhirong, Trevor Spanner and Calvin Tai also act as directors in certain HKEX's subsidiaries.

# MANAGEMENT COMMITTEE



# Second row (from left):

Iain Greig, Ferheen Mahomed, Adrian Farnham, Bill Chow, David Graham, Paul Kennedy, Richard Leung, Mao Zhirong, James Proudlock and Eva Chau

# Front row (from left):

Roger Lee, Trevor Spanner, Calvin Tai, Charles Li, Romnesh Lamba, Li Gang and Matthew Chamberlain

# **BUSINESS REVIEW**

## **Overview**



Market sentiment moderated in the last quarter of 2016, with headline ADT declining 6 per cent against the previous quarter to \$64.3 billion. The decline in trading and clearing income together with seasonal decreases in depository, custody and nominee services fees, led to Revenue <sup>1</sup> being 5 per cent lower than the previous quarter, but in line with the first quarter.

Overall revenue and other income for 2016 dropped by 17 per cent (\$2,259 million) compared to the prior year or 14 per cent after adjusting for the one-off items, totalling \$514 million <sup>2</sup>, which arose in 2015. Notwithstanding this decline against the prior year, Revenue <sup>1</sup> held up well when compared to the difficult market conditions experienced during the year: the headline Cash Market ADT declined by 37 per cent against the record high of \$105.6 billion in 2015 and trading volumes in both the commodities and stock options markets also declined. The more modest decline in overall Revenue <sup>1</sup> was largely attributable to an increase in trading on HKFE where growing derivatives income has further reduced the Group's exposure to volatility in the Cash Market. Overall HKFE volumes were up 18 per cent over 2015, with growth concentrated in higher fee products, in particular Hang Seng Index products. As a consequence, HKFE trading fees increased by 31 per cent <sup>3</sup>.

Gross operating expenses rose by 5 per cent compared to 2015 or by 3 per cent after adjusting for a one-off recovery of \$77 million received from Lehman's liquidators in 2015. This growth in operating expenses was lower than previously anticipated and arose from continuing investment in strategic initiatives (most notably the development of a commodities trading platform in the Mainland) partially offset by expenditure control measures that were introduced during the year. The Group's capital expenditure for the year was also lower than previously anticipated as less critical projects have been deferred. In response to the persistence of uncertain market conditions, the Group will continue to adopt a prudent approach to expenditure control.

Monthly average daily volume of metals contracts traded ('000 lots)

<sup>1</sup> Excludes net investment income, gain on disposal of a leasehold property and sundry income

<sup>2</sup> One-off items in 2015: gain on sale of Worldwide House property \$445 million, gain on sale of shares in LCH \$31 million, and post liquidation interest received from Lehman's liquidators \$38 million

<sup>3</sup> Before any allocation of fees to the Clearing segment

# **Business Update and Analysis of Results by Operating Segment**

# Analysis of Revenue and Other Income by Segment \*



# Analysis of EBITDA and EBITDA Margin by Segment \*



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

 $<sup>\</sup>star$  Further details of the results by segment are set out in note 4 to the Consolidated Financial Statements of this Annual Report.

# **Cash Segment**

# **Key Market Indicators**

	2016	2015	Change
ADT of equity products traded on the Stock Exchange <sup>1,2</sup> (\$bn)	50.2	79.9	(37%)
ADT of Northbound Trading – Shanghai-Hong Kong Stock Connect <sup>2</sup> (RMBbn)	3.2	6.4	(50%)
ADT of Northbound Trading – Shenzhen-Hong Kong Stock Connect <sup>2</sup> (RMBbn)	1.5	_	N/A
Average daily number of trades of equity products traded on the Stock Exchange <sup>1,2</sup>	895,170	1,197,332	(25%)
Number of newly listed companies on Main Board <sup>3</sup>	81	104	(22%)
Number of newly listed companies on GEM	45	34	32%
Number of companies listed on Main Board at 31 Dec	1,713	1,644	4%
Number of companies listed on GEM at 31 Dec	260	222	17%
Total	1,973	1,866	6%
Market capitalisation of companies listed on Main Board at 31 Dec (\$bn)	24,450	24,426	0%
Market capitalisation of companies listed on GEM at 31 Dec (\$bn)	311	258	21%

<sup>1</sup> Excludes DWs, CBBCs and warrants (which are included under the Equity and Financial Derivatives segment) and includes Southbound Trading ADT of \$3.6 billion (2015: \$3.4 billion) under Shanghai-Hong Kong Stock Connect and \$0.5 billion (2015: \$Nil) under Shenzhen-Hong Kong Stock Connect
Includes buy and sell trades under Stock Connects. Shenzhen-Hong Kong Stock Connect was launched on 5 December 2016.

<sup>3</sup> Includes 6 transfers from GEM (2015: 14)

	2016 \$bn	2015 \$bn	Change
Total equity funds raised on Main Board			
- IPOs	190.7	260.3	(27%)
– Post-IPO	280.5	833.2	(66%)
Total equity funds raised on GEM			
– IPOs	4.6	2.8	64%
– Post-IPO	14.3	19.3	(26%)
Total	490.1	1,115.6	(56%)

# **Analysis of Results**

# **Summary**

	2016 \$m	2015 \$m	Change
Trading fees and trading tariff <sup>1</sup>	1,421	2,252	(37%)
Stock Exchange listing fees <sup>1</sup>	770	703	10%
Market data fees <sup>1</sup>	422	420	0%
Other revenue and sundry income	70	60	17%
Total revenue and other income	2,683	3,435	(22%)
Operating expenses <sup>2</sup>	(544)	(531)	2%
EBITDA	2,139	2,904	(26%)
EBITDA margin	80%	85%	(5%)

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

 $<sup>{\</sup>small 2\>\>\>\>} Includes\>Listing\>Division\>costs\>relating\>to\>equity\>products\>traded\>on\>the\>Stock\>Exchange\>$ 



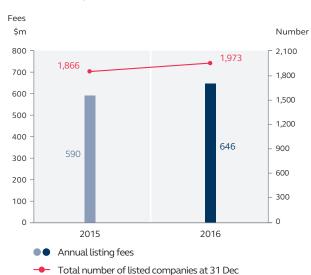
1 Excludes DWs, CBBCs and warrants (which are included under the Equity and Financial Derivatives segment)

Trading fees and trading tariff dropped by \$831 million or 37 per cent, in line with the 37 per cent fall in ADT of equity products.

# **Stock Exchange Listing Fees**

	2016 \$m	2015 \$m	Change
Annual listing fees	646	590	9%
Initial and subsequent issue listing fees	117	105	11%
Others	7	8	(13%)
Total	770	703	10%

#### **Annual Listing Fees**



Annual listing fees increased with the rise in the total number of listed companies. The 9 per cent increase in annual listing fees exceeded the 6 per cent increase in the number of listed companies due to the full year impact of the annual listing fees of companies listed in 2015.

#### Initial and Subsequent Issue Listing Fees



Despite a decrease in the number of newly listed companies and the total IPO funds raised, initial and subsequent issue listing fees increased due to forfeited fees from a higher number of withdrawn or lapsed IPO applications not listed within six months of application.

#### **EBITDA**

Operating expenses increased by \$13 million or 2 per cent due to higher costs incurred for strategic initiatives including Shenzhen-Hong Kong Stock Connect. The decline in EBITDA margin from 85 per cent to 80 per cent reflects the decline in trading fees and trading tariff.

## **Business Update**

Market sentiment moderated in the last quarter of 2016 with headline ADT declining 6 per cent against the prior quarter despite the successful launch of Shenzhen-Hong Kong Stock Connect during the period. For the full year, headline ADT (\$66.9 billion) dropped by 37 per cent as compared to the record-high headline ADT achieved during 2015 (\$105.6 billion). Notwithstanding these subdued volumes, HKEX admitted a record number (46) of new EPs to the Cash Market, with the current number of EPs reaching a historical high of 556, indicating continued optimism in the Hong Kong market.

# **Stock Connects**

2016 marked a major milestone in development of Stock Connects, as significant progress was made in scope extension, model enhancement and market promotion.

Following the smooth operation of Shanghai-Hong Kong Stock Connect since its launch in November 2014, the aggregate quota was abolished on 16 August 2016. Abolishing the quota resolved market concerns about reaching sell-only limits once the aggregate quota was reached and strengthened investor confidence that they can trade freely under Stock Connects.

To promote Stock Connects, HKEX participated in over 200 seminars and training workshops across major Mainland and international cities including Beijing, Shanghai, Shenzhen, London, Edinburgh, Paris, Frankfurt, New York, Boston, San Francisco and Toronto. Some of these promotional initiatives were conducted together with SZSE and ChinaClear. To deepen investors' understanding of HKEX's markets, a series of training and promotional activities (including simulation games) was held to dovetail with the launch of Shenzhen-Hong Kong Stock Connect, which drew considerable interest from Mainland investors.

HKEX has enhanced its surveillance systems to support cooperation with SZSE and facilitate monitoring of trading activities following the launch of Shenzhen-Hong Kong Stock Connect.

#### **Issuer Businesses**

In promoting HKEX as a preferred listing venue for international enterprises, HKEX conducted 27 seminars and completed 10 overseas marketing trips during the year. HKEX also organised over 30 IPO seminars and made presentation at approximately 70 seminars across 23 provinces and cities across Mainland China, explaining the benefits of the Hong Kong as a listing venue.

#### **ETF Market Development**

Following regulatory approval, HKEX achieved an important milestone in the development of the ETF market by welcoming its first listings of Leveraged and Inverse Products (commonly known as Leveraged and/or Inverse ETFs) on foreign underlying indices. After a series of subsequent successful product launches and their smooth operation, the SFC announced on 23 December 2016 that the scope of eligible underlying indices would be expanded to include Hong Kong equity indices.

#### **Market Data Business**

The Mainland Market Data business continues to grow and as of 31 December 2016, there were 59 real-time Mainland information vendors. Among these information vendors, 21 are Mainland brokers who have participated in the Fixed Fee Programme on Southbound eligible stocks. HKEX has also launched a One-Off Six-Month Programme and provided subscriber fee discounts for Mainland investors to facilitate the increased visibility and penetration of Hong Kong securities market data in the Mainland.

In addition to the annual market data conference in Shanghai, HKEX held a joint market data seminar with SZSE to support the launch of Shenzhen-Hong Kong Stock Connect and introduce Mainland brokers to the latest market data promotion offers.

## Closing Auction Session and Volatility Control Mechanism

Phase One of the Closing Auction Session, which facilitates trade execution at securities' closing prices, was successfully implemented on 25 July 2016 for selected securities and has been operating smoothly. The Volatility Control Mechanism for the Cash Market, which safeguards the securities market from abnormal price fluctuations, was also successfully rolled out on 22 August 2016 with no triggering of the mechanism to date.

#### **Promotional Activities**

HKEX has provided a university training programme to 16 universities in 14 cities across Mainland China and Hong Kong since April 2016, educating over 4,000 students and junior staff on aspects of the financial industry. In addition to promoting the brand of HKEX, the training also serves as an information exchange platform for attendees in both Mainland China and Hong Kong to gain a better understanding of international capital markets and HKEX's products.

# **Listing Regulation**

In June 2016, the Stock Exchange jointly issued a consultation with the SFC on "Proposed Enhancements to the Stock Exchange's Decision-Making and Governance Structure for Listing Regulation". The consultation period ended on 18 November 2016. The SFC and the Stock Exchange are reviewing and analysing the responses to the consultation. Details of the joint consultation and other main policy issues arising in 2016 as well as the proposals under review in 2017 are set out in the 2016 Listing Committee Report.

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

- Issued series of (i) guidance letters on major areas concerning market quality and listed issuers, including bonus issues of
  shares, issuers subject to market commentaries or rumours, issues related to "controlling shareholder" and related Listing
  Rules implications and suitability of listing for companies that exhibit "shell" characteristics; and (ii) listing decisions on
  interpretation of the Listing Rules, including highly dilutive offers, share consolidations/subdivisions and eligibility and
  suitability requirements for new listings
- Issued a joint statement with the SFC regarding the price volatility of stocks listed on GEM as an initial step to address some of the current concerns with GEM IPO placings
- Published reports on the Stock Exchange's review of disclosure in issuers' annual reports and key observations under the financial statements review programme, and provided guidance and recommendations to issuers to promote transparency and high quality disclosures
- Published reports on the findings of the Stock Exchange's latest reviews of listed issuers' corporate governance practices in March year-end 2015 and June year-end 2015 annual reports to provide a more holistic view of issuers' overall compliance with the Corporate Governance Code and Corporate Governance Report
- Published a "Guide on Producing Simplified Listing Documents Relating to Equity Securities for New Applications" to encourage production of a succinct listing document that is user friendly for investors and organised three seminars to help sponsors and market practitioners better understand and apply the Guide
- Enhanced ESG webpage on the HKEX Market website and organised a series of 12 issuer seminars to facilitate issuers' compliance with the revised ESG Reporting Guide
- Initiated a training programme for company directors in 2017 that will cover a broad range of topics aimed at improving the quality of directors and effectiveness of boards
- Published a revised Enforcement Policy Statement to reflect current enforcement practice

### IPO Processing, Compliance and Monitoring

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

### Stock Exchange's IPO Work

	2016	2015
Number of listing applications vetted <sup>1</sup>	349	256
• Number of applications brought to the Listing Committees (or their delegates) for decisions <sup>2</sup>	154	149
– within 120 calendar days	82	104
- between 121 to 180 calendar days	43	26
– after more than 180 calendar days	29	19
• Number of applications for which approval was granted in principle <sup>3</sup>	181	151
Number of requests for guidance from listing applicants or their advisers		
seeking clarifications of listing matters	159	170
– Average response time (in business days)	8	6
Number of listing applications for transfer of listing from GEM to Main Board accepted	12	18
• Applications listed <sup>4</sup>	163	156
• New listing applications rejected <sup>5</sup>	13	9
New listing applications withdrawn	4	9
New listing applications returned	7	3
Application in process at year-end	102	74

- 1 Comprises 275 (2015: 217) new applications and 74 (2015: 39) existing applications brought forward from previous year
- 2 Refers to listing applications heard by the Listing Committees (or their delegates) for the first time and excludes Chapter 20 listing applications
- 3 At the end of 2016, 20 (2015: 14) approved applications had not yet been listed, and 12 (2015: 1) approved application had lapsed during the year.
- 4 Includes 37 investment vehicles listed on Main Board and deemed new listings (2015: 18)
- 5 In 2016, 1 rejection decision (2015: 1) was subsequently reversed by the Listing Committee upon review.

### **Number of Compliance and Monitoring Actions**

	2016	2015
Announcements of issuers vetted	55,946	54,688
Circulars of issuers vetted	2,214	2,085
• Share price and trading volume monitoring actions undertaken <sup>1</sup>	6,279	13,757
Complaints handled	493	558
Cases (including complaints) referred to Listing Enforcement Team for investigation	35	26

<sup>1</sup> In 2016, monitoring actions undertaken included 515 enquiries (2015: 1,931) on unusual share price and trading volume movements, and the actions undertaken led to 24 resumption announcements (2015: 182) on trading suspensions. The number of monitoring actions was unusually high in 2015 due to a period of exceptionally high trading volume and share price volatility in the Hong Kong securities markets.

### **Long Suspension**

	Main	Main Board		GEM	
Status of Long Suspended Companies (at year-end)	2016	2015	2016	2015	
Resumption of trading of securities during the year	15	25	5	3	
Cancellation/withdrawal of listing during the year	2	1	1	2	
Companies in the third stage of delisting	11	2	N/A	N/A	
Companies notified of the Stock Exchange's intention					
to cancel their listing <sup>1</sup>	1	1	0	3	
Companies suspended for three months or more	53	51	3	7	

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

### **Listing Enforcement**

Since 2014 the Stock Exchange has been adopting a themed approach to enforcement activity. Following a review by the Listing Committee in 2016, the focus for investigation and enforcement activity has been modified from five to seven themes. Details are set out in the 2016 Listing Committee Report. The dedicated "Enforcement" section on the HKEX Market website continues to provide updated enforcement related information and statistics to enhance the transparency of the Stock Exchange's Listing Rule enforcement work.

### **Enforcement Statistics**

	2016	2015
Investigations <sup>1</sup>	<b>71</b> <sup>2, 3</sup>	52
Public censures <sup>4</sup>	7	5
Public statements/criticisms <sup>4</sup>	1	1
Warning/caution letters <sup>5</sup>	15	5

- 1 Figures cover cases concluded during the year, and cases which remained active at year-end.
- 2 There were 32 outstanding investigations (all of which commenced in 2016) at the end of 2016 as compared to 22 outstanding investigations (82 per cent of which commenced in 2015) at the end of 2015.
- 3 In 2016, 3 cases (2015: 2) originating from complaints were subject to enforcement investigation, and might give rise to disciplinary proceedings after investigation.
- 4 Figures represent only the primary regulatory action from a disciplinary matter. They exclude any other actions taken at a lower level, eg, private reprimand, in the same case.
- 5 The warning and caution letters were primarily delivered in circumstances where action before the Listing Committees was not considered appropriate.

### **Costs of Listing Function**

The costs of the front line regulation of listed issuers, performed by the Listing Committees and the Listing Division, are absorbed by the Cash and Equity and Financial Derivatives segments based on the listing fee income of the two segments.

# Equity and Financial Derivatives Segment Key Market Indicators

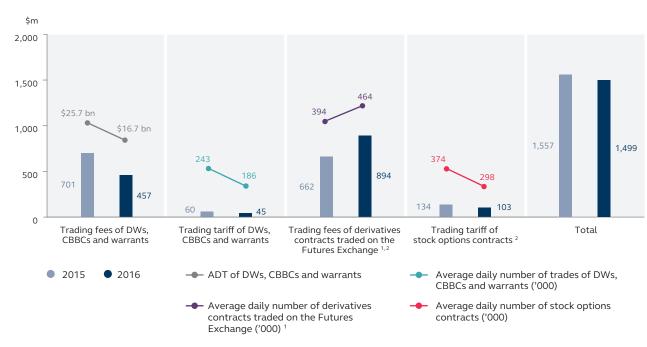
	2016	2015	Change
ADT of DWs, CBBCs and warrants traded on the Stock Exchange (\$bn)	16.7	25.7	(35%)
Average daily number of trades of DWs, CBBCs and warrants traded			
on the Stock Exchange	185,850	242,948	(24%)
Average daily number of derivatives contracts traded on the Futures Exchange <sup>1</sup>	463,722	393,948	18%
Average daily number of stock options contracts traded on the Stock Exchange	297,903	374,346	(20%)
Number of newly listed DWs	4,875	6,336	(23%)
Number of newly listed CBBCs	8,896	11,213	(21%)
Average daily number of contracts traded during AHFT 1	37,833	21,555	76%
	At	At	
	31 Dec 2016	31 Dec 2015	Change
Open interest of futures and options <sup>1</sup>	9,296,057	7,266,630	28%

### **Summary**

	2016 \$m	2015 \$m	Change
Trading fees and trading tariff	1,499	1,557	(4%)
Stock Exchange listing fees	322	411	(22%)
Market data fees	204	206	(1%)
Other revenue and sundry income	9	5	80%
Total revenue and other income	2,034	2,179	(7%)
Operating expenses <sup>1</sup>	(441)	(446)	(1%)
EBITDA	1,593	1,733	(8%)
EBITDA margin	78%	80%	(2%)

<sup>1</sup> Includes Listing Division costs related to DWs, CBBCs and warrants traded on the Stock Exchange

## **Trading Fees and Trading Tariff**



<sup>1</sup> Excludes London Metal Mini Futures contracts (which are included under the Commodities segment)

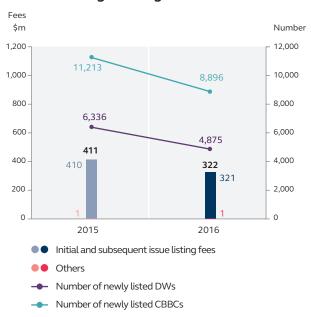
Trading fees and trading tariff for the segment are generated from trading of derivatives on the Stock Exchange (ie, DWs, CBBCs, warrants, and stock options) and trading of futures and options on the Futures Exchange. A portion of the trading fees and trading tariff for the futures and options contracts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

Trading fees and trading tariff from trading of DWs, CBBCs and warrants declined by \$259 million or 34 per cent due to the 35 per cent drop in trading volume.

Gross trading fees from futures and options traded on the Futures Exchange, before allocation of a share of fees to the Clearing segment, rose by 31 per cent. However, as shown above, the fees remaining in the Equity and Financial Derivatives segment rose by \$232 million or 35 per cent. This increase was higher than the 18 per cent increase in average daily number of contracts traded, as a higher proportion of derivatives contracts traded in 2016 related to higher fee products including Hang Seng Index Futures.

<sup>2</sup> Excludes trading fees and trading tariff allocated to the Clearing segment (Derivatives contracts traded on the Futures Exchange – 2016: \$229 million; 2015: \$195 million; stock options contracts – 2016: \$49 million; 2015: \$61 million)

### **Stock Exchange Listing Fees**



Stock Exchange listing fees are mainly derived from initial and subsequent issue listing fees for DWs and CBBCs. The fees dropped by \$89 million or 22 per cent, reflecting a decrease in the number of newly listed DWs and CBBCs.

### **EBITDA**

Operating expenses dropped by \$5 million or 1 per cent principally due to lower staff costs, including reduced variable pay, partly offset by higher index license fees from the increased trading volume of derivatives contracts. As the percentage drop in revenue and other income was higher than that of operating expenses, the EBITDA margin reduced from 80 per cent to 78 per cent.

### **Business Update**

HKEX surpassed various records for trading volume and open interest in its Derivatives Market in 2016 and was also named the Best Derivatives Exchange in the Asia-Pacific Structured Products & Derivatives Awards event.

### New Record Highs - Full Year Trading Volume

	2016 Number of contracts		016 record f contracts
Total futures <sup>1</sup>	84,070,958	73,406,459	(2015)
Hang Seng Index Futures	32,313,994	23,085,833	(2011)
Mini Hang Seng Index Futures	12,477,552	10,294,537	(2011)
HSCEI Dividend Point Index Futures	589,188	240,572	(2014)
USD/CNH Futures	538,594	262,433	(2015)
Mini Hang Seng Index Options	1,424,379	1,230,997	(2012)
H-shares Index Options	19,475,726	15,304,215	(2015)
AHFT <sup>1</sup>	9,193,402	5,237,882	(2015)

 $<sup>1\ \ \</sup>text{Excludes London Metal Mini Futures contracts included under the Commodities segment}$ 

### New Record Highs - Single Day Trading Volume and Open Interest

	Single Day Trading Volume		Open Interest	
	Date (2016)	Number of contracts	Date (2016)	Number of contracts
Hang Seng Index Futures	27 Sep	316,855	_	_
Mini Hang Seng Index Futures	24 Jun	141,519	_	_
HSCEI Dividend Point Index Futures	7 Jan	25,553	13 Dec	184,626
Mini Hang Seng Index Options	9 Nov	17,771	_	_
H-shares Index Options	-	_	28 Dec	3,276,956
Mini H-shares Index Options	9 Nov	7,404	28 Nov	16,714
USD/CNH Futures	-	_	30 Dec	45,635





### **Futures and Options Market Development**

HKEX launched an array of equity index derivatives products in 2016, including seven Sector Index Futures on 9 May that facilitate client hedging needs relating to specific sectors; and Mini H-shares Index Options on 5 September in response to retail trading interest.

On 1 November 2016, HKEX introduced a fourth calendar expiry month contract for Hang Seng Index Options and H-shares Index Options to facilitate trading close to three-month maturity. Enhancements were also made to the index options and stock options markets including revisions to the market making obligations of market makers designed to improve price transparency.

### **RMB Currency Futures and Options Market Development**

HKEX's USD/CNH Futures contract maintained its leading position, for both liquidity and distribution, amongst all global exchanges. The average daily volume and open interest increased by 105 per cent and 98 per cent respectively compared with the previous year.

On 30 May 2016, HKEX launched four cash-settled RMB currency futures against the Euro, Japanese yen, Australian dollar, and US dollar. On 23 June, HKEX and Thomson Reuters launched a series of RMB currency (RXY) indices, offering independent, transparent and timely benchmarks for the RMB against the currencies of a number of Mainland China's significant trade partners.

HKEX plans to introduce new USD/CNH currency options in the first quarter of 2017, which will provide more flexible trading and hedging strategies for RMB. This is part of HKEX's efforts to provide a full range of RMB-related derivatives in the FIC space.

### Other FIC Development

On 24 May 2016, HKEX hosted its third annual RMB Fixed Income and Currency Conference. Over 650 industry experts and business leaders gathered to discuss RMB-related trends, product and market development.

### **Stock Option Position Limits**

A market consultation on the proposed revisions to stock option position limits (SOPL) was completed with consultation conclusions issued in June 2016. The proposed model aligns Hong Kong's SOPL regime more closely with international practice and was well received by a broad spectrum of market participants. On 20 September 2016, the SFC published a consultation paper on proposed enhancements to the position limit regime, consulting the market on hedge exemptions for the Derivatives Market. The consultation paper facilitates the implementation of HKEX's proposed revisions to the SOPL model.

### Pre-Trade Risk Management System

The Pre-Trade Risk Management System for the Derivatives Market was launched on 11 April 2016. The system offers tools to help Participants in meeting their needs for pre-trade controls while complementing their in-house risk controls.

### **Volatility Control Mechanism**

The Volatility Control Mechanism for the Derivatives Market, which safeguards the Derivatives Market from abnormal price fluctuations, similar to that implemented in the Cash Market, was successfully rolled out on 16 January 2017.

## **SMARTS Derivatives Surveillance Systems**

HKEX launched a new market surveillance platform for the Derivatives Market, SMARTS Derivatives Surveillance Systems, on 1 August 2016. The new platform complements the existing surveillance systems in the Cash Market, and enhances real-time monitoring and cross-market surveillance capabilities, as well as facilitating the rollout of new products and trading microstructures.

### **Other Service Enhancements**

HKEX introduced the electronic submission of Large Open Position Reports for Futures and Stock Options during the year.

## **Commodities Segment**

### **Key Market Indicators**

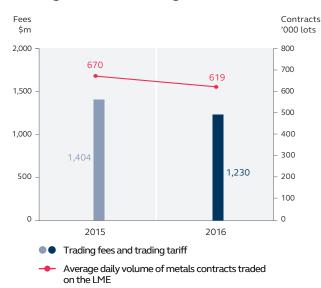
	2016	2015	Change
Average daily volume of metals contracts traded on the LME (lots)			
Aluminium	221,671	247,198	(10%)
Copper	153,121	162,247	(6%)
Zinc	111,161	118,723	(6%)
Nickel	81,779	81,817	(0%)
Lead	43,227	51,271	(16%)
Others	7,668	8,933	(14%)
	618,627	670,189	(8%)
	At 31 Dec 2016	At 31 Dec 2015	Change
Total futures Market Open Interest (lots)	2,212,501	2,314,219	(4%)

### **Analysis of Results**

### **Summary**

	2016 \$m	2015 \$m	Change
Trading fees and trading tariff	1,230	1,404	(12%)
Market data fees	190	177	7%
Other revenue:			
Commodities stock levies and warehouse listing fees	87	102	(15%)
Others	53	52	2%
Total revenue	1,560	1,735	(10%)
Operating expenses	(597)	(546)	9%
EBITDA	963	1,189	(19%)
EBITDA margin	62%	69%	(7%)

### **Trading Fees and Trading Tariff**



Trading fees fell by \$174 million or 12 per cent due to an 8 per cent drop in the average daily volume of metals contracts traded, increased market-making incentive rebates, new member incentive rebates introduced in the third quarter of 2015 and fee reductions for short-dated carry trades effective from September 2016.

### **EBITDA**

Operating expenses rose by \$51 million or 9 per cent. The increase was principally attributable to increased headcount for strategic initiatives (including product development and the establishment of a commodities trading platform in the Mainland), higher premises costs for new offices in London and the Mainland and also higher legal and professional fees incurred on strategic projects. The increase was partly offset by savings on IT costs and savings on LME operating costs arising from a weaker GBP. As a result of the drop in revenue and the increase in operating expenses, EBITDA margin dropped from 69 per cent in 2015 to 62 per cent in 2016.

### **Business Update**

### **LME**

2016 saw a continuation of 2015's challenging market conditions, with a consequent reduction in volumes. In 2016, the average daily volume was 618,627 lots, representing a decrease of 8 per cent compared to the previous year. However, LME ferrous cash-settled contracts gained traction in 2016, following their launch in November 2015, and LME Steel Scrap won the Futures and Options World award for the most innovative new contract in the commodities and energy sectors.

In April 2016 the LME launched LMEshield, a global electronic receipting service for commodities designed to reduce the risks around commodity financing and underpinned by the LME's experience of overseeing a global metals warehousing network. In October 2016, the LME announced a pilot scheme for LMEshield in China, in partnership with Henry Bath & Son Ltd (jointly owned by CMST Development Co Ltd (a Chinese State-Owned Enterprise) and Mercuria Energy Trading). More information can be found at: www.lme.com/trading/venues-and-systems/systems/lmeshield/.

2016 saw the LME draw its warehouse reform programme, initiated in July 2013, to a conclusion. The LME introduced a rule to increase the daily rate at which warehouses load out metal on 1 March, and a cap on the rents applicable to metal waiting in queues to be loaded out on 1 May. In response to high annual increases of headline rates charged by LME-listed warehouses, the LME initiated a market-wide discussion and subsequent consultation, on the topic. Following this consultation the LME announced its intention to introduce a charge cap – a limit on the maximum headline charges applied by warehouse operators – and published a set of caps on maximum rates. These will come into effect on 1 April 2017.

In August 2016, the LME announced its plans for LMEprecious, a new initiative created in partnership with the World Gold Council and a group of leading industry players. LMEprecious opens up trading opportunities for existing LME members and their clients, as well as for new participants wishing to take advantage of on-exchange precious metals trading that will be cleared through a recognised clearing house, LME Clear.

Also in August 2016, following market engagement, the LME announced a package of measures to support LME members and develop the market as a whole. These covered, amongst other things, a fee reduction on member short-dated carry trades, a cap on the cost of member and client position transfers, and a review of the LME's suite of incentive programmes to ensure these continue to support the market to the benefit of all stakeholders.

Trading fees remain unchanged in 2017, including the continuation of fee discounts for short-dated carries and position transfer caps as announced in August 2016. The LME has also introduced a waiver for the base metals usage licence fee for physical market participants, which came into effect on 1 January 2017.

In January 2016, the LME and LME Clear moved into new offices at 10 Finsbury Square, combining the three separate offices on Leadenhall Street. Ring trading began at the new offices shortly after, and the office was formally opened by President Bachelet of Chile in May 2016. On 17 July 2016 the LME and LME Clear invoked their business continuity plan following the discovery of structural defects at the new premises in the non-LME areas of the building. The business operated successfully from its back-up trading venues for seven weeks, before returning to Finsbury Square on 5 September 2016.

### **Promotional Activities**

The annual "LME Asia Week 2016" was held on 14 June 2016 in Hong Kong. The Metals Seminar attracted nearly 800 attendees and the Gala Dinner with over 1,700 guests, was the largest ever since the inception of the LME Asia Week, in 2013. During the week, HKEX also organised the "Investment in Metals Forum", "Precious Metals and Base Metals Workshop" as well as two educational briefing sessions. In addition, HKEX and the China Futures Association jointly organised the third training programme for senior executives from the top 20 Mainland futures brokers.

To enhance market awareness and attract Mainland investors to trade both HKEX and LME products, HKEX and the LME sponsored the third global derivatives trading competition from 1 April to 30 September 2016 and HKEX derivatives trading competition from 21 November 2016 to 30 March 2017. Both competitions were organised by the China Futures Daily and have attracted 40 international brokers to participate. HKEX also sponsored the first ever gold futures simulation game featuring HKEX's proposed new gold futures contracts (pending the SFC's approval). Approximately 1,300 people joined the game and more than 7 million lots were traded from 1 November 2016 to 27 January 2017.

HKEX also spoke at over 100 events, including EP briefings, public conferences, brokers' seminars, webinars and educational training, in Mainland, Hong Kong and Taiwan to enhance market awareness and attract investors to our markets.

## **Clearing Segment**

## **Key Market Indicators**

	2016	2015	Change
ADT on the Stock Exchange (\$bn)	66.9	105.6	(37%)
Average daily number of Stock Exchange trades	1,081,020	1,440,280	(25%)
Average value per trade (\$)	61,908	73,340	(16%)
Average daily value of Settlement Instructions (SIs) settled by CCASS (\$bn)	181.9	254.7	(29%)
Average daily number of SIs	83,194	101,029	(18%)
Average value per SI (\$)	2,186,693	2,520,752	(13%)

## **Analysis of Results**

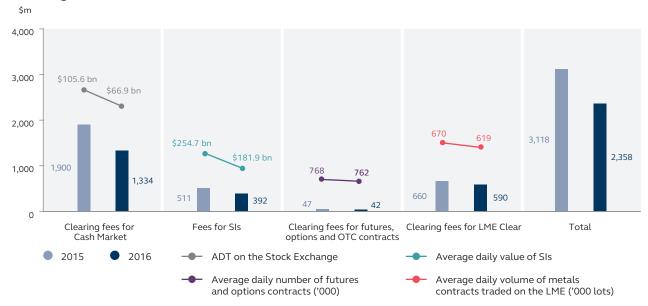
## **Summary**

	2016 \$m	2015 \$m	Change
Trading fees and trading tariff – allocated from			
Equity and Financial Derivatives segment	278	256	9%
Clearing and settlement fees	2,358	3,118	(24%)
Depository, custody and nominee services fees	857	867	(1%)
Other revenue and sundry income	98	157	(38%)
	3,591	4,398	(18%)
Net investment income	547	604	(9%)
Total revenue and other income	4,138	5,002	(17%)
Operating expenses	(702)	(692)	1%
EBITDA	3,436	4,310	(20%)
EBITDA margin	83%	86%	(3%)

### **Trading Fees and Trading Tariff**

Trading fees and trading tariff allocated for clearing derivatives products rose due to an 18 per cent increase in average daily number of derivatives contracts traded on the Futures Exchange, but was partly offset by a 20 per cent drop in volume of stock options traded (see commentary for the Equity and Financial Derivatives segment above).

### **Clearing and Settlement Fees**



Clearing and settlement fees for the Hong Kong Cash Market and for SIs decreased by 30 per cent and 23 per cent respectively. The decrease was lower than the 37 per cent decrease in ADT on the Stock Exchange and the 29 per cent fall in average daily value of SIs due to the decrease in average transaction size that resulted in more Cash Market trades being subject to the minimum clearing fee and fewer SI transactions being subject to the maximum fee.

Clearing fees for LME Clear declined by \$70 million or 11 per cent as a result of the 8 per cent drop in average daily volume of metals contracts traded on the LME and the effect of incentive rebates introduced since the third guarter of 2015.

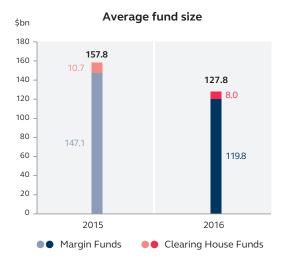
### **Depository, Custody and Nominee Services Fees**

Depository, custody and nominee services fees are not directly impacted by changes in market activity. They dropped by \$10 million or 1 per cent due to lower scrip and corporate action fees, but this was partly offset by higher stock withdrawal fees. The decrease in scrip fees was attributable to fewer companies having their first book close or declaring a dividend in 2016 than in 2015.

### Other Revenue and Sundry Income

Other revenue and sundry income dropped by \$59 million or 38 per cent, due to the one-off post-liquidation interest payment of \$38 million received from Lehman's liquidators in 2015, and lower accommodation income received by LME Clear principally due to lower levels of collateral lodged by members.

### **Net Investment Income**



The decrease in the average size of Margin Funds during the year was due to lower margin requirements per contract cleared through HKCC, lower cash margins received by LME Clear (due to lower margin requirements on lower prices of metals contracts), and a higher proportion of non-cash collateral posted by members of LME Clear.

		2016			2015	
	Margin Funds \$m	Clearing House Funds \$m	Total \$m	Margin Funds \$m	Clearing House Funds \$m	Total \$m
Net investment income from:						
Cash and bank deposits	512	20	532	570	21	591
Debt securities	13	-	13	14	_	14
Exchange gains/(losses)	2	-	2	(1)	_	(1)
Total net investment income	527	20	547	583	21	604
Net investment return	0.44%	0.26%	0.43%	0.40%	0.19%	0.38%

The lower net investment income on Margin Funds in 2016 was attributable to a lower average fund size. The drop in investment income was mitigated by an increase in the investment return on Margin Funds, from 0.40 per cent in 2015 to 0.44 per cent in 2016, reflecting an increase in bank deposit rates in Hong Kong.

### **EBITDA**

Operating expenses rose by \$10 million or 1 per cent over 2015. However, after excluding a non-recurring recovery from Lehman's liquidators of \$77 million in 2015, underlying operating expenses showed a reduction of 9 per cent, as a result of lower staff costs including reduced variable pay, lower legal and professional fees incurred on strategic projects and depreciation of GBP which resulted in lower costs for LME Clear.

The drop in EBITDA margin from 86 per cent in 2015 to 83 per cent in 2016 is a direct reflection of the decrease in revenue and other income.

### **Business Update**

### **Cash and Derivatives Clearing**

Three batches of CCASS enhancements were introduced during 2016 and January 2017 to improve the settlement and collateral efficiencies of CCASS Participants in Stock Connects.

In July 2016 HKCC started to offer margin offset between USD/CNH currency futures and CNH/USD currency futures. The new arrangement benefits CPs through a reduction in margin costs for their offsettable positions in these two products. HKCC will extend similar margin offset arrangement to HSI and HSCEI Index futures and options in the first quarter of 2017.

HKCC relaxed its cash collateral policy in late September 2016, allowing CPs to satisfy their RMB margin requirement of up to RMB1 billion <sup>4</sup> by any acceptable cash and/or non-cash collateral <sup>5</sup>. This policy relaxation will help reduce investors' funding costs when trading RMB-denominated derivatives products.

<sup>5</sup> Non-cash collateral limit remains at 50 per cent of margin requirement.

#### **OTC Clear**

During 2016, OTC Clear broadened its membership base to admit HK-incorporated licensed corporations. It also admitted a US swap dealer as its thirteenth Clearing Member in December 2016.

Clearing services for USD/CNH cross currency swaps were launched on 15 August 2016, and OTC Clear is the first international clearing house to do so. The SFC has also recognised OTC Clear as a Designated Central Counterparty, which allows market participants to use clearing services offered by OTC Clear to fulfil their mandatory clearing obligations in Hong Kong.

### **LME Clear**

In 2016, LME Clear won the Metals Service Provider of the Year at the Platts Global Metals Awards. This was in recognition of LME Clear's innovations in the metals trading industry, noting in particular the risk management transparency of the new clearing system and the introduction of warrants as collateral and compression services.

In the second quarter of 2017, LME Clear will launch clearing of LME precious gold and silver contracts. In 2017, it will also deliver its solution for clearing in compliance with the Markets in Financial Instruments Directive 2 and intends to launch clearing for LME Flex contracts, which will provide members the ability to replicate monthly average deliverable positions.

## **Platform and Infrastructure Segment**

### **Analysis of Results**

### **Summary**

	2016 \$m	2015 \$m	Change
Network, terminal user, dataline and software sub-license fees	406	389	4%
Hosting services fees	129	105	23%
Others	5	5	0%
Total revenue	540	499	8%
Operating expenses	(152)	(148)	3%
EBITDA	388	351	11%
EBITDA margin	72%	70%	2%

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

Network, terminal user, dataline and software sub-license fees increased as more Cash Market EPs migrated from the obsolete Open Gateway to HKEX Orion Central Gateway, but this was partly offset by a decrease in sales of throttles.

### **Hosting Services Fees**

Hosting services fees increased due to an increase in the number of racks taken up by customers.

### **EBITDA**

Operating expenses increased due to higher staff costs attributable to annual payroll adjustments, partly offset by reduced variable pay. As the percentage increase in revenue was higher than the percentage increase in operating expenses, EBITDA margin increased from 70 per cent to 72 per cent.

During 2016, all major trading, clearing, settlement, and market data dissemination systems for the Cash, Derivatives and Commodities Markets continued to perform reliably. On 22 July 2016 and 12 January 2017, the opening of the LME's electronic trading platform experienced a delay triggered by issues at a telecoms network provider, which affected LME's member network and the LME trading system respectively. However, telephone trading of LME products was able to continue as normal.

The system development phase for the implementation of Orion Trading Platform – Securities Market was completed in the fourth quarter of 2016 and various testing and other market readiness activities will be carried out in 2017. The first phase of pre-implementation independent review has commenced and is scheduled to be completed by the first quarter of 2017.

Despite the challenging environment, HKEX continues to invest in technology to improve market efficiency. To facilitate Northbound trading under Stock Connects for China Connect Exchange Participants (CCEPs) HKEX will introduce a new market access gateway between Broker Supplied Systems of CCEPs and China Connect securities markets in the second quarter of 2017.

The revamp of the HKEX corporate websites to improve the user experience is in progress. The updated HKEX Group website was launched in September 2016 while the Market website will be launched in 2017.

At the end of December 2016, 95 EPs were using HKEX's Hosting Services. These EPs generated, in aggregate, approximately 45 per cent of the Cash Market turnover and 56 per cent of the trading volume of the Derivatives Market.

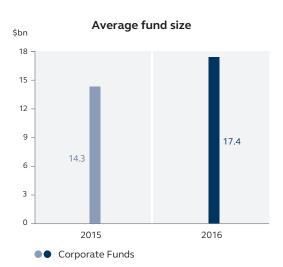
## **Corporate Items**

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

### Revenue and Other Income

	2016 \$m	2015 \$m	Change
Net investment income	149	74	101%
Gain on disposal of a leasehold property	_	445	(100%)
Others	12	6	100%
Total	161	525	(69%)

### **Net Investment Income**



The average fund size increased principally due to cash generated and retained by the business (net of cash dividends paid).

The analysis of net investment income is as follows:

	2016 \$m	2015 \$m
Net investment income from:		
Cash and bank deposits	82	71
Equity securities	27	30
Debt securities	75	30
Collective investment schemes	6	_
Exchange loss	(41)	(57)
Total net investment income	149	74
Net investment return	0.86%	0.52%

In 2015, a \$31 million gain on sale of the remaining stake in shares of LCH was included in net investment income under equity securities. Excluding the LCH gain, net investment income of the Corporate Funds in 2016 increased by \$106 million principally due to higher fair value gains on other equity securities, debt securities and collective investment schemes.

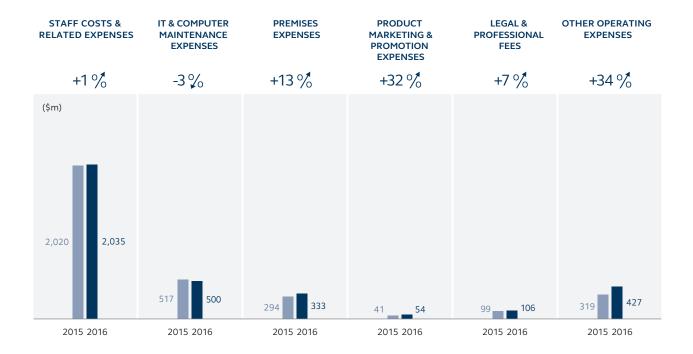
As the valuation of investments reflect movements in market prices, fair value gains or losses may fluctuate or reverse until the investments are sold or redeemed.

### Gain on Disposal of a Leasehold Property

In 2015, the Group disposed of a leasehold property in Hong Kong and a gain of \$445 million was recorded.

## **Expenses, Other Costs and Taxation**

### **Operating Expenses**



Staff costs and related expenses increased by \$15 million or 1 per cent mainly due to annual payroll adjustments and increased headcount for strategic initiatives (including Shenzhen-Hong Kong Stock Connect and the establishment of a commodities trading platform in the Mainland), but were partly offset by reduced variable pay.

IT and computer maintenance expenses consumed by the Group, excluding costs of services and goods directly consumed by Participants of \$73 million (2015: \$72 million), were \$427 million (2015: \$445 million). The drop was mainly attributable to lower IT costs of the LME Group as a result of the depreciation of GBP and cost control measures.

Premises expenses increased due to new offices taken up following the sale of the Group's Worldwide House office premises in Hong Kong in September 2015, and the relocation of the LME to a new office in January 2016.

Other operating expenses increased due to the effect of a non-recurring recovery from Lehman's liquidators of \$77 million in 2015. Excluding this recovery, operating expenses rose by \$31 million or 8 per cent, which was primarily due to higher committed bank credit facilities fees, higher investment management services costs due to increased size of externally-managed Corporate Funds, and an increase in index license fees arising from the higher trading volume of derivatives contracts.

### **Depreciation and Amortisation**

	2016 \$m	2015 \$m	Change
Depreciation and amortisation	771	684	13%

Depreciation and amortisation increased due to the completion of various system enhancements including upgrades to the cash clearing system and the commodities trading and clearing systems, and leasehold improvements at the new office premises.

### **Finance Costs**

	2016 \$m	2015 \$m	Change
Finance costs	82	114	(28%)

The decrease in finance costs was mainly due to the conversion of all convertible bonds to equity in the second quarter of 2015.

### **Taxation**

	2016 \$m	2015 \$m	Change
Taxation	1,058	1,347	(21%)

Taxation decreased due to lower profit before taxation in 2016, but was partly offset by lower non-taxable income (due to the non-taxable gain arising on the sale of a leasehold property in 2015) and a lower deferred tax credit on enacted reductions in UK Corporation Tax rates (2016: \$31 million; 2015: \$65 million).

## FINANCIAL REVIEW

## **Analysis of Results by Quarter**

## **Quarterly Results**

	Q1 2016 \$m	Q2 2016 \$m	Q3 2016 \$m	Q4 2016 \$m	Total 2016 \$m
Revenue and other income	2,751	2,879	2,848	2,638	11,116
Operating expenses	(854)	(834)	(834)	(933)	(3,455)
EBITDA	1,897	2,045	2,014	1,705	7,661
Depreciation and amortisation	(188)	(194)	(191)	(198)	(771)
Operating profit	1,709	1,851	1,823	1,507	6,890
Finance costs	(23)	(20)	(19)	(20)	(82)
Share of loss of a joint venture	(2)	(3)	(2)	(2)	(9)
Profit before taxation	1,684	1,828	1,802	1,485	6,799
Taxation	(259)	(281)	(266)	(252)	(1,058)
Profit for period/year	1,425	1,547	1,536	1,233	5,741
Loss attributable to non-controlling interests	7	6	7	8	28
Profit attributable to shareholders	1,432	1,553	1,543	1,241	5,769
	Q1 2015 \$m	Q2 2015 \$m	Q3 2015 \$m	Q4 2015 \$m	Total 2015 \$m
Profit attributable to shareholders	1,575	2,520	2,330	1,531	7,956

### **Analysis of Quarterly Results**



- 2015 Profit attributable to shareholders
- 2016 Profit attributable to shareholders
- 2015 ADT on the Stock Exchange
- → 2016 ADT on the Stock Exchange

The significant change in Cash Market ADT, from the record highs achieved in 2015, had a significant influence on the Group's results. The return of trading volumes to pre-2015 levels resulted in profit attributable to shareholders being lower than in 2015 for all quarters.

During 2016, profit was the highest in the second quarter due to seasonal increases in depository, custody and nominee services. Excluding these seasonal increases, profit was the highest in the third quarter due to an improvement in headline ADT and trading activity through Shanghai-Hong Kong Stock Connect.

## Changes to Key Items in Consolidated Statement of Financial Position

### (A) Financial Assets and Financial Liabilities

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m	Change
Financial assets			
Cash and cash equivalents	115,723	110,890	4%
Financial assets measured at fair value through profit or loss	70,066	72,705	(4%)
Financial assets measured at amortised cost	29,167	19,496	50%
Tabal	214.056	202.001	<b>C</b> 0/
Total	214,956	203,091	6%

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

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m	Change
Financial assets			
Corporate Funds	17,670	15,636	13%
Margin Funds <sup>1</sup>	125,803	114,416	10%
Clearing House Funds	9,602	8,430	14%
Base metals derivatives contracts cleared through LME Clear	61,618	64,480	(4%)
Cash prepayments for A shares	263	129	104%
Total	214,956	203,091	6%

1 Excludes Settlement Reserve Fund and Settlement Guarantee Fund paid to ChinaClear and margin receivable from CPs of \$1,043 million (31 December 2015: \$797 million), which are included in accounts receivable, prepayments and other deposits.

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m	Change
Financial liabilities			
Base metals derivatives contracts cleared through LME Clear	61,618	64,480	(4%)
Other financial liabilities at fair value through profit or loss	9	6	50%
Margin deposits, Mainland security and settlement deposits,			
and cash collateral from CPs	126,846	115,213	10%
CPs' contributions to Clearing House Funds	8,656	7,474	16%
Total	197,129	187,173	5%

The 10 per cent increase in financial assets and financial liabilities of Margin Funds at 31 December 2016 against those at 31 December 2015 was mainly attributable to increased contributions required from members of LME Clear in response to an increase in open positions and higher metal contract prices.

The increase in financial assets and financial liabilities of Clearing House Funds was mainly attributable to higher contributions required from members of LME Clear in response to increase open positions, higher metal contract prices and changes in risk exposures.

Corporate Funds at 31 December 2016 increased by 13 per cent or \$2,034 million as compared to those at 31 December 2015 due to the retention of cash generated by the business over the past year partly offset by the cash element of the 2015 final dividend and 2016 interim dividend.

### (B) Fixed Assets, Intangible Assets and Capital Commitments

The total net book value of the Group's fixed assets and intangible assets dropped by \$121 million from \$19,432 million at 31 December 2015 to \$19,311 million at 31 December 2016. The drop was mainly due to depreciation and amortisation of \$771 million, but was partly offset by additions of \$646 million. Additions during the year mainly related to the establishment of a commodities trading platform in Mainland China, the renovation of new offices, and the development and upgrade of various trading and clearing systems including the LME's trading and clearing systems, the cash trading system, and trading and clearing systems to facilitate mutual stock market access between Mainland China and Hong Kong.

The Group's capital expenditure commitments at 31 December 2016, including those authorised by the Board but not yet contracted for, amounted to \$981 million (31 December 2015: \$961 million). These related mainly to the establishment of a commodities trading platform in Mainland China, and the development and upgrade of various IT systems including the LME's trading and clearing systems, the cash trading system, and the derivatives trading and clearing systems in Hong Kong.

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

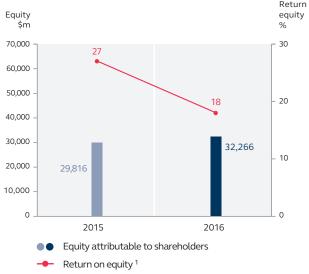
The Group completed an internal reorganisation of its subsidiaries on 22 January 2016. Following the internal reorganisation, HKCC, SEOCH, The Stock Exchange Club Limited (subsequently renamed HKEX Investment (China) Limited), HKEX Information Services Limited and HK Conversion Agency Services Limited, which were previously held by HKFE, SEHK and HKSCC, became direct wholly-owned subsidiaries of HKEX. The internal reorganisation helps the Group better manage its various regulatory obligations and risks associated with the businesses and operations of the recognised exchanges and clearing houses.

During the year, the Group set up a subsidiary, Gangrong Trading Services (Shenzhen) Limited in Qianhai, Shenzhen for the development of a new commodity trading platform in the Mainland. At the date of this Annual Report, RMB250 million had been injected into this subsidiary as registered capital.

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

Equity attributable to shareholders increased by \$2,450 million to \$32,266 million at 31 December 2016 from \$29,816 million at 31 December 2015. This arose principally from the \$2,782 million shares issued in lieu of cash dividends but was partly offset by a decrease in retained earnings of \$357 million as the 2015 final dividend (based on the relatively high profit of the second half of 2015) and 2016 interim dividend declared exceeded profit for the year.

### Equity attributable to Shareholders and Return on Equity



Return on equity dropped by 9 per cent due to the decrease in profit attributable to shareholders and the increase in equity arising from shares issued in lieu of cash dividends in 2016.

1 Based on equity attributable to shareholders at year-end

## Liquidity, Financial Resources and Gearing

Working capital rose by \$2,527 million to \$17,122 million at 31 December 2016 (31 December 2015: \$14,595 million). The increase was mainly due to profit attributable to shareholders of \$5,769 million, which was partly offset by the 2015 final dividend and 2016 interim dividend, net of scrip dividends, of \$3,360 million.

At 31 December 2016, the Group had the following outstanding borrowings:

	At 31 Dec 2016		At 3	31 Dec 2015
	Carrying value \$m	Maturity	Carrying value \$m	Maturity
USD floating rate bank borrowings 2 USD fixed rate notes with average	1,586	Jul 2020 & Jul 2021	1,585	Jul 2020 & Jul 2021
coupon of 2.8 per cent	1,519	Dec 2018 & Jan 2019	1,516	Dec 2018 & Jan 2019
Written put options to non-controlling interests	317	N/A	308	N/A
	3,422		3,409	

At 31 December 2016, the Group had a gross gearing ratio (ie, gross debt divided by adjusted capital) of 11 per cent (31 December 2015: 12 per cent), and a net gearing ratio (ie, net debt divided by adjusted capital) of zero per cent (31 December 2015: zero per cent). For this purpose, gross debt is defined as total borrowings and net debt is defined as total borrowings less cash and cash equivalents of Corporate Funds (and will be zero when the amount of cash and cash equivalents of Corporate Funds is greater than total borrowings), and adjusted capital as all components of equity attributable to shareholders other than designated reserves.

Apart from the borrowings used to fund the acquisition of the LME Group, banking facilities have been put in place for contingency purposes. At 31 December 2016, the Group's total available banking facilities for its daily operations amounted to \$18,947 million (31 December 2015: \$17,012 million), which included \$11,938 million (31 December 2015: \$10,000 million) of committed banking facilities and \$7,000 million (31 December 2015: \$7,000 million) of repurchase facilities.

The Group has also put in place foreign exchange facilities for its daily clearing operations and for the RMB Trading Support Facility to support the trading of RMB stocks listed on the Stock Exchange. At 31 December 2016, the total amount of the facilities was RMB21,500 million (31 December 2015: RMB17,000 million).

In addition, the Group has arranged contingency banking facilities amounting to RMB13,000 million (31 December 2015: RMB13,000 million) for settling payment obligations to ChinaClear should there be events that disrupt normal settlement arrangements for Stock Connects, eg, natural disasters or extreme weather conditions in Hong Kong.

At 31 December 2016, 85 per cent (31 December 2015: 92 per cent) of the Group's cash and cash equivalents were denominated in HKD or USD.

## **Pledges of Assets**

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

### **Exposure to Fluctuations in Exchange Rates and Related Hedges**

Details of the Group's exposure to fluctuations in exchange rates and related hedges are included in note 47(a)(i) – Foreign exchange risk to the Consolidated Financial Statements of this Annual Report.

## **Contingent Liabilities**

Details of contingent liabilities are included in note 43 to the Consolidated Financial Statements of this Annual Report.

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
KEY MARKET STATISTICS										
Average daily turnover value on the		105.0	co. 5		=2.0	co 7			70.4	00.4
Stock Exchange (\$bn)  Average daily number of derivatives contracts	66.9	105.6	69.5	62.6	53.9	69.7	69.1	62.3	72.1	88.1
traded on the Futures Exchange										
('000 contracts)	464	394	275	284	260	269	222	206	207	171
Average daily number of stock options contracts traded on the Stock Exchange										
('000 contracts)	298	374	302	249	228	303	246	192	225	188
Average daily volume of metals contracts traded on LME* ('000 lots)	619	670	700	676	634	N/A	N/A	N/A	N/A	N/A
* HKEX completed the acquisition of the Li	ME Group or	n 6 Deceml	per 2012.							
CONSOLIDATED INCOME STATEMENT										
(\$m)	11 116	12 275	0.040	0.722	7 244	7.055	7.566	7.025	7.540	0.200
Revenue and other income Operating expenses	11,116 (3,455)	13,375 (3,290)	9,849 (2,958)	8,723 (2,777)	7,211 (1,957)	7,855 (1,733)	7,566 (1,505)	7,035 (1,392)	7,549 (1,511)	8,390 (1,333)
Operating expenses	(3,433)	(3,290)	(2,930)	(2,777)	(1,337)	(1,755)	(1,505)	(1,332)	(1,511)	(1,555)
EBITDA	7,661	10,085	6,891	5,946	5,254	6,122	6,061	5,643	6,038	7,057
Depreciation and amortisation	(771)	(684)	(647)	(507)	(158) (138)	(90)	(107)	(101)	(110)	(79)
Costs relating to acquisition of LME Group Finance costs	(82)	(114)	(196)	(183)	(55)	_	_	_	_	_
Fair value loss on derivative component	(0-)	(,	(150)	(100)	(00)					
of convertible bonds	-	-	-	-	(55)	-	-	-	-	-
Gain on disposal of an associate Share of profits less losses of	-	-	-	-	-	-	-	-	-	206
associates/joint venture	(9)	(9)	(10)	(10)	(3)	_	_	_	_	6
Profit before taxation	6,799	9,278	6,038	5,246	4,845	6,032	5,954	5,542	5,928	7,190
Taxation	(1,058)	(1,347)	(900)	(700)	(761)	(939)	(917)	(838)	(799)	(1,021)
Profit for the year	5,741	7,931	5,138	4,546	4,084	5,093	5,037	4,704	5,129	6,169
Loss attributable to non-controlling interests	28	25	27	6	-	-	-	-	-	-
Profit attributable to shareholders	5,769	7,956	5,165	4,552	4,084	5,093	5,037	4,704	5,129	6,169
Dividend per share (\$)	4.25	5.95	3.98	3.54	3.31	4.25	4.20	3.93	4.29	5.19
Basic earnings per share (\$)	4.76	6.70	4.44	3.95	3.75	4.71	4.66	4.36	4.76	5.76
CONSOLIDATED STATEMENT										
OF FINANCIAL POSITION (\$m)										
Non-current assets	19,508	19,622	19,672	20,797	20,260	1,580	2,350	2,637	425	884
Current assets	227,810	218,571	232,188	65,146	60,577	52,448	45,534	42,695	62,397	87,070
Current liabilities	(210,688)	(203,976)	(222,564)	(57,538)	(55,337)	(44,809)	(39,160)	(36,985)	(55,220)	(79,273)
Net current assets	17,122	14,595	9,624	7,608	5,240	7,639	6,374	5,710	7,177	7,797
Total assets less current liabilities	36,630	34,217	29,296	28,405	25,500	9,219	8,724	8,347	7,602	8,681
Non-current liabilities	(4,246)	(4,255)	(7,937)	(7,887)	(7,736)	(60)	(47)	(320)	(308)	(305)
Total equity	32,384	29,962	21,359	20,518	17,764	9,159	8,677	8,027	7,294	8,376
Non-controlling interests	(118)	(146)	(86)	(113)	-	-	-	-	-	-
Equity attributable to HKEX's shareholders	32,266	29,816	21,273	20,405	17,764	9,159	8,677	8,027	7,294	8,376
Equity per share <sup>1</sup> (\$)	26.42	24.74	18.26	17.59	15.48	8.50	8.06	7.46	6.79	7.83
FINANCIAL RATIOS										
Dividend payout ratio	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Cost to income ratio <sup>2</sup>	31%	25%	30%	32%	27%	22%	20%	20%	20%	15%
Pre-tax profit margin <sup>2</sup>	61%	69%	61%	60%	67%	77%	79%	79%	79%	84%
Return on equity <sup>3</sup>	18%	27%	24%	22%	23%	56%	58%	59%	70%	74%
Current ratio	1.1	1.1	1.0	1.1	1.1	1.2	1.2	1.2	1.1	1.1

## Notes:

- 1 Based on number of shares issued and fully paid less number of shares held for the Share Award Scheme at 31 December
- <sup>2</sup> For the purpose of computing cost (ie, operating expenses) to income ratio and pre-tax profit margin, income includes gain on disposal of an associate and share of profits less losses of associates/joint venture.
- Based on equity attributable to HKEX's shareholders at year end

### CORPORATE GOVERNANCE REPORT

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

HKEX's key corporate governance practices and activities during the year ended 31 December 2016 are highlighted in this report and certain Committee Reports, as well as the 2016 CSR Report which will be published on the HKEX Group website together with this Annual Report. All the Committee Reports form part of this report.

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

### **Committee Reports**

Nomination Committee Report: pages 70 to 72 Audit Committee Report: pages 73 to 75 Risk Committee Report: pages 76 to 78 Remuneration Committee Report: pages 79 to 85 ESG Committee Report: pages 86 and 87

### **HKEX Group website**

About HKEX (Organisation) section ORG
Investor Relations section IR
Corporate Governance section CG
Corporate Social Responsibility section CSR

### **Governance Highlights**

- High level of independence
- · Periodic Board refreshment
- Diverse range of expertise and experience
- Strong time commitment by Directors
- Ample training attended by Directors
- Independent Board composition review
- Effective project oversight

- Annual compensation policies review
- Robust risk management and internal controls framework
- Embedded compliance culture
- · Accountability and transparency
- Proactive and ongoing stakeholder engagement

## **Compliance with Corporate Governance Code**

Throughout the year 2016, HKEX complied with all code provisions and, where appropriate, adopted the recommended best practices set out in the Corporate Governance Code, with the following exceptions:

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

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

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

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

HKEX has applied the principles of the Corporate Governance Code to its corporate governance structure and practices in the manner as described in this report and on the HKEX Group website CG/IR/ORG. A checklist detailing HKEX's compliance with the Corporate Governance Code is available on the HKEX Group website CG. The Board has delegated its corporate governance functions to the ESG Committee. A summary of the work done by the ESG Committee in 2016/2017 is set out in the ESG Committee Report.

## **Strategic Planning**

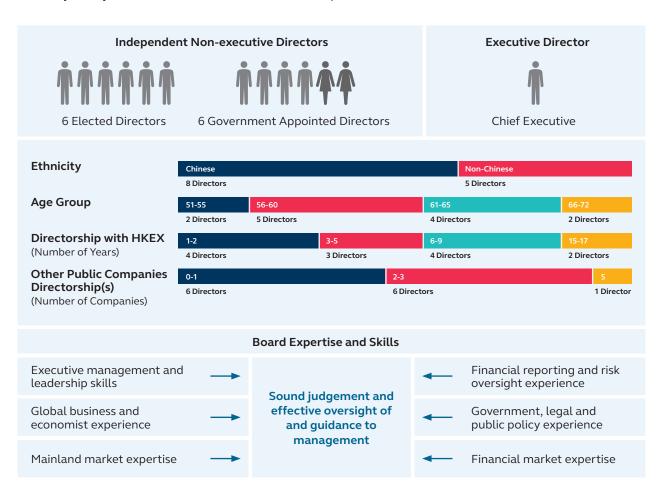
HKEX adopts a rigorous and continuing strategic planning process to identify and assess the opportunities and challenges that the Group might face and to develop a planned course of action for the Group to generate sustainable long-term value for Shareholders.

HKEX's three-year strategic plan for 2016-2018 is available on the HKEX Group website (About HKEX section). In September 2016, an annual Board offsite meeting was held to discuss and review the Group's latest strategic developments. Details of the progress made during the year are reported in the Chief Executive's Review and Business Review sections of this Annual Report.

### The Board

### **Board Composition**

The Board's structure is governed by HKEX's Articles and the SFO. The Board has adopted a Board Diversity Policy which is available on the HKEX Group website CG.



The names of the Directors in office during 2016 and brief biographies of the current Directors are included in the Board of Directors and Senior Management section of this Annual Report.

Under HKEX's Articles, the term of office of Non-executive Directors is not more than three years (subject to re-appointment or re-election), although each Government Appointed Director is normally appointed for a term of approximately two years. The staggered terms of service enable the Board to have a core team of veteran Directors who are conversant with the Group's ongoing business as well as new members who bring fresh perspectives and a diversity of experience to the Board.

A strong and effective board requires the appropriate mix of skills, experience and diversity among its members to provide sound judgement on strategic issues and effective oversight of and guidance to management. Over half of the Board's members were new joiners in the past five years. In 2016, HKEX engaged an independent consultant to conduct a review of the Board's composition to identify any talent or experience gap to be filled through future Director appointments. Based on the consultant's recommendation, a set of selection criteria has been developed for identifying potential candidates for election to the Board. On 27 February 2017, the Board accepted the nomination by the Nomination Committee and recommended Cheah Cheng Hye and Leung Pak Hon, Hugo to stand for election at the 2017 AGM.

Information about the Board Diversity Policy along with the review of the Board's composition, nomination of Board candidates and independence assessment of INEDs during 2016/2017 is set out in the Nomination Committee Report.

### **Roles and Responsibilities**

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

For effective oversight and leadership, the Board regularly reviews reports from HKEX's Chief Executive and senior management on progress of the approved strategies, plans and budgets, and receives updates/advice from the Board committees, Consultative Panels and management on the governance, business performance and development of the Group. Further details relating to the Board committees, Consultative Panels and HKEX's management functions are set out in the Board Delegation section below.

The Board recognises the importance and benefits of conducting regular evaluation of its performance. On 27 February 2017, the Board approved the proposal to engage an independent external consultant to conduct independent board evaluations for HKEX and its two subsidiaries, the LME and LME Clear, in 2017.

### **Chairman and Chief Executive**

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

Key Responsibilities of HKEX's Chairman and Chief Executive

### C K Chow

Chairman (INED)

- Provides leadership to the Board
- Monitors Board effectiveness
- Fosters constructive relationships among Directors
- Promote integrity and probity
- Ensure effective stakeholder communication

### Charles Li

Chief Executive (ex-officio Director)

- Develops strategies for the Board's approval
- Executes the strategies agreed by the Board
- Leads day-to-day management of the Group

On appointment, Directors are provided with comprehensive induction training to ensure that they have a thorough understanding of the Group's operations and governance policies as well as their role and responsibilities. Apurv Bagri who was elected as a Director on 28 April 2016 has received the induction training during the year. Every new Board member also receives a Director's Handbook which contains the Board's terms of reference, an overview of Directors' responsibilities, the Guidelines on Conduct and information on other key governance issues. The Director's Handbook and more information about induction training for new Directors are available on the HKEX Group website  $\square$ G.

Ongoing development and training helps Directors keep abreast of current trends and issues facing the Group, while enabling them to update and refresh their skills and knowledge necessary for the performance of their duties. All Directors are required to provide HKEX with their training records, and to confirm their respective records on a semi-annual basis. The records are maintained by the Company Secretary for annual review by the ESG Committee. During 2016, the Directors received an aggregate of about 600 hours of training by attending management briefings, or participating as speakers, members or attendees in conferences, seminars, and workshops on various topics relevant to HKEX's strategy and operation, development of the financial markets, and directors' duties.

### 2016 Directors' Training by Topic

	Average hours of training: more than 45 $^{\mathrm{1}}$						
	HKEX's strategy/ business	Economy/ financial markets and products	Director's duties/ ESG practices	Financial reporting/risk management	Legislative/ regulatory compliance	Others <sup>2</sup>	
INEDs							
C K Chow (Chairman)	✓	✓	✓	✓	✓		
Apurv Bagri ³	✓	✓	✓				
T C Chan	✓	✓	✓	✓	✓	✓	
Timothy Freshwater	<b>✓</b>	✓	✓	✓	✓		
Anita Fung	✓	✓	✓	✓	✓		
Rafael Gil-Tienda	✓	✓		✓	✓		
ohn Harrison		✓	✓				
Fred Hu		✓					
Bill Kwok	✓	✓	✓	✓	✓		
Vincent Lee	✓	✓	✓	✓	✓		
Margaret Leung		✓	✓	✓	✓	✓	
John Williamson	✓	✓		✓	✓		
Oscar Wong <sup>1</sup>			✓				
Executive Director							
Charles Li	✓	✓	✓	✓	✓	✓	

1 This figure excludes the training hours received by Mr Wong who retired from the Board at the end of the 2016 AGM.

<sup>!</sup> Includes topics such as investor relations, IT and management

<sup>3</sup> Mr Bagri was elected as a Director on 28 April 2016.

### **Board Process**

In addition to the annual offsite meeting in September, the Board held nine regular meetings in 2016 to discuss matters relating to the Group's strategies, business operations, performance, governance, risk management and human capital. HKEX's Chairman also had regular gatherings with other Directors, occasionally without the presence of HKEX's Chief Executive, to consider issues in an informal setting.

	2016 AGM	Board	Audit Committee	ESG Committee	Executive Committee	Investment Advisory Committee	Nomination Committee	Panel Member Nomination Committee	Project <sup>1</sup> Oversight Committee	Remuneration Committee	Risk Committee	Risk Management Committee (statutory)
Number of Meetings	1	9	4	1	6	5	5	1	4	6	4	4
Total Duration (Approximate number of hours)	1	29	8	1	5	8	4	1	7	8	6	3
INEDs												
C K Chow (Chairman)	1/1	9/9		1/1	6/6		5/5			6/6	4/4	4/4
Apurv Bagri <sup>2</sup>		7/7		-					4/4			
T C Chan	1/1	9/9	4/4				5/5	1/1			4/4	4/4
Timothy Freshwater	1/1	9/9				5/5	5/5			6/6		
Anita Fung	1/1	9/9	4/4			4/5		1/1	4/4			
Rafael Gil-Tienda <sup>3</sup>	1/1	8/9		1/1				1/1	4/4		4/4	
John Harrison	1/1	8/9	4/4								4/4	
Fred Hu	0/1	7/9				2/5	4/5		1/4			
Bill Kwok	1/1	9/9	4/4		5/6			1/1	4/4	6/6		
Vincent Lee 4	1/1	9/9		1/1	6/6	3/3		1/1		6/6		
Margaret Leung	1/1	9/9			6/6						2/4	4/4
John Williamson	1/1	9/9	3/4	1/1			5/5			5/6		
Oscar Wong <sup>5</sup>	1/1	2/2				2/2						
Executive Director												
Charles Li	1/1	9/9		0/1	6/6							
Market Professionals												
Henry Cheng <sup>6</sup>												2/3
Raymond Cheng <sup>7</sup>												4/4
Lawrence Lam												4/4
Howard Lee 8												1/1
Keith Lui												4/4
Barbara Shiu												4/4
May Tan <sup>9</sup>												-
Average Attendance Rate	92%	97%	95%	80%	97%	80%	96%	100%	85%	97%	90%	97% <sup>10</sup>

- 1 The Project Oversight Committee was established on 29 April 2016.
- Mr Bagri was elected as a Director on 28 April 2016 and appointed to the ESG Committee and the Project Oversight Committee on 29 April 2016. No meeting of ESG Committee took place between 29 April 2016 and 31 December 2016.
- Mr Gil-Tienda was appointed to the Panel Member Nomination Committee on 29 April 2016 and ceased to be a member of the ESG Committee on the same date.
- Mr Vincent Lee was appointed to the Investment Advisory Committee on 29 April 2016.
- Mr Wong retired from the Board, the Investment Advisory Committee and the Panel Member Nomination Committee on 28 April 2016.
- Mr Henry Cheng was appointed to the Risk Management Committee (statutory) on 26 February 2016.
- Mr Raymond Cheng was appointed to the Risk Management Committee (statutory) on 20 January 2016.
- Mr Howard Lee ceased to be a member of the Risk Management Committee (statutory) on 26 February 2016.
- Ms Tan ceased to be a member of the Risk Management Committee (statutory) on 20 January 2016. No meeting of Risk Management Committee (statutory) took place between 1 and 19 January 2016.
- 10 The attendance rate took into account the attendance by the alternate members of the committee.

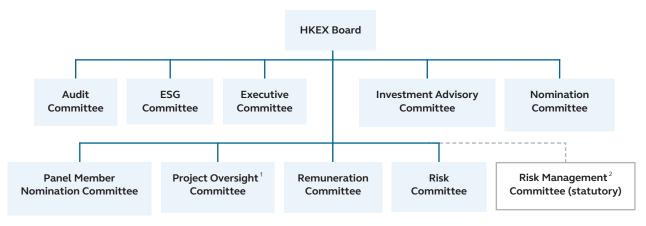
To facilitate effective oversight and decision making of the Board, HKEX has established the Group Escalation and Incident Reporting Policy to set out the guidelines on handling critical concerns relating to the Group's operations and performance. The Continuous Disclosure and Communication Policy is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

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

The Company Secretary's biography is set out in the Board of Directors and Senior Management section of this Annual Report. During 2016, the Company Secretary had over 15 hours of professional training to update his skills and knowledge.

## **Board Delegation**

### **Committees**



- 1 Established in 2016
- 2 A statutory committee established under Section 65 of the SFO

The Board has delegated authority to various committees to deal with specific matters under defined terms of reference. In April 2016, the Project Oversight Committee was established to oversee the development of HKEX's Qianhai commodity-trading platform.

The composition and terms of reference of the Board committees are reviewed and updated regularly to ensure that they remain appropriate and in line with the Group's business and changes in governance practices. Board committee information is available on the HKEX Group website CG/ORG. The list of members of the Board committees is set out in the Board and Committees section of this Annual Report, and their attendance record is set out in the Board Process section above.

### **Consultative Panels**

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

Number of Panel Meeting(s) Held in 2016					
Cash Market Consultative Panel	1				
Derivatives Market Consultative Panel	4				
Clearing Consultative Panel	2				

### Management

Senior management, under the leadership of HKEX's Chief Executive, is responsible for the day-to-day management of the Group's businesses and implementation of the strategies approved by the Board. The Management Committee, a management decision-making body chaired by HKEX's Chief Executive with defined authorities delegated by the Board, aims to meet at least twice a month. Its membership and duties are available on the HKEX Group website ORG.

During 2016, several senior management changes were made to support the implementation of the HKEX Strategic Plan 2016-2018 and to strengthen the executive team. Details are set out in the Media Centre (News Releases) section of the HKEX Group website. HKEX's updated organisation structure is available on the HKEX Group website ORG. The members of the senior management team and their biographies are set out in the Board of Directors and Senior Management section of this Annual Report.

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

Given the competitive business environment in which the Group operates, HKEX arranges professional development programmes for its senior executives from time to time to support its long-term growth and success. During 2016, the Senior Management received an aggregate of about 400 hours of training by participating as speakers, members or attendees in conferences, seminars, and workshops on various topics, including HKEX's strategy and business, development of the financial markets, regulatory compliance, ESG practices and risk management. Other employees of the Group also attended training throughout the year. Details are set out in the 2016 CSR Report.

### **Subsidiary Governance**

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

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

HKEX has implemented a number of Group-wide governance policies and codes, including the Group Anti-Bribery and Anti-Corruption Policy, the Group Whistleblowing Policy, the Group Personal Account Dealing Policy and the Code of Conduct, to support HKEX's commitment to high standards of business, professional and ethical conduct and to ensure best practices across the organisation. There is also mandatory training on risk awareness and compliance matters for all of the Group's employees.

Information about the Group's governance policies and practices is available on the HKEX Group website CG/CSR.

## **Remuneration of Directors and Senior Management**

HKEX has formal and transparent procedures for fixing the remuneration packages of individual Directors and senior management. Information about HKEX's remuneration policies and the Remuneration Committee, including its work in 2016/2017, is set out in the Remuneration Committee Report.

## **Directors' Securities Transactions and Interests in HKEX**

### **Compliance with Model Code**

HKEX has adopted the Model Code as its own code of conduct regarding Directors' securities transactions. In response to a specific enquiry by the Company, all Directors confirmed that they complied with the Model Code at all applicable times during 2016.

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

The interests and short positions of Directors, including HKEX's Chief Executive, in the shares and underlying shares of HKEX (within the meaning of Part XV of the SFO) as at 31 December 2016 as recorded in the register required to be kept under Section 352 of the SFO, or as otherwise notified to HKEX and the SFC under the Model Code, are set out below.

### Long Positions in Shares and Underlying Shares of HKEX

Name of Director	Personal interests	Family interests	Corporate interests	Other interests	Total	% of HKEX <sup>1</sup> shares in issue
C K Chow	15,000 <sup>2</sup>	_	_	_	15,000	0.00
Margaret Leung	_	3,101 <sup>3</sup>	_	_	3,101	0.00
Charles Li	842,678 4	_	-	-	842,678	0.06

- Based on 1,224,322,572 HKEX shares in issue as at 31 December 2016
- 2 Mr Chow was the beneficial owner of those shares.
- 3 Mrs Leung's spouse was the beneficial owner of those shares.
- 4 It included Mr Li's interests in Awarded Shares and shares acquired out of the dividends from the Awarded Shares in an aggregate of 448,320 shares which remained unvested under the Share Award Scheme. Details of Mr Li's Awarded Shares are set out in the Remuneration Committee Report.

Save as disclosed above, none of the Directors had any interests or short positions in the shares, underlying shares or debentures of HKEX or any of its associated corporations (within the meaning of Part XV of the SFO) as at 31 December 2016 as recorded in the register required to be kept under Section 352 of the SFO, or as otherwise notified to HKEX and the SFC under the Model Code.

Apart from the Awarded Shares as disclosed in the Remuneration Committee Report, during 2016, none of the Directors (including their spouses and children under the age of 18) had any interests in or was granted any right to subscribe for the securities of HKEX or its associated corporations (within the meaning of Part XV of the SFO), or had exercised any such rights.

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

### **Minority Controllers**

As at the date of this report, other than the Government which has been a Minority Controller since 7 September 2007, nine entities have been approved as Minority Controllers on the basis that they hold HKEX shares in custody for their clients. According to the Participant Shareholding Report as at 31 December 2016, these Minority Controllers in aggregate held approximately 59 per cent of HKEX shares in issue. More information about Minority Controllers is set out on the HKEX Group website  $\square$ .

Other persons' interests and short positions in the shares and underlying shares of HKEX (within the meaning of Part XV of the SFO) as at 31 December 2016 as recorded in the register required to be kept under Section 336 of the SFO, or as otherwise notified to HKEX and the Stock Exchange, are set out below.

Long Positions in Shares and Underlying Shares of HKEX						
Name	Capacity	Number of shares/ underlying shares held	Total	% of HKEX <sup>1</sup> shares in issue		
The Government of the Hong Kong	Beneficial owner	66,730,300 <sup>2</sup>	66,730,300	5.45		
Special Administrative Region						
(for the account of the						
Exchange Fund)						

<sup>1</sup> Based on 1,224,322,572 HKEX shares in issue as at 31 December 2016

Save as disclosed above, no other persons had any interests or short positions in the shares or underlying shares of HKEX as at 31 December 2016 as recorded in the register required to be kept under Section 336 of the SFO, or as otherwise notified to HKEX and the Stock Exchange.

## **Senior Management**

Members of the senior management are obliged to follow the Company's restrictions on dealing in securities, futures contracts and other derivatives, which are on terms no less stringent than the Model Code, as set out in the Group Personal Account Dealing Policy. Senior Management's interests in the shares and underlying shares of HKEX as at 31 December 2016 are set out below.

Senior Management	Number of shares held	Number of shares remained unvested under the Share Award Scheme	Derivatives (number of underlying shares)
Matthew Chamberlain	-	55,187	_
Eva Chau	_	8,533	_
Bill Chow	433,968	17,376	_
Adrian Farnham	29,071	36,142	_
David Graham	47,763	58,260	_
Paul Kennedy	16,136	37,611	-
Romnesh Lamba	86,049	73,964	-
Roger Lee	302,884	73,844	_
Richard Leung	63,605	35,043	_
Li Gang	-	48,270	-
Mao Zhirong	12,915	28,566	_
Trevor Spanner	_	60,907	-
Calvin Tai	140,692	58,299	-

<sup>2</sup> Based on a confirmation to HKEX by the Government in respect of its holding immediately following completion of a placing of new HKEX shares as announced on 30 November 2012

## **Continuing Connected Transactions**

In June 2000, the SFC granted a waiver to HKEX from strict compliance with the Main Board Listing Rules with respect to certain continuing connected transactions as referred to in (A), (B) and (C) below. The waiver has remained valid since then. During 2016 and subject to the waiver, the Group had the following continuing connected transactions:

- A. Transactions between HKEX or its subsidiaries and the following connected persons arising from or in connection with the use of the facilities provided by the Group for the trading, clearing and/or settlement of securities and futures products and transactions, and all services offered by the Group which are ancillary, incidental or otherwise related to the foregoing:
- Bill Kwok, an INED, was interested in the transactions entered into by Wocom Securities Limited (WSL) and Wocom Limited, EPs and CPs, which are Dr Kwok's associates by virtue of the Main Board Listing Rules.
- Vincent Lee, an INED, was interested in the transactions entered into by Hang Tai Securities Limited,
   Tung Tai Securities Company Limited and Tung Tai Futures Limited, EPs and CPs, which are Mr Lee's associates by virtue of the Main Board Listing Rules.
- B. Transactions between HKEX or its subsidiaries and the following connected person arising from or in connection with the listing, or proposed listing, of securities on the Stock Exchange, and all services offered by the Group which are ancillary, incidental or otherwise related to the foregoing:
- Bill Kwok was interested in the transactions entered into by his associate, Wing On Company International Limited, which is listed on the Stock Exchange.
- C. Transactions between HKEX or its subsidiaries and the following connected person arising from or in connection with the HKSCC arrangement on behalf of CCASS Participants for: (i) carrying out "buy-in" when a CCASS Participant has failed to deliver securities on time for settlement under the CNS System or the Isolated Trades System operated by CCASS; (ii) the purchase or sale of securities in connection with the liquidation of the positions of a CCASS Participant that has been declared by HKSCC to be in default; and (iii) the sale of entitlements of securities held through CCASS (collectively referred as Buy-in Transactions):
- WSL is one of the brokers appointed by HKSCC to assist it in carrying out Buy-in Transactions. Bill Kwok is interested in any Buy-in Transactions entered into by WSL which is his associate by virtue of the Main Board Listing Rules. During 2016, no Buy-in Transactions were conducted by WSL.

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

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

## **Material Related Party Transactions**

During 2016, the Group entered into certain transactions with "related parties" as defined under the applicable accounting standards. Material related party transactions are disclosed in note 44 to the Consolidated Financial Statements. They include the following connected transactions under the Main Board Listing Rules.

Material related party transactions which constitute connected transactions	Compliance with Listing Rules
Transactions in connection with services incidental or related to facilities provided by the Group for the trading, clearing and/or settlement of securities and futures products and transactions, or listing of securities on the Stock Exchange as described in note 44(a) to the Consolidated Financial Statements	These are continuing connected transactions which have satisfied the conditions of the waiver granted by the SFC from strict compliance with the Main Board Listing Rules.
Compensation to HKEX's Chief Executive and directors of HKEX's subsidiaries and remuneration to HKEX's Non-executive Directors, which form part of the "Key management personnel compensation" described in note 44(b) to the Consolidated Financial Statements	These are continuing connected transactions exempt from the connected transaction requirements under Rule 14A.76 or 14A.95 of the Main Board Listing Rules.

## Accountability and Audit

## **Financial Reporting**

The Board, which is responsible for overseeing the preparation of annual financial statements, receives monthly management accounts and updates on the Group's performance, financial position and prospects. In 2016, HKEX published its annual, interim and quarterly results within three months, two months and 45 days respectively after the relevant period end. In preparing the financial statements for the year ended 31 December 2016, the Board adopted appropriate accounting policies consistently, made prudent and reasonable judgements and estimates, and ensured that the financial statements were prepared on a going concern basis and show a true and fair view of the state of affairs of HKEX and of the Group as at 31 December 2016 and of the Group's profit and cash flows for the year.

### **Risk Management and Internal Control**

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

The Board has reviewed the adequacy and effectiveness of the Group's risk management and internal control systems, at least quarterly, through the Risk Committee and the Audit Committee. Information about the Risk Committee and the Audit Committee, including their work in 2016/2017, is set out in their respective reports contained in this Annual Report.

### **Independence of External Auditor**

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

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

### **Shareholder Relations**

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

### **Investor Engagement and Communications**

By acting as HKEX's prime contact with investors and analysts, the investor relations team is committed to engage institutional investors with a well-established and comprehensive engagement programme to interact with HKEX's Chief Executive and other senior executives. The programme allows the investment community to grasp the up-to-date development of the Group's strategic initiatives and operations. In 2016, about 260 meetings were held with institutional investors and analysts in Hong Kong, Mainland China and overseas. To enable better attended and effective investor relations, shareholding analyses were conducted under Section 329 of the SFO to gain a better view of HKEX's shareholding structure.

#### **Investor Relations Activities in 2016**

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

#### **Investor Relations Contact Details**

Email: info@hkex.com.hk Fax: (852) 2868 4084 Tel: (852) 2840 3330

Investors' views are conveyed to the Board periodically, which contain HKEX share price performance, details of sell-side rating, market consensus, and summaries of questions and feedback from investors and analysts. During 2016, major topics/issues that investors were interested included:

- (i) HKEX Strategic Plan 2016-2018;
- (ii) Latest development of the mutual market access initiatives, including Shenzhen-Hong Kong Stock Connect, the Qianhai commodities trading platform and the Bond Connect; and
- (iii) Financial performance updates of the Group.

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

### **Shareholder Engagement and Communications**

Corporate communications	<ul> <li>HKEX ensures prompt dissemination of corporate communications to enable Shareholders and other stakeholders to keep abreast of the Group's business affairs and developments so that they can make informed decisions.</li> <li>The HKEX Group website has been adopted as the designated company website for publication of HKEX's announcements, notices and other corporate communications. As at 31 December 2016, about 64 per cent of Shareholders had opted to receive corporate communications via electronic means.</li> </ul>
Financial key dates	• The financial calendar highlighting important dates for Shareholders in 2017 is set out in the Shareholder Information section of this Annual Report and is also available on the HKEX Group website $\overline{\mathbb{R}}$ .
Scrip dividend scheme	• HKEX offers Shareholders the option of receiving their cash dividends in the form of scrip. Since 2015, the Board has offered a 5 per cent discount on the subscription price to Shareholders who elect the scrip alternative to facilitate their reinvestment of their dividends in the HKEX shares. Further details of the HKEX's scrip dividend scheme are set out in the Shareholder Information section of this Annual Report and are also available on the HKEX Group website IR.
General meetings	<ul> <li>One or more Shareholder representing at least 5 per cent of the total voting rights of all Shareholders having a right to vote at general meetings may request the Board to call a general meeting. The request must state the general nature of the business to be dealt with, and it may include the text of a resolution that may properly be moved and is intended to be moved at the meeting. Such requests must be sent to the Company Secretary at HKEX's registered office, or by email to <a href="mailto:ssd@hkex.com.hk">ssd@hkex.com.hk</a>.</li> <li>Under HKEX's Articles, if a Shareholder wishes to propose a person for election as a Director at a general meeting, he or she should give a written notice of nomination to the Company Secretary at HKEX's registered office. Details of the procedures for nominating candidates to stand for election as a Director at the 2017 AGM will be set out in the circular to Shareholders to be sent together with this Annual Report.</li> <li>Shareholders may put forward proposals at general meetings by sending a written notice of their proposals to the Company Secretary at HKEX's registered office, or by email to <a href="mailto:ssd@hkex.com.hk">ssd@hkex.com.hk</a>. Details of the procedures for putting forward proposals by Shareholders are set out on the HKEX Group website <a href="mailto:CG">CG</a>.</li> </ul>
Policies and guidelines	<ul> <li>The Shareholders Communication Policy ensures that Shareholders are provided with ready, equal and timely access to information about HKEX. The policy is regularly reviewed to ensure its effectiveness and is posted on the HKEX Group website CG.</li> <li>The Shareholders' Guide with answers to the frequently asked questions of Shareholders with regard to their interests in HKEX shares is also available on the HKEX Group website CG.</li> </ul>
Shareholding analysis	Based on publicly available information and within the Directors' knowledge as at the date of this report, approximately 100 per cent of the HKEX shares were held by the public. HKEX's market capitalisation and shareholder analysis as at 31 December 2016 are set out in the Shareholder Information section of this Annual Report.

During 2016, HKEX launched the revamped HKEX Group website with new features designed to improve functionality and accessibility of information to investors. The HKEX Group website, which provides enhanced disclosure of HKEX's corporate information, including the Company's background and history, investor relations, corporate governance and corporate social responsibility, has become the Company's principal communication channel with the investing public.

Further information about the Group's stakeholder engagement activities in 2016 is set out in the 2016 CSR Report.

The Board is grateful to Shareholders and other stakeholders for their continual support and welcomes their views as well as any questions they may have about the management and governance of the Group. Shareholders and other stakeholders may at any time send their enquiries and concerns to the Board by addressing them to the Company Secretary and sending them by post to the Secretarial Services Department, HKEX, 12/F, One International Finance Centre, 1 Harbour View Street, Central, Hong Kong, or by email to <a href="mailto:ssd@hkex.com.hk">ssd@hkex.com.hk</a>.

### 2016 Annual General Meeting

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

Most of the Directors in office on the meeting date, including HKEX's Chairman and the chairmen

Total number of participants: 430
Shares voted: 33 per cent of total issued shares
Individual Shareholders
Authorised representatives of HKSCC Nominees Limited
Shareholders appointing representatives/proxies to attend the 2016 AGM

of the Audit Committee and other Board committees, attended the 2016 AGM along with key senior executives and the external auditor and answered questions from Shareholders.

The voting results and the minutes of the 2016 AGM are available on the HKEX Group website IR.

### Key Matters Resolved at the 2016 AGM<sup>1</sup>

- Receipt of the 2015 audited financial statements
- Declaration of 2015 final dividend of \$2.87 per share
- Election of Apurv Bagri as a Director
- Re-appointment of PricewaterhouseCoopers as the Company's auditor
- Granting a general mandate to buy back HKEX shares (not exceeding 10 per cent of the number of shares in issue)
- Granting a general mandate to issue HKEX shares (not exceeding 10 per cent of the number of shares in issue and at a price not exceeding a discount of 10 per cent)

### 2017 Annual General Meeting

The 2017 AGM will be held on Wednesday, 26 April 2017. The Notice of the 2017 AGM, which constitutes part of a circular to Shareholders, will be sent together with this Annual Report. The Notice of the 2017 AGM, the circular which sets out details of the business to be conducted at the 2017 AGM and the proxy form will be available on the HKEX Group website IR. The results of the voting on the proposed resolutions will be published on the HKEX Group website shortly after the 2017 AGM is held.

All Shareholders are encouraged to attend the 2017 AGM and exercise their right to vote. Shareholders are invited to ask questions related to the business of the meeting, and will be able to meet with Directors and the senior management.

## Changes after Closure of Financial Year

This report takes into account the changes that occurred between the end of 2016 and the date of the approval of this report.

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

Hong Kong, 27 February 2017

ORGANISATION

GOVERNANCE

<sup>1</sup> The full text of the resolutions is set out in the Notice of the 2016 AGM.

### NOMINATION COMMITTEE REPORT

### **The Nomination Committee**

The Nomination Committee is delegated with the authority from the Board to formulate and implement the policy for nominating Board candidates for election by Shareholders and assess INED's independence and commitment. Its terms of reference are available on the HKEX Group website ORG.

The Nomination Committee comprises five INEDs whose names and biographies are set out in the Board and Committees section of this Annual Report. The Nomination Committee held five meetings in 2016. Members' attendance records are disclosed in the Corporate Governance Report contained in this Annual Report.

### Summary of Work in 2016/2017

- Reviewed an independent consultant's report on the Board's composition to identify any talent or experience gaps
- Nominated Board candidates for election by Shareholders at the 2016 and 2017 AGMs
- Reviewed the independence of the 12 INEDs and the Board candidates who have been nominated to stand for election at the 2017 AGM
- Reviewed time commitment of Directors for performance of their responsibilities
- Reviewed the succession plan for the Board

### **Changes in Directors during 2016**

In March 2016, the Government re-appointed C K Chow and Tim Freshwater to the Board, each for a term of approximately two years from the close of the 2016 AGM until the conclusion of the AGM in 2018.

At the 2016 AGM, Apurv Bagri was elected by Shareholders for a term of approximately three years from 28 April 2016 until the conclusion of the AGM in 2019. Oscar Wong retired from the Board after the conclusion of the 2016 AGM.

## **Retiring Directors**

The service term of Anita Fung, Rafael Gil-Tienda, John Harrison and Margaret Leung (Government Appointed Directors), and Bill Kwok and Vincent Lee (Elected Directors) will expire at the conclusion of the 2017 AGM.

### **Board Diversity**

HKEX sees increasing diversity at the Board level as an essential element in attaining its strategic objectives and achieving sustainable and balanced development for the Group. Since 2013, HKEX has followed the Board Diversity Policy which is available on the HKEX Group website CG. To further enhance Board diversity and strike an appropriate balance between continuity of experience and Board refreshment, HKEX has, since 2015, set a maximum tenure of 12 consecutive years for the Non-executive Directors to be eligible for nomination by the Board to stand for re-election by Shareholders.

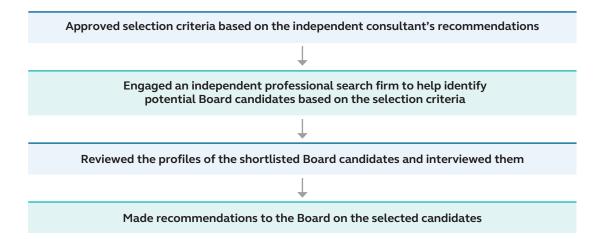
The Nomination Committee also reviews the Board structure, size and diversity annually and recommends any proposed changes to the Board to complement HKEX's corporate strategies. In 2016, the Nomination Committee engaged an independent consultant to conduct a review of the Board's composition to identify any talent or experience gaps which could be filled through the future appointment of Directors.

In the short term, HKEX should look for Board candidates who are seasoned and senior market participants with the following key attributes:

- Extensive knowledge and experience in trading (eg, securities and derivatives markets), capital markets (eg, asset management sector) or both in Hong Kong;
- Good understanding of the local market dynamics; and
- Ability to contribute to the Board's understanding of, and response to, Hong Kong's market environment

#### **Nomination of Candidates**

Following the independent consultant's review, the Nomination Committee adopted the following process to identify potential Board candidates to stand for election at the 2017 AGM:



In December 2016, the Nomination Committee nominated Cheah Cheng Hye and Leung Pak Hon, Hugo to the Board for it to recommend to Shareholders for election at the 2017 AGM. The nominations were made in accordance with the Nomination Policy and the objective criteria (including without limitation, gender, age, cultural and educational background, ethnicity, professional experience, skills, knowledge and length of service), with due regard for the benefits of diversity, as set out under the Board Diversity Policy. Given Mr Cheah's in-depth knowledge of the fund management industry and Mr Leung's extensive experience in global markets business including the fixed income, equities and commodity derivatives businesses, their appointment would help broaden the Board's diversity and enhance its performance.

The Nomination Committee was satisfied with the independence of Messrs Cheah and Leung having regard to the criteria under the Main Board Listing Rules. Messrs Cheah and Leung do not have any service contracts with any member of the Group that are not determinable by the Group within one year without compensation (other than statutory compensation). Their particulars will be set out in the circular to Shareholders to be sent together with this Annual Report and posted on the HKEX Group website IR.

## **Independence of Non-executive Directors**

An independent Board has the benefit of providing objective judgement and constructive challenge to the viewpoints presented by management. The Nomination Committee assesses Non-executive Directors' independence and reviews their independence annually and at any other time where the circumstances warrant reconsideration.

#### Assessment upon Director's Appointment

Apurv Bagri, upon his appointment, confirmed the following in writing to the SFC:

- his independence having regard to the criteria under Rule 3.13 of the Main Board Listing Rules;
- he has no connection with any of HKEX's core connected persons (as defined in the Main Board Listing Rules); and
- he has no past or present financial or other interest in the Group's business, except for his interests in the Metdist Group of companies which have been trading and clearing on the LME and LME Clear. Mr Bagri considered that the business dealings between the Metdist Group of companies and the LME/LME Clear were immaterial and would not affect his exercise of independent judgement.

#### **Ongoing Assessment**

- Each INED is required to inform HKEX as soon as practicable if there is any change in his or her own personal particulars that may affect his or her independence. No such notification was received during 2016.
- None of the Directors have any financial, business, family or other material/relevant relationships with each other, in particular, between HKEX's Chairman and Chief Executive.
- Details of the Directors' interests in the Group's business are set out on pages 65 and 66 of this Annual Report.

On 15 February 2017, the Nomination Committee assessed the annual independence confirmation received from each INED, having regard to the criteria under Rule 3.13 of the Main Board Listing Rules.

#### **Annual Assessment**

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

## **CHOW Chung Kong**

Chairman of the Nomination Committee

Hong Kong, 15 February 2017

#### **The Audit Committee**

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

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

The AC held four meetings in 2016. Members' attendance records are disclosed in the Corporate Governance Report contained in this Annual Report.

#### Summary of Work in 2016/2017

- Endorsed amendments to the AC's terms of reference
- Endorsed amendments to the Group Anti-Bribery and Anti-Corruption Policy and the Group Whistleblowing Policy and adoption of the Group Personal Account Dealing Policy and the Group Record Retention Policy
- Reviewed the Group's quarterly, half-yearly and annual financial results
- Reviewed in detail, with both management and the external auditors, the approach and methodology applied with respect to the Key Audit Matters included in the year end auditor's report
- Approved the annual internal audit plan and internal audit three year strategic plan (2017 to 2019)
- Reviewed the external auditor's statutory audit scope for 2016
- Reviewed significant findings of the IAD, external auditor and regulators, and management's response to their recommendations
- Reviewed the adequacy and effectiveness of the Group's internal control systems and its accounting, financial reporting and internal audit functions
- Reviewed the continuing connected transactions
- Reviewed and monitored the external auditor's independence and engagement to perform non-audit services
- Approved the 2016 external audit engagement letters and fees
- · Reviewed changes in accounting principles and practices proposed by management

#### **Review of Financial Results**

The AC reviewed the 2016 Consolidated Financial Statements in conjunction with HKEX's external auditor. Based on this review and discussions with management, the AC was satisfied that the Consolidated Financial Statements were prepared in accordance with applicable accounting standards and fairly present the Group's financial position and results for the year ended 31 December 2016. The AC therefore recommended the Consolidated Financial Statements for the year ended 31 December 2016 be approved by the Board.

## **Review of Internal Control Systems**

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

The AC reviewed and concurred with the management's confirmation that for the year ended 31 December 2016: (i) the Group's risk management and internal control systems were effective with reference to the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Internal Control – Integrated Framework (2013) principles; (ii) the Group had adopted the necessary control mechanisms to monitor and correct non-compliance; and (iii) the Group had complied satisfactorily with the requirements of the Corporate Governance Code in respect of risk management and internal control systems. The management's confirmation was endorsed by the Risk Committee and submitted to the Board.

## Review of Accounting, Financial Reporting and Internal Audit Functions

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

## **Review of Continuing Connected Transactions**

During 2016, the Group entered into certain continuing connected transactions as disclosed in the Corporate Governance Report contained in this Annual Report. The AC, under the authority delegated by the Board, reviewed these continuing connected transactions pursuant to Rule 14A.55 of the Main Board Listing Rules. As a good corporate governance practice, an AC member who has an interest in the transactions abstained from reviewing them. The AC confirmed that the transactions were entered into by the Group in accordance with the conditions of the waiver granted by the SFC and the Main Board Listing Rules requirements that:

- (i) the transactions have been entered into in the Group's ordinary and usual course of business, and on normal commercial terms or on terms no more favourable than terms available to independent third parties;
- (ii) the transactions other than the Buy-in Transactions disclosed in the Corporate Governance Report have been conducted in accordance with the rules and regulations of the relevant Group company governing such transactions, and where the rules and regulations do not govern those transactions in full, in accordance with the standard terms and conditions of the relevant Group company relating to such transactions;
- (iii) the Buy-in Transactions have been conducted in accordance with the standard terms and conditions of HKSCC applicable generally to all buy-in brokers in such transactions for and on behalf of HKSCC and at the mutually agreed commission rates payable by HKSCC in respect of such Buy-in Transactions generally (there were no Buy-in Transactions by connected persons during 2016); and
- (iv) the transactions have been entered into according to the relevant agreements governing each of the continuing connected transactions on terms that were fair and reasonable and in the interests of Shareholders as a whole.

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

## **Independence of External Auditor**

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

Before commencement of the audit of the Group's 2016 financial statements, the AC received the written confirmation from PwC of its independence and objectivity.

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

External Auditor's Services and Fees				
	2016 \$m	2015 \$m		
Audit services Non-audit services	14	13		
<ul><li> Tax advisory and compliance</li><li> Other services</li></ul>	5 1	6 2		
Total	20	21		

## Re-appointment of External Auditor

The AC was satisfied with PwC's work, its independence, and its objectivity, and therefore recommended the re-appointment of PwC (which has indicated its willingness to continue in office) as the Group's external auditor for 2017 for Shareholders' approval at the 2017 AGM.

#### John Barrie HARRISON

Chairman of the Audit Committee

Hong Kong, 22 February 2017

#### RISK COMMITTEE REPORT

#### **Risk Statement**

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

We seek to ensure we achieve our strategic goal of being the global exchange and clearing provider of choice, for investors and participants, seeking exposure in the Hong Kong, Mainland China and international markets. This includes to maintain stakeholder trust and support the integrity of the financial system. We recognise the role of HKEX Group as a market infrastructure operator and manager of systemic risk, and that our long-term sustainability is dependent on pursuing our strategic goals while simultaneously managing our risks, having sufficient capital and liquidity, ensuring continuity of operations, and protecting our reputation.

We aim to maintain sufficient capital and liquidity to meet our regulatory obligations, which require us to maintain financial resources to cover our potential losses and liquidity needs in a range of stress scenarios taking into account extreme but plausible market conditions. As a business, we also aim to maintain sufficient capital over and above that required to meet our regulatory obligations in order to fund our strategic development objectives while ensuring the appropriate balance between risk and shareholder returns. We apply risk management measures to strategic initiatives that are designed to limit our exposure to potential losses to the Group. We also seek to maintain liquid financial resources to meet unforeseen cash outflows. The Group strives to maintain stakeholder trust by avoiding business practices that could lead to reputational damage or harm to the Group. The Group, therefore, seeks to operate within all relevant rules and regulations and to avoid disruptions to our business operations affecting our stakeholders.

#### The Risk Committee

The Risk Committee is delegated by the Board to oversee the Group's overall Risk Management Framework and to advise the Board on the Group's risk-related matters. The Committee is also responsible for endorsing the Group's risk policies for Board approval and assessing the effectiveness of the Group's risk management and internal control systems. The Committee's terms of reference are available on the HKEX Group website ORG. The Committee comprises five INEDs whose names and biographies are set out in the Board and Committees section of this Annual Report. The Committee held four quarterly meetings in 2016. Members' attendance records are disclosed in the Corporate Governance Report contained in this Annual Report.

#### Summary of Work in 2016/2017

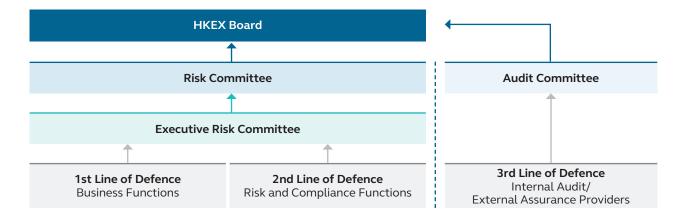
During the period, the Risk Committee oversaw key risk management activities including:

- Improvements to the Group Risk Management Policy and Group Enterprise Risk Management function;
- Implementation of Group Risk Appetite statements and risk reporting metrics;
- Implementation of a Group wide centralised risk reporting tool;
- Received quarterly Group risk reporting on liquidity, capital adequacy and solvency levels of the Group's clearing houses and the results of the Group's Enterprise Risk Management process;
- Enhancements to cash collateral and portfolio margining practices;
- Enhancements to the risk governance model including consolidation of HKEX Group Risk Management for ainto a single Executive Risk Committee; and
- Endorsed management confirmation on the effectiveness of the Group's risk management and internal control systems.

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

#### **Risk Governance**

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



## **Group Risk Management**

The Group Risk Management Framework, approved by the Risk Committee, mandates a consistent and effective approach applied across the Group to manage the risks associated with its business and operations. The framework is based on the International Standard ISO (International Organisation for Standardisation) 31000:2009 Risk Management – Principles and Guidelines. The following diagram illustrates the key processes adopted under the Group Risk Management Framework.



## **Principal Risks**

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

Principal Risks	Description	Key Mitigations
Business and Strategic Risk	The risk of material adverse changes to the Group's business performance, development prospects and/or ability to deliver its strategy, caused by changes in the business, economic, competitive, regulatory or political environment in which the Group operates.	<ul> <li>Proactive monitoring of global exchange industry trends, competitors and innovations;</li> <li>Proactive monitoring of and preparation for global and local changes in regulations affecting the Group; and</li> <li>Responsive project controls to allow strategic flexibility and dedicated strategy resources.</li> </ul>
Credit Risk	The risk that a counterparty will not settle an obligation in full value, either when due or at any time thereafter.	<ul> <li>Default management and recovery procedures in place;</li> <li>Established credit risk management function;</li> <li>Stress tested collateral and margin deposits; and</li> <li>Clearing market risk managed through collateral management and margin practices.</li> </ul>
Market Risk	The risk resulting from adverse movements in market rates or prices such as foreign exchange rates, interest rates or equity prices impacting the Group's investment portfolio (Investment Market Risk).	<ul> <li>Investment capital at risk limited by investment policies, restrictions and guidelines; and</li> <li>Exposure to foreign exchange risk through subsidiaries limited due to HKD/USD peg</li> </ul>
Liquidity Risk	The risk of being unable to settle obligations as they fall due whether relating to HKEX's cash flow requirements and/ or regulatory requirements for clearing coverage confidence levels under extreme but plausible market conditions.	<ul> <li>Investment policy, restrictions and guidelines in place covering Corporate Funds, Margin Funds and Clearing House Funds; and</li> <li>Clearing liquidity risk management requirements met through established stress testing practices.</li> </ul>
Operational Risk	The risk of material adverse changes to the Group's business due to inadequate or failed internal processes, IT systems or external events.	<ul> <li>Environment, Social and Governance programmes;</li> <li>Low latency, highly resilient IT service design;</li> <li>Defence-in-depth cyber security controls;</li> <li>Comprehensive cyber testing programme; and</li> <li>Service delivery controls covering people, process and technology.</li> </ul>
Legal and Compliance Risk	The risk of loss resulting from breach of or non-compliance with applicable laws, regulations or contractual obligations.	<ul> <li>Internal and where appropriate external legal advice sought and compliance reviews conducted on business activities and new initiatives;</li> <li>Legal review of contracts; and</li> <li>Compliance review monitoring program.</li> </ul>
Listing Risk	The risk of reputational damage resulting from a failure on the part of SEHK to comply fully with its statutory obligations or the provisions of, or obligations under, the January 2003 MOU.	<ul> <li>Existing checks and balances under three-tiered regulatory structure (including the Listing Committee);</li> <li>Listing Division Market Contingency Plan to deal with potential business disruption events;</li> <li>Monitoring of unusual movements in price or trading volume of issuers' listed securities; and</li> <li>Physical segregation from other parts of HKEX under Chinese Wall to avoid leakage of inside information.</li> </ul>

### **CHOW Chung Kong**

Chairman of the Risk Committee

Hong Kong, 16 February 2017

#### REMUNERATION COMMITTEE REPORT

#### The Remuneration Committee

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

The RC comprises five INEDs whose names and biographies are set out in the Board and Committees section of this Annual Report. The RC held six meetings in 2016. Members' attendance records are disclosed in the Corporate Governance Report contained in this Annual Report.

#### Summary of Work in 2016/2017

- Reviewed the remuneration of non-executive directors of HKEX, the LME, LME Clear and OTC Clear
- Reviewed the analysis by management and recommended to the Board the 2016 performance bonus funding methodology, its underlying principles and metrics to be used
- Recommended the 2016 performance bonus and share award pools and the 2017 salary adjustment rates for the Group's employees
- · Reviewed and approved the compensation and benefits setup for a new subsidiary of HKEX
- Reviewed and agreed to a set of general principles for the possible setup of a special incentive scheme for the key executives in a new subsidiary of HKEX
- Approved the revision of pension arrangements for the LME and LME Clear employees as a result of the pension tax changes in the UK
- Recommended the 2016 performance bonus and share award for HKEX's Chief Executive
- Reviewed the achievements of HKEX's Chief Executive and recommended to the Board the appropriate vesting
  percentage of the Senior Executive Awards for the relevant performance period

#### **Non-executive Directors' Remuneration**

#### Objective

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

#### **Policy**

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

#### Annual review for 2016/2017

- McLagan, a firm specialising in performance and rewards for the financial services industry, was appointed to
  conduct an independent review of the non-executive directors' remuneration for HKEX and certain subsidiaries
  to ensure the competitiveness and appropriateness of their remuneration. The study included benchmarking
  against other listed exchanges as well as banks and constituent companies of the FTSE 100 Index and the HSI.
- Based on the findings and the consultant's recommendation, the RC (none of the RC members participated in the decision on his remuneration) recommended that the remuneration for the Non-executive Directors should remain unchanged for 2016/2017. The proposal was approved by the Board in March 2016.

#### Annual review for 2017/2018

- McLagan was appointed again to conduct a review of the non-executive directors' remuneration for HKEX and certain subsidiaries. The methodology and the benchmark used in the study largely followed those used in the 2016/2017 review.
- After review of the market information provided and recommendation provided by the consultant, the RC (none
  of the RC members participated in the decision of his remuneration) recommended that the remuneration for
  the Non-executive Directors would remain unchanged for 2017/18. However, the RC recommended the
  remuneration of \$180,000 per annum and \$120,000 per annum respectively also be payable to the chairman and
  each of the other members of the Project Oversight Committee (POC), together with an attendance fee of
  \$3,000 per meeting to each member of the POC, in light of the time and effort spent by them to oversee the
  development of HKEX's Qianhai commodity-trading platform. The remuneration payable to members of the POC
  would be proposed to the Board for it to recommend to Shareholders for their approval at the 2017 AGM.

Non-executive Directors' remuneration for 2017/2018	
	\$
Board <sup>1</sup>	
- Chairman	2,100,000
- Other member	700,000
Audit Committee	
- Chairman	200,000
- Other member	120,000
- Attendance fee per meeting	3,000
Executive Committee <sup>1</sup> , Investment Advisory Committee, Project Oversight Committee <sup>2</sup> , Risk Committee and Remuneration Committee	
- Chairman	180,000
- Other member	120,000
- Attendance fee per meeting	3,000

<sup>1</sup> Excludes the Executive Director

Non-executive Directors are not entitled to participate in the Share Award Scheme, or to receive other fringe benefits.

The remuneration paid to the Non-executive Directors in 2015 and 2016 for their service on the Board and, where applicable, on its committees and the board and committees of HKEX's subsidiaries is set out below.

	2016 \$	2015 \$
Apurv Bagri <sup>1</sup>	525,000	_
T C Chan	964,000	926,000
C K Chow	3,282,732	3,136,536
Timothy Freshwater	1,018,000	957,000
Anita Fung	964,000	720,000
Rafael Gil-Tienda	832,000	621,000
John Harrison	2,486,095	2,600,961
Fred Hu	829,000	799,000
Bill Kwok	1,597,000	1,417,334
Vincent Lee	1,075,000	991,000
Margaret Leung	964,000	929,000
John Williamson	964,000	957,000
Oscar Wong <sup>2</sup>	226,000	884,500
Total	15,726,827	15,525,578 <sup>3</sup>

 $<sup>1\,</sup>$  Mr Bagri was elected as a Director on 28 April 2016.

<sup>2</sup> The proposed remuneration payable to members of the POC is subject to Shareholders' approval at the 2017 AGM.

<sup>2</sup> Mr Wong retired on 28 April 2016.

<sup>3</sup> Includes a total remuneration of \$586,247 paid to Stephen Hui and Michael Lee, who retired on 29 April 2015

## **Employees' Remuneration**

#### Objective

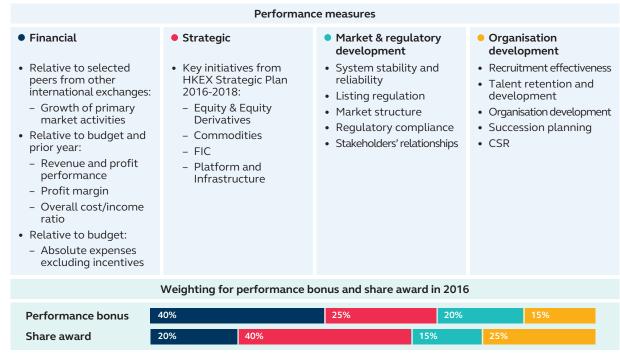
To ensure that employees are remunerated equitably and competitively with consideration of the achievement of their individual performance goals, the key business objectives at corporate level, and the market conditions

#### Policy

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

#### Review for 2016/2017

- The RC recommended and the Board approved in November and December 2016:
  - a base salary adjustment and promotion increase effective January 2017. The salary adjustment took into consideration the competitive positioning, the cost of living and the projected pay increase in the financial services industry;
  - (ii) a discretionary performance bonus for eligible employees in recognition of their contributions in 2016;
  - (iii) a sum of \$220.7 million for the purchase of HKEX shares pursuant to the Share Award Scheme for 297 selected employees, including HKEX's Chief Executive (\$12 million), and for selected employees to be recruited in 2017; and
  - (iv) an additional sum of \$12.75 million for the purchase of HKEX shares for a performance-based Senior Executive Award pursuant to the Share Award Scheme for HKEX's Chief Executive for the performance period between 2017 and 2019.
- The performance cash bonus and share award pools for the Group's employees were determined based on the overall achievements with respect to the following on the corporate performance scorecard:



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

Further details of HKEX's remuneration policy and structure are available on the HKEX Group website CG.

As at 31 December 2016, the Group had 1,603 permanent employees and 60 temporary employees.

A performance development process is in place to ensure that employees' performance objectives are defined, their performance progress is tracked and training and development opportunities are identified for them. Employee training details are set out in the 2016 CSR Report.

# Emoluments for 2016 Executive Director

		2016						2016
	Salary \$	Retirement <sup>2</sup> Cash Other <sup>1</sup> benefits Director's  Salary bonus benefits cost fee Total <sup>3</sup> \$ \$ \$ \$ \$					Total <sup>3</sup> \$	Share <sup>4</sup> award benefits \$
HKEX's Chief Executive								
Charles Li	9,000,000	11,250,000	217,241	1,125,000	-	21,592,241	25,302,924	<b>22,471,093</b> <sup>5</sup>

#### **Senior Management**

			2016			2015	2016
	Salary \$	Cash bonus \$	Other <sup>1</sup> benefits \$	Retirement <sup>2</sup> benefits cost	Total <sup>3</sup> \$	Total <sup>3</sup> \$	Share <sup>4</sup> award benefits \$
Matthew Chamberlain <sup>6</sup>	2,467,350	3,578,922	15,946	419,450	6,481,668	8,444,288	6,043,977
Eva Chau 7	1,228,064	1,620,000	23,481	153,508	3,025,053	-	46,294
Bill Chow	3,084,480	2,640,000	58,628	385,560	6,168,668	10,512,365	1,519,420
Adrian Farnham <sup>6</sup>	2,894,716	2,210,510	19,737	492,102	5,617,065	6,559,880	2,957,929
David Graham	4,691,040	4,590,000	60,611	586,380	9,928,031	11,230,233	4,147,107
Paul Kennedy	3,708,000	4,353,000	79,654	463,500	8,604,154	10,049,279	2,497,043
Romnesh Lamba	4,691,040	4,708,000	82,266	586,380	10,067,686	12,002,063	6,158,102
Roger Lee	2,913,840	4,017,000	77,740	364,230	7,372,810	7,331,488	4,820,839
Richard Leung	3,213,600	2,890,000	39,758	401,700	6,545,058	6,540,843	2,570,236
Li Gang	3,600,000	4,400,000	44,153	360,000	8,404,153	9,404,487	2,307,919
Mao Zhirong	2,958,084	3,082,830	44,238	369,761	6,454,913	6,468,071	2,093,243
Trevor Spanner	4,472,219	3,605,294	901,463	570,842	9,549,818	11,014,848	5,199,240
Calvin Tai	3,528,000	3,528,000	79,436	441,000	7,576,436	8,940,696	4,347,632

- 1 Other benefits include leave pay, insurance premium, club membership and relocation allowance, as applicable.
- 2 An employee who retires before normal retirement age is eligible to 18 per cent of the employer's contribution to the provident fund after completion of two years of service. The rate of vested benefit increases by 18 per cent annually thereafter and reaches 100 per cent after completion of seven years of service.
- 3 Excludes the amounts approved by the Board for the purchase of HKEX shares pursuant to the Share Award Scheme, details of which are set out in the Share Award Scheme section below
- 4 The share award benefits represent the aggregate of the amortised fair value of the Awarded Shares of HKEX's Chief Executive and the members of the Senior Management that was charged to the Consolidated Income Statement for the year ended 31 December 2016.
- 5 Includes the share award benefits relating to the Senior Executive Award granted to Mr Li in December 2016, the vesting of which is not affected if Mr Li ceases employment with the Group before the end of the performance assessment period. In accordance with prevailing accounting standards, such award is considered to be vested immediately upon grant. The actual number of shares to be transferred to Mr Li under the Senior Executive Awards is conditional on the satisfaction of performance criteria approved by the Board as set out in note 4 under the Share Award Scheme section below.
- 6 Messrs Chamberlain and Farnham were members of the LME pension scheme operating in the UK during 2016. The vesting scale of HKEX's provident fund scheme as specified in note 2 above is not applicable to them.
- 7 Ms Chau was appointed as HKEX's Group Head of Human Resources on 15 August 2016 and became a member of the Senior Management on 14 September 2016.

Further details of Directors' emoluments and the five top-paid employees are set out in notes 14 and 15 respectively to the Consolidated Financial Statements.

## **Share Award Scheme**

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

On 7 December 2016, the Board approved a total sum of \$233.45 million for the purchase of HKEX shares pursuant to the Scheme, details of which are set out in the Employees' Remuneration section above. Based on the Board's recommendation, the Scheme's trustee applied 179,706 shares held under the Scheme which were unallocated or forfeited pursuant to the Scheme to partly satisfy such awards.

Further details of the Scheme are set out in note 38 to the Consolidated Financial Statements.

Since the Adoption Date and up to the date of this report, a total of 9,517,278 shares had been awarded under the Scheme, representing about 0.9 per cent of the number of HKEX shares in issue on the Adoption Date.

As at 31 December 2016, taking into account the shares acquired out of the dividends from the shares held under the trust, there were 3,220,109 shares held in trust under the Scheme.

Details of the interests of HKEX's Chief Executive and the Senior Management in the Awarded Shares (save for those which had been fully vested as of 31 December 2015) are set out below.

	Number of shares <sup>1</sup>							
	Date of award <sup>2</sup>	Number of Awarded Shares	As at 1 Jan 2016	Shares acquired during the year out of the dividends	Vested during the year	Lapsed during the year	As at 31 Dec 2016	Vesting period <sup>3</sup>
HKEX's Chief Executive								
Charles Li	3 Dec 2014	23,733 4	24,344	-	23,614 5	730 <sup>5</sup>	-	End of a performance period of 2013 – 2015
	3 Dec 2014	48,681	24,968	720	25,688	-	-	9 Dec 2015 - 9 Dec 2016
	3 Dec 2014	47,467 <sup>4</sup>	48,691	1,405	-	-	50,096 <sup>6</sup>	End of a performance period of 2014 – 2016
	2 Jan 2015	88,345	90,629	2,617	46,620	-	46,626	15 Dec 2016 -15 Dec 2017
	2 Jan 2015	95,100 4	97,558	2,817	-	-	100,375	End of a performance period of 2015 – 2017
	31 Dec 2015	60,429	60,429	1,744	-	-	62,173	9 Dec 2017 – 9 Dec 2018
	31 Dec 2015	56,800 4	56,800	1,640	-	-	58,440	End of a performance period of 2016 – 2018
	30 Dec 2016	63,210	-	-	-	-	63,210	7 Dec 2018 – 7 Dec 2019
	30 Dec 2016	67,400 <sup>4</sup>	-	-	-	-	67,400	End of a performance period of 2017 – 2019
Senior Management								
Matthew Chamberlain	3 Dec 2014	12,828	6,579	109	6,688	-	=	1 May 2015 - 1 May 2016
	3 Dec 2014	19,232	9,863	284	10,147	-	=	9 Dec 2015 – 9 Dec 2016
	2 Jan 2015	31,948	32,775	946	16,858	-	16,863	15 Dec 2016 - 15 Dec 2017
	18 Nov 2015	17,364	8,683	143	8,826	-	-	23 Nov 2015 - 1 May 2016 <sup>7</sup>
	31 Dec 2015	21,220	21,220	612	-	-	21,832	9 Dec 2017 – 9 Dec 2018
	30 Dec 2016	16,492	-	-	-	-	16,492	7 Dec 2018 – 7 Dec 2019
Eva Chau	30 Dec 2016	8,533	-	-	-	-	8,533	7 Dec 2018 – 7 Dec 2019
Bill Chow	3 Dec 2014	5,626	2,884	82	2,966	-	-	9 Dec 2015 - 9 Dec 2016
	2 Jan 2015	10,210	10,477	302	5,387	-	5,392	15 Dec 2016 -15 Dec 2017
	31 Dec 2015	7,553	7,553	217	-	-	7,770	9 Dec 2017 – 9 Dec 2018
	30 Dec 2016	4,214	-	-	-	-	4,214	7 Dec 2018 – 7 Dec 2019
Adrian Farnham	3 Dec 2014	10,190	5,226	86	5,312	-	-	1 May 2015 - 1 May 2016
	3 Dec 2014	8,191	4,200	120	4,320	-	-	9 Dec 2015 – 9 Dec 2016
	2 Jan 2015	19,157	19,655	567	10,107	-	10,115	15 Dec 2016 -15 Dec 2017
	31 Dec 2015	14,854	14,854	428	-	-	15,282	9 Dec 2017 – 9 Dec 2018
	30 Dec 2016	10,745	-	-	-	-	10,745	7 Dec 2018 – 7 Dec 2019
David Graham	27 Mar 2013	10,700	5,761	-	5,761	-	-	9 Jan 2015 - 9 Jan 2016
	3 Dec 2014	16,878	8,656	249	8,905	-	-	9 Dec 2015 - 9 Dec 2016
	2 Jan 2015	25,059	25,708	741	13,221	-	13,228	15 Dec 2016 -15 Dec 2017
	31 Dec 2015	21,653	21,653	624	-	-	22,277	9 Dec 2017 – 9 Dec 2018
	30 Dec 2016	22,755	-	-	-	-	22,755	7 Dec 2018 – 7 Dec 2019
Paul Kennedy	3 Dec 2014	8,439	4,328	124	4,452	-	-	9 Dec 2015 - 9 Dec 2016
	2 Jan 2015	13,849	14,208	409	7,305	-	7,312	15 Dec 2016 – 15 Dec 2017
	31 Dec 2015	14,603	14,603	421	-	-	15,024	9 Dec 2017 – 9 Dec 2018
	30 Dec 2016	15,275	-	-	-	-	15,275	7 Dec 2018 – 7 Dec 2019

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			Number of shares <sup>1</sup>					
	Date of award <sup>2</sup>	Number of Awarded Shares	As at 1 Jan 2016	Shares acquired during the year out of the dividends	Vested during the year	Lapsed during the year	As at 31 Dec 2016	Vesting period
Romnesh Lamba	3 Dec 2014	28,131	14,428	416	14,844	-	-	9 Dec 2015 – 9 Dec 2016
	2 Jan 2015	39,323	40,340	1,164	20,748	-	20,756	15 Dec 2016 – 15 Dec 2017
	31 Dec 2015	30,214	30,214	871	-	-	31,085	9 Dec 2017 – 9 Dec 2018
	30 Dec 2016	22,123	-	-	-	-	22,123	7 Dec 2018 – 7 Dec 2019
Roger Lee	3 Dec 2014	8,298	4,255	122	4,377	-	-	9 Dec 2015 – 9 Dec 2016
	2 Jan 2015	11,468	11,766	339	6,049	-	6,056	15 Dec 2016 – 15 Dec 2017
	18 Nov 2015	14,658	14,658	422	-	-	15,080	1 Mar 2017 - 1 Mar 2018
	31 Dec 2015	28,703	28,703	828	-	-	29,531	9 Dec 2017 – 9 Dec 2018
	30 Dec 2016	23,177	-	-	-	-	23,177	7 Dec 2018 – 7 Dec 2019
Richard Leung	3 Dec 2014	11,252	5,771	165	5,936	-	-	9 Dec 2015 – 9 Dec 2016
	2 Jan 2015	14,556	14,933	431	7,680	-	7,684	15 Dec 2016 – 15 Dec 2017
	31 Dec 2015	14,100	14,100	407	-	-	14,507	9 Dec 2017 – 9 Dec 2018
	30 Dec 2016	12,852	-	-	-	-	12,852	7 Dec 2018 – 7 Dec 2019
Li Gang	31 Dec 2015	26,437	26,437	763	-	-	27,200	9 Dec 2017 – 9 Dec 2018
	30 Dec 2016	21,070	-	-	-	-	21,070	7 Dec 2018 – 7 Dec 2019
Mao Zhirong	3 Dec 2014	6,188	3,173	90	3,263	-	-	9 Dec 2015 – 9 Dec 2016
	2 Jan 2015	12,110	12,424	358	6,389	-	6,393	15 Dec 2016 – 15 Dec 2017
	31 Dec 2015	12,337	12,337	355	-	-	12,692	9 Dec 2017 – 9 Dec 2018
	30 Dec 2016	9,481	-	-	-	-	9,481	7 Dec 2018 – 7 Dec 2019
Trevor Spanner	3 Dec 2014	16,019	8,216	123	8,339	-	-	25 Apr 2015 – 25 Apr 2016
	3 Dec 2014	21,582	11,068	318	11,386	-	-	9 Dec 2015 – 9 Dec 2016
	2 Jan 2015	35,229	36,142	1,043	18,589	-	18,596	15 Dec 2016 – 15 Dec 2017
	31 Dec 2015	22,694	22,694	654	-	-	23,348	9 Dec 2017 – 9 Dec 2018
	30 Dec 2016	18,963	-	-	-	-	18,963	7 Dec 2018 – 7 Dec 2019
Calvin Tai	3 Dec 2014	14,065	7,213	207	7,420	-	-	9 Dec 2015 – 9 Dec 2016
	2 Jan 2015	26,991	27,691	798	14,241	-	14,248	15 Dec 2016 – 15 Dec 2017
	31 Dec 2015	23,668	23,668	683	-	-	24,351	9 Dec 2017 – 9 Dec 2018
	30 Dec 2016	19,700	-	-	_	-	19,700	7 Dec 2018 – 7 Dec 2019

 $<sup>1 \ \ \</sup>text{Includes shares acquired out of the dividends from the Awarded Shares according to the Scheme}$ 

#### **CHOW Chung Kong**

Chairman of the Remuneration Committee

Hong Kong, 16 February 2017

<sup>2</sup> The date of award refers to the date on which the trustee allocated the Awarded Shares to the selected employees from the shares purchased with the awarded sum determined by the Board.

<sup>3</sup> Save for those Senior Executive Awards referred to in note 4 below and the awards granted as part of the hiring agreement with special vesting schedule, the Awarded Shares and the related income are vested in two equal tranches in the second and third year after the grant.

<sup>4</sup> The awards were granted under the Scheme as long-term incentives for selected senior executives of the Group (Senior Executive Awards).

The Board has full discretion to determine the actual amount of the Senior Executive Awards to be vested at the end of a performance period in accordance with the performance criteria recommended by the RC and approved by the Board. These performance criteria include total shareholder return, achievements made in business development initiatives and sustaining the organisation's effectiveness.

<sup>5</sup> On 2 March 2016, the Board approved the vesting of 23,614 shares to Mr Li based on his actual performance for the period 2013-2015. Pursuant to the terms of the Scheme, the remaining 730 Awarded Shares previously allocated to Mr Li lapsed on 2 March 2016.

 $<sup>6\ \</sup> The\ RC\ recommended\ a\ vesting\ of\ 45,086\ shares\ to\ Mr\ Li\ based\ on\ the\ actual\ performance\ for\ the\ period\ 2014-2016.\ ^*$ 

<sup>7</sup> The awards were granted as part of the hiring agreement with special vesting schedule.

<sup>\*</sup> The recommendation was approved by the Board on 27 February 2017.

## ENVIRONMENTAL, SOCIAL AND GOVERNANCE COMMITTEE REPORT

#### The ESG Committee

The ESG Committee is delegated with the authority from the Board to review and monitor the Group's ESG policies and practices to ensure compliance with the relevant legal and regulatory requirements, monitor and respond to emerging ESG issues and make recommendations to the Board where appropriate to improve the Group's ESG performance. Its terms of reference are available on the HKEX Group website ORG.

The ESG Committee comprises four INEDs and HKEX's Chief Executive, whose names and biographies are set out in the Board and Committees section of this Annual Report. The ESG Committee held one meeting in 2016. Members' attendance records are disclosed in the Corporate Governance Report contained in this Annual Report.

### Summary of Work in 2016/2017

- · Reviewed the training and continued professional development of the Directors and Senior Management
- Endorsed the annual Corporate Governance Report and the annual CSR Report
- Considered the proposal to engage an independent external consultant to conduct board evaluations for the Company and certain subsidiaries

#### **ESG Policies and Performance**

HKEX is committed to the highest standards of corporate governance and aims to integrate CSR into its business strategy and management approach. Details of HKEX's key corporate governance practices and activities during 2016 are disclosed in the Corporate Governance Report. HKEX's Corporate Governance Statement and CSR Policy are available on the HKEX Group website CG/CSR.

In view of the business nature of the Group, we are not aware of any environmental laws and regulations that would have a significant impact on the Group. The Group, however, continues to do more than it is required by adopting measures to reduce energy and other resource use, minimise waste and increase recycling, encourage its employees to adopt environmentally responsible behaviour and promote environmental protection in its supply chain and marketplace. In 2016, the data centre at Tseung Kwan O, Hong Kong, was certified to the Gold level under the "Leadership in Energy and Environmental Design for Existing Buildings: Operations and Maintenance". During the year, HKEX achieved the Wastewi\$e Label – Class of Excellence under the Hong Kong Awards for Environmental Excellence.

HKEX promotes the development of socially responsible practices in its marketplace and community in accordance with its Community Investment Policy. In 2016, the Group contributed a total of \$2.4 million to different causes in communities where it operates and helped to raise \$62 million for The Community Chest of Hong Kong via the Stock Code Balloting for Charity Scheme and approximately £107,000 for the LME's charity partner, Little Havens Hospice. Throughout the year, the Group continued encouraging its employees to participate in different events organised by charities in their communities. The Group's employees and their guests contributed 3,782 hours of volunteer services in total.

HKEX supports efforts by its Directors and Senior Management to develop and refresh their knowledge and skills to ensure that their contributions to the Board and the Group remain informed and relevant. On 15 February 2017, the ESG Committee reviewed the training records of Directors and Senior Management for 2016 and concluded that the training they received was appropriate and adequate.

## **Relationships with Major Stakeholders**

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

Employees are remunerated equitably and competitively. Training and development opportunities are provided to equip staff members to deliver their best performance and achieve corporate goals. In February 2016, HKEX communicated to its employees the results of the most recent employee engagement survey. The September 2015 survey had a high response rate of 89 per cent and its results showed an increase in staff engagement. Based on the findings of the survey, follow up actions such as focus group meetings have been carried out to formulate action plans for further improvement.

The market is usually consulted (formally or informally) on major initiatives and the views of the respondents are carefully and thoroughly considered to ensure that decisions are made in an informed manner and any changes are acceptable to the market. In 2016, HKEX announced its plan to revise the stock option position limit model for its derivatives market in light of strong market support for its proposed changes to the model. HKEX is continuing to work with the SFC on the joint consultation regarding proposed enhancements to the Exchange's decision-making and governance structure for listing regulation to take into account a wide range of views from market participants. In the UK, the LME has announced its decision to implement charge-capping on warehouse rents and free-on-trucks charges following a five-week market-wide consultation.

HKEX uses suppliers that reflect its values and commitment to being a good corporate citizen. In 2016, HKEX published its Supplier CSR Code of Conduct on the HKEX Group website CSR to promote good ESG practices in its network of suppliers. During the year, 27 representatives from HKEX's suppliers and other business partners supported and attended seminars related to prevention of bribery organised by HKEX under its ongoing stakeholder engagement programme.

## **CSR Reporting**

During 2016, HKEX's Chief Executive provided to the Board quarterly CSR progress reports summarising the CSR initiatives undertaken by HKEX. Details of the Group's CSR performance in 2016 are disclosed in the 2016 CSR Report.

#### **CHOW Chung Kong**

Chairman of the ESG Committee

Hong Kong, 15 February 2017

### **DIRECTORS' REPORT**

The Directors are pleased to present this Annual Report together with the audited consolidated financial statements for the year ended 31 December 2016.

## **Principal Activities**

HKEX is a recognised exchange controller under the SFO. HKEX operates the only recognised stock and futures markets in Hong Kong through its wholly-owned subsidiaries, SEHK and HKFE. HKEX also operates HKSCC, HKCC, SEOCH and OTC Clear, which are the only recognised clearing houses in Hong Kong. HKSCC, HKCC and SEOCH provide integrated clearing and settlement services to their Participants, while OTC Clear provides clearing and settlement services for interest rate and foreign exchange derivatives traded over-the-counter. HKSCC also provides depository and nominee services to its Participants. HKEX provides market data through its data dissemination entity, HKEX Information Services Limited.

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

A list of HKEX's principal subsidiaries as of 31 December 2016 and their particulars are set out in note 25 to the Consolidated Financial Statements.

#### **Business Review**

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

A fair review of the Group's business, including the important events affecting the Group that have occurred since the end of 2016 and the likely future developments, is set out in the Chief Executive's Review, Business Review and Financial Review sections of this Annual Report. Principal risks and uncertainties facing the Group were reviewed by the Board as delineated in the Risk Committee Report. Details about the Group's financial risk management are set out in note 47 to the Consolidated Financial Statements.

Throughout 2016, there was no incidence of non-compliance with the relevant laws and regulations that have a significant impact on the Group's business as outlined in the following table.

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

Primary legislation/ regulations <sup>1</sup>	Key scope	Compliance measures
Financial Markets and Insolvency (Settlement Finality) Regulations 1999 (SFR)	LME Clear's secure payment system is a designated system and is required to meet the SFR requirements.	LME Clear has adopted, as part of its rules and procedures, a Settlement Finality Rule (Rule 11) and related Settlement Finality Procedures which define the system and the point of irrevocability and finality of instructions as well as the participants in the system. The procedures explaining how the system meets the SFR requirements are available on the LME website.
PFMI	LME Clear, as financial market infrastructure, is required to observe the applicable PFMI on an ongoing basis.	LME Clear's approach to observing each applicable PFMI is summarised in its disclosure document, which is available on the LME website.
		LME Clear performs a self-assessment on an annual basis against the PFMI. This assessment is shared with LME Clear's primary regulator, the Bank of England.
Operations in Hong Kong a	nd the UK	
Prevention of Bribery Ordinance (Chapter 201 of the Laws of Hong Kong)	HKEX, SEHK, HKFE, HKSCC, HKCC and SEOCH are public bodies and are subject to prohibitions on bribery (under sections 4 to 8) and corrupt transactions with agents (under section 9).	HKEX has adopted the Group Anti-Bribery and Anti-Corruption Policy to ensure that employees within the Group comply with the Prevention of Bribery Ordinance and the Bribery Act 2010, where applicable.
Bribery Act 2010	The Group's subsidiaries in the UK and persons who are British citizens are subject to the Bribery Act provisions.	

<sup>1</sup> On the corporate level, all of the Group companies comply with the laws of the place in which the companies are incorporated and the Main Board Listing Rules and the SFO where they are applicable.

Disclosures related to the Group's environmental policies and performance, and relationships with major stakeholders are included in the ESG Committee Report on pages 86 and 87.

## **Major Customers and Suppliers**

During the year ended 31 December 2016, the combined value of the Group's contracts with its five largest suppliers, which were not of a capital nature, was less than 30 per cent of the total value of supplies purchased. The Group's five largest customers combined contributed less than 30 per cent of its total revenue and other income during the year ended 31 December 2016.

## **Results and Appropriations**

The Group's results for the year ended 31 December 2016 are set out in the Consolidated Income Statement.

An interim dividend of \$2.21 per share (2015: \$3.08 per share) was declared by the Board. On 23 September 2016, dividends in the total sum of \$2.7 billion (2015: \$3.7 billion) were paid to Shareholders. This included the dividends of \$7 million (2015: \$9 million) paid to shares held in trust under the Share Award Scheme.

<sup>2</sup> HKEX's corporate governance structure is available on the HKEX Group website, and its principal corporate governance practices are set out in the Corporate Governance Report, Nomination Committee Report, Audit Committee Report, Risk Committee Report, Remuneration Committee Report and ESG Committee Report contained in this Annual Report.

The Board recommends the payment of a final dividend of \$2.04 per share (2015: \$2.87 per share) to Shareholders whose names appear on HKEX's Register of Members on 5 May 2017, and the retention of the remaining profit for the year. Including the interim dividend, total dividend for 2016 amounts to a total of \$4.25 per share (2015: \$5.95 per share), which represents a payout ratio of 90 per cent (2015: 90 per cent) of the profit attributable to shareholders for the year ended 31 December 2016. Dividends for shares held in trust under the Share Award Scheme amount to \$14 million (2015: \$18 million). The Board also proposes to offer a scrip dividend alternative to allow Shareholders to elect to receive the final dividend wholly or partly in the form of new fully paid shares in lieu of cash.

#### **Donations**

The Group's charitable and other donations during the year amounted to \$2.1 million (2015: \$2.4 million). There have never been any political donations.

HKEX continues to raise funds for The Community Chest of Hong Kong via the Stock Code Balloting for Charity Scheme. During 2016, a total sum of \$62 million (2015: \$78 million) was raised via the Stock Code Balloting for Charity Scheme for The Community Chest of Hong Kong.

## **Share Capital**

Details of the movements in share capital of the Company during the year are set out in note 37 to the Consolidated Financial Statements. HKEX shares were issued during the year on election of scrip in lieu of cash dividends for the 2015 final dividend and 2016 interim dividend pursuant to HKEX's scrip dividend scheme. Details are set out in note 37(a) to the Consolidated Financial Statements.

## **Equity-linked Agreements**

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

## **Distributable Reserves**

As at 31 December 2016, HKEX's distributable reserves, calculated under Part 6 of the Companies Ordinance (Chapter 622 of the Laws of Hong Kong), amounted to \$6.4 billion (31 December 2015: \$6.6 billion).

Details of the movements in the respective reserves of the Group and HKEX during the year are set out in the Consolidated Statement of Changes in Equity and notes 38 to 40 and note 48(a) to the Consolidated Financial Statements.

## Purchase, Sale or Redemption of HKEX's Listed Securities

During 2016, neither the Company nor any of its subsidiaries purchased, sold or redeemed any of the HKEX shares, except that the trustee of the Share Award Scheme, pursuant to the terms of the rules and trust deed of the Share Award Scheme, purchased on the Stock Exchange a total of 991,700 HKEX shares at a total consideration of \$188 million.

#### **Directors**

The following is the list of Directors during the year and up to the date of this report (unless otherwise stated). The interests of existing Directors in the HKEX shares are set out in the Corporate Governance Report. Information about Directors' appointments, retirements and remuneration is set out in the Nomination Committee Report and the Remuneration Committee Report.

#### **INEDs**

CHOW Chung Kong (Chairman) (Re-appointed on 28 April 2016)
Apurv BAGRI (Elected on 28 April 2016)
CHAN Tze Ching, Ignatius
Timothy George FRESHWATER (Re-appointed on 28 April 2016)
FUNG Yuen Mei, Anita
Rafael GIL-TIENDA
John Barrie HARRISON
HU Zuliu, Fred
KWOK Chi Piu, Bill
LEE Kwan Ho, Vincent Marshall
LEUNG KO May Yee, Margaret
John Mackay McCulloch WILLIAMSON
WONG Sai Hung, Oscar (Retired on 28 April 2016)

#### **Executive Director**

LI Xiaojia, Charles (Chief Executive)

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

Garry Peter JONES 3

LI Xiaojia, Charles 1

Brian Geoffrey BENDER
Matthew James CHAMBERLAIN <sup>2</sup>
CHAN Wing Kwong
CHENG Mo Chi, Moses
CHIN Chin Fai
CHOW Chung Kong <sup>1</sup>
Adrian John Winston FARNHAM <sup>2</sup>
David GRAHAM <sup>2</sup>
Hugh Edward GRAHAM
John Barrie HARRISON <sup>1</sup>

Elizabeth Noel HARWERTH HUI Ching Yu Marye Louise HUMPHERY Paul Michael KENNEDY <sup>2</sup>
KIM Gene Kyum <sup>3</sup>
KWAN Wai Hung
KWOK Chi Piu, Bill <sup>1</sup>
LAI Tat Sze, Darcy
LAM Kin
Romnesh LAMBA <sup>2</sup>
Nathaniel Bernard LE ROUX <sup>3</sup>
LEE Kwok Keung <sup>2</sup>
LEUNG Chung Kwong, Richard <sup>2</sup>
LI Gang <sup>2</sup>

LO Wai Keung, David <sup>3</sup>
MAO Zhirong <sup>2</sup>
Ketan B PATEL
POON Hon Cheung
POON Tim Fung
Trevor William SPANNER <sup>2</sup>
Marco Andrea STRIMER
Antony John STUART
TAI Chi Kin <sup>2</sup>
Richard John THORNHILL

Hossein ZAIMI<sup>3</sup>

**ZUO Tao** 

- 1 Member of the Board
- 2 Member of Senior Management
- 3 No longer a director of any subsidiary of HKEX as at the date of this report

## Directors' Interests in Transactions, Arrangements and Contracts

Details of the continuing connected transactions and material related party transactions are set out in the Corporate Governance Report and note 44 to the Consolidated Financial Statements.

Notwithstanding the above, no transaction, arrangement or contract that is significant in relation to the Group's business to which the Company or any of its subsidiaries was a party and in which a person who at any time in 2016 was a Director or his or her connected entity had, directly or indirectly, a material interest subsisted at any time during the year or at the end of 2016.

## **Directors' Rights to Acquire Shares or Debentures**

Li Xiaojia, Charles, Executive Director, was awarded HKEX shares pursuant to the Share Award Scheme. Details are set out in the Remuneration Committee Report and note 38 to the Consolidated Financial Statements.

Save for the above, neither HKEX nor any of its subsidiary undertakings was a party to any arrangements to enable Directors to acquire benefits by means of the acquisition of shares in, or debentures of, HKEX or any other body corporate at any time during the year or at the end of 2016.

## **Management Contracts**

No contract, other than employment contracts, concerning the management and administration of the whole or any substantial part of the Company's business was entered into or existed during 2016.

## **Permitted Indemnity Provision**

Pursuant to the HKEX's Articles, subject to the provisions of the statutes, every Director shall be entitled to be indemnified by the Company against all costs, charges, losses, expenses and liabilities incurred by him or her in the execution and discharge of his or her duties or in relation thereto. The Directors and Officers Liability Insurance (D&O Insurance) undertaken by the Company provides such indemnities to all the directors of the Company and its subsidiaries. The relevant provisions in the HKEX's Articles and the D&O Insurance were in force during the financial year ended 31 December 2016 and as of the date of this report.

#### **Auditor**

The financial statements for the year ended 31 December 2016 have been audited by PricewaterhouseCoopers, which retires and, being eligible, offers itself for re-appointment at the 2017 AGM. A resolution to re-appoint PricewaterhouseCoopers and to authorise the Directors to fix its remuneration will be proposed at the 2017 AGM.

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

Approved by the Board on 27 February 2017

## **CHOW Chung Kong**

Chairman

## **AUDITOR'S REPORT**

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

(incorporated in Hong Kong with limited liability)

## **Opinion**

#### What we have audited

The consolidated financial statements of Hong Kong Exchanges and Clearing Limited (the "Company") and of its subsidiaries (together, the "Group") set out on pages 101 to 176, which comprise:

- the consolidated statement of financial position as at 31 December 2016;
- the consolidated income statement for the year then ended;
- the consolidated statement of comprehensive income for the year then ended;
- the consolidated statement of changes in equity for the year then ended;
- the consolidated statement of cash flows for the year then ended; and
- the notes to the consolidated financial statements, which include a summary of significant accounting policies.

#### Our opinion

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2016, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Hong Kong Financial Reporting Standards ("HKFRSs") issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA") and have been properly prepared in compliance with the Hong Kong Companies Ordinance.

## **Basis for Opinion**

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

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

#### Independence

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

## **Key Audit Matters**

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

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

- Goodwill impairment assessment
- Valuation, existence, accuracy and presentation of certain financial assets and liabilities

## Goodwill impairment assessment

#### Nature of the Key Audit Matter

As at 31 December 2016, the Group has goodwill of \$13,167 million arising from the acquisition of LME Holdings Limited and its subsidiaries (collectively "LME Group") in 2012. The goodwill was allocated to groups of Cash Generating Units ("CGUs") within the "Commodities" operating segment (\$10,310 million) and "Clearing" operating segment (\$2,857 million) and is monitored by management at the operating segment level.

Following the planned expansion of the Group's commodities business in Mainland China, a new CGU ("China commodities CGU"), which forms part of the Commodities operating segment, was included in the assessment this year.

We focused on this area due to the size of the balance and significant judgement applied by management in the assessment of the 'value in use' of the Group's operating segments. Significant judgement was involved on the key assumptions underlying the future cash flow projections, including expected trade volume and pricing within the CGUs in each of the operating segments. Other assumptions involved are the discount rates applied and growth rates applied to the period beyond the 5th year ("terminal growth rate") to those future cash flows projections.

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

- calculating the value in use for groups of CGUs within each operating segment using a discounted
  cash flow model. These models used future cash flow projections (revenue, expenses and capital
  expenditure) for each group of CGUs over a five-year period, with a growth rate applied to the period
  beyond the 5th year ("terminal growth rate"). These cash flows were discounted to net present value
  using the respective CGU's weighted average cost of capital ("WACC"); and
- 2. comparing the resulting value in use of each group of CGUs to their respective book values.

Management has also assessed the future cash flow projections for the two groups of CGUs over the five-year period. Management has assumed higher growth assumptions for the five-year period from 2017 to 2021 when compared to prior year, which is primarily driven by new products to be introduced.

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

Refer to note 3 for critical accounting estimates and assumptions and note 27 for the goodwill disclosure relating to the impairment assessment.

#### How our audit addressed the Key Audit Matter

Our work included testing performed over management's key controls on goodwill impairment assessment:

- 1. process by which management's strategic cash flow projections were developed; and
- 2. approval and monitoring process undertaken by management and the board of directors over management's strategic cash flow projections, budgets, goodwill impairment assessment including key assumptions involved, and sensitivity analyses.

## Goodwill impairment assessment (continued)

How our audit addressed the Key Audit Matter (continued)

Our audit procedures also included the following:

- 1. We have assessed the methodology used by the Group to estimate the value in use of the respective groups of CGUs within the Commodities and Clearing operating segments applied in management's annual impairment assessment;
- 2. We have assessed the reasonableness of the WACCs used and the growth rate applied to the period beyond the 5th year, including the growth rate applied to the cash flow projections of the new China Commodities CGU, by reviewing management's assumptions underlying the cash flow projections and comparing them to independent market data, industry forecasts and historical average daily volume growth;
- 3. We have evaluated the reasonableness of management's key assumptions of the underlying cash flow projections for the five-year period, including the scenario analyses for new products to be launched, by comparing historical budgets and achievements and the reasons for any deviations. We have also agreed the cash flow projections against the latest budgets approved by the respective board of directors;
- 4. We have obtained and have evaluated management's sensitivity analyses to assess the impact of reasonably possible changes to the key assumptions (cash flow projections, WACC and growth rates). We have also performed our own sensitivity analyses on these key assumptions, including those applied to the period beyond the 5th year and evaluated the impact that such reasonably possible changes have on the recoverable amount of the goodwill allocated to each group of CGUs at financial year end; and
- 5. We have reviewed the appropriateness of disclosure on goodwill impairment assessment.

Based on the above testing procedures, no material exceptions were noted.

## Valuation, existence, accuracy and presentation of certain financial assets and liabilities

#### Nature of the Key Audit Matter

The majority of the Group's financial assets and financial liabilities are classified as level 2.

As at 31 December 2016, the Group's financial assets and liabilities classified as level 2 are as follows:

	\$ million
Financial assets	64,819
Financial liabilities	61,627

The financial assets mainly consist of debt securities (\$301 million), collective investment schemes (\$2,886 million) and base metals derivatives contracts cleared through LME Clear (\$61,618 million), while financial liabilities mainly consist of base metals derivatives contracts cleared through LME Clear (\$61,618 million).

Our audit focus for level 2 financial instruments was on (a) the valuation and existence of debt securities and collective investment schemes and (b) the accuracy and presentation of net derivative balances of base metals derivatives contracts.

# Valuation, existence, accuracy and presentation of certain financial assets and liabilities (continued)

#### Nature of the Key Audit Matter (continued)

(a) Valuation and existence of debt securities and collective investment schemes

We focused on debt securities and collective investment schemes within financial assets classified as level 2 due to the size of these balances and the judgement involved in selecting the appropriate pricing sources in determining the estimated fair value of these financial instruments.

As at 31 December 2016, the Group's debt securities and collective investment schemes classified as level 2 consist of the following:

	\$ million
Debt securities	301
Collective investment schemes	2,886

Refer to note 3 for critical accounting estimates and assumptions, note 21 for financial assets measured at fair value through profit or loss and note 47(d) for the fair value hierarchy disclosure.

(b) Accuracy and presentation of net derivative balances

As at 31 December 2016, the Group's base metals derivatives assets and liabilities contracts are as follows:

Base metals derivatives contracts	\$ million		\$ million
Financial assets		Financial liabilities	
Net amount	61,618	Net amount	61,618
Gross amount	1,122,855	Gross amount	1,122,855

We focused on the base metals derivatives contracts classified as level 2 financial assets and liabilities due to the magnitude of these balances, large volume of data generated by the clearing system and the complexity of the netting process.

All open derivative positions must be netted off and the balance presented net in the statement of financial position when, and only when an entity:

- currently has a legally enforceable right to net off the recognised amounts; and
- intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

Refer to note 47(d) for the fair value hierarchy disclosure and note 47(e) for the offsetting disclosure.

# Valuation, existence, accuracy and presentation of certain financial assets and liabilities (continued)

#### How our audit addressed the Key Audit Matter

Our work included testing performed over management's key controls over the valuation and existence of debt securities and collective investment schemes and the netting process of the derivative balances:

#### Controls over the valuation and existence of debt securities and collective investment schemes

- 1. IT general controls over and interface between the treasury investment system and the financial reporting system;
- 2. Verification process on valuation of financial assets from independent sources; and
- 3. Reconciliation process of financial assets positions with the custodian records and the relevant fund administrators' records.

#### Controls over the netting process of the derivative balances

- 1. IT general controls over the clearing system which generates data used in the netting procedure; and
- 2. Automated controls for trade matching and clearing systems which support the registration and novation process of matched trades.

Our audit procedures also included the following:

#### Procedures over the valuation and existence of debt securities and collective investment schemes

- 1. We have assessed the appropriateness of the valuation method used by the Group in determining the estimated fair value of these financial instruments;
- 2. We have compared the pricing of the debt securities and collective investment schemes as at 31 December 2016 to external pricing sources or independent broker quotes; and
- 3. We have obtained direct confirmations from the independent custodians and the relevant fund administrators and agreed the balances of debt securities, holding and pricing of collective investment schemes held at 31 December 2016 to the respective confirmations.

#### Procedures over the netting process of the derivative balances

- 1. We have assessed the appropriateness of the netting criteria used by management in determining the net positions;
- 2. We have tested the completeness and accuracy of the net positions (for recognition on the consolidated statement of financial position) and the gross positions (for disclosure in the offsetting note) from reports generated from the clearing system; and
- 3. We have recalculated the amounts based on the respective net and gross positions from reports generated from the clearing system.

Based on the above testing procedures, no material exceptions were noted.

The directors of the Company are responsible for the other information. The other information comprises the section Overview, Organisation, Management Discussion and Analysis, Governance, Shareholder Information and Glossary included in the Annual Report, but does not include the consolidated financial statements and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

## Responsibilities of the Directors for the Consolidated Financial Statements

The directors of the Company are responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with HKFRSs issued by the HKICPA and the Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

The Audit Committee of the Group assists the directors in discharging their responsibilities for overseeing the Group's financial reporting process.

## Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. We report our opinion solely to you, as a body, in accordance with Section 405 of the Hong Kong Companies Ordinance and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

# Auditor's Responsibilities for the Audit of the Consolidated Financial Statements (continued)

As part of an audit in accordance with HKSAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether
  due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit
  evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting
  a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may
  involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements.
   We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Audit Committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Audit Committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Audit Committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor's report is Marie-Anne, Sew Youne, Kong Yao Fah.

#### PricewaterhouseCoopers

Certified Public Accountants

Hong Kong, 27 February 2017

## CONSOLIDATED INCOME STATEMENT

For the year ended 31 December 2016

	Note	2016 \$m	2015 \$m
Trading fees and trading tariff	5(a)	4,428	5,469
Stock Exchange listing fees	5(b)	1,092	1,114
Clearing and settlement fees		2,358	3,118
Depository, custody and nominee services fees		857	867
Market data fees		816	803
Other revenue	5(c)	847	862
REVENUE	5	10,398	12,233
Investment income		826	702
Interest rebates to Participants		(130)	(24)
Net investment income	6	696	678
Gain on disposal of a leasehold property	7	-	445
Sundry income	8	22	19
REVENUE AND OTHER INCOME	4	11,116	13,375
OPERATING EXPENSES			
Staff costs and related expenses	9	(2,035)	(2,020)
Information technology and computer maintenance expenses	10	(500)	(517)
Premises expenses		(333)	(294)
Product marketing and promotion expenses		(54)	(41)
Legal and professional fees		(106)	(99)
Other operating expenses:			
Reversal of provision for impairment losses arising from			
Participants' default on market contracts	11(a)	-	77
Others	11(b)	(427)	(396)
		(3,455)	(3,290)
EBITDA	4	7,661	10,085
Depreciation and amortisation		(771)	(684)
OPERATING PROFIT	12	6,890	9,401
Finance costs	13	(82)	(114)
Share of loss of a joint venture		(9)	(9)
PROFIT BEFORE TAXATION	4	6,799	9,278
TAXATION	16(a)	(1,058)	(1,347)
PROFIT FOR THE YEAR		5,741	7,931
PROFIT/(LOSS) ATTRIBUTABLE TO:			
Shareholders of HKEX	40	5,769	7,956
Non-controlling interests	25(a)(i)	(28)	(25)
PROFIT FOR THE YEAR		5,741	7,931
Basic earnings per share	17(a)	\$4.76	\$6.70
Diluted earnings per share	17(b)	\$4.75	\$6.67
	(~)	,	,,

The notes on pages 106 to 176 are an integral part of these consolidated financial statements.

Details of dividends are set out in note 18 to the consolidated financial statements.

# CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

For the year ended 31 December 2016

	Note	2016 \$m	2015 \$m
PROFIT FOR THE YEAR		5,741	7,931
OTHER COMPREHENSIVE INCOME			
Items that may be reclassified subsequently to profit or loss:			
Currency translation differences of foreign subsidiaries recorded in exchange reserve	2(e)(iii)	(6)	(7)
OTHER COMPREHENSIVE INCOME	_(=),(=)	(6)	(7)
TOTAL COMPREHENSIVE INCOME		5,735	7,924
TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO:			
Shareholders of HKEX		5,763	7,949
Non-controlling interests	25(a)(i)	(28)	(25)
TOTAL COMPREHENSIVE INCOME		5,735	7,924

The notes on pages 106 to 176 are an integral part of these consolidated financial statements.

## CONSOLIDATED STATEMENT OF FINANCIAL POSITION

At 31 December 2016

		At	31 Dec 20	16	At 31 Dec 2015		
	Note	Current \$m	Non- current \$m	Total \$m	Current \$m	Non- current \$m	Total \$m
ASSETS							
Cash and cash equivalents	19, 20	115,723	-	115,723	110,890	-	110,890
Financial assets measured at							
fair value through profit or loss	19, 21	70,066	-	70,066	72,705	-	72,705
Financial assets measured at amortised cost	19, 22	29,093	74	29,167	19,439	57	19,496
Accounts receivable, prepayments and deposits	24	12,928	21	12,949	15,537	21	15,558
Interest in a joint venture	26	-	59	59	-	68	68
Goodwill and other intangible assets	27	-	17,812	17,812	-	17,872	17,872
Fixed assets	28	-	1,499	1,499	-	1,560	1,560
Lease premium for land		-	21	21	-	22	22
Deferred tax assets	36(d)		22	22	_	22	22
Total assets		227,810	19,508	247,318	218,571	19,622	238,193
LIABILITIES AND EQUITY							
Liabilities							
Financial liabilities at fair value through profit or loss	29	61,627	_	61,627	64,486		64,486
Margin deposits, Mainland security and	23	01,027	_	01,027	04,400	_	04,480
settlement deposits, and cash collateral							
from Clearing Participants	19, 30	126,846	_	126,846	115,213	_	115,213
Accounts payable, accruals and	,	,		,	,		,
other liabilities	31	12,246	30	12,276	15,270	15	15,285
Deferred revenue		842	_	842	773	_	773
Taxation payable		356	_	356	653	_	653
Other financial liabilities	32	37	_	37	42	_	42
Participants' contributions to							
Clearing House Funds	19, 33	8,656	_	8,656	7,474	_	7,474
Borrowings	34	_	3,422	3,422	_	3,409	3,409
Provisions	35	78	81	159	65	70	135
Deferred tax liabilities	36(d)	_	713	713	_	761	761
Total liabilities		210,688	4,246	214,934	203,976	4,255	208,231
Equity							
Share capital	37			22,085			19,285
Shares held for Share Award Scheme	37			(599)			(590)
Employee share-based compensation reserve	38			226			199
Exchange reserve	2(e)(iii)			(260)			(254)
Designated reserves	33, 39			773			778
Reserve relating to written put options to non-controlling interests	,			(293)			(293)
Retained earnings	40			10,334			10,691
Equity attributable to shareholders of HKEX	. •			32,266			29,816
Non-controlling interests				118			146
Total equity				32,384			29,962
Total liabilities and equity				247,318			238,193
Net current assets				17,122			14,595

The notes on pages 106 to 176 are an integral part of these consolidated financial statements.

Approved by the Board of Directors on 27 February 2017

**CHOW Chung Kong** Director **LI Xiaojia, Charles** Director

# CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the year ended 31 December 2016

Tor the year ended 5 1 D				Attributable to sha	reholders of HKI	ΞX				
	Share capital and shares held for Share Award Scheme (note 37) \$m	Employee share-based compensation reserve (note 38) \$m	Exchange reserve \$m	Convertible bond reserve \$m	Designated reserves (note 39) \$m	Reserve relating to written put options to non-controlling interests \$m	Retained earnings (note 40) \$m	Total \$m	Non- controlling interests \$m	Total equity \$m
At 1 Jan 2015	11,743	142	(247)	409	643	(217)	8,800	21,273	86	21,359
Profit for the year	-	-	-	-	-	-	7,956	7,956	(25)	7,931
Other comprehensive income	-	-	(7)	-	-	-	-	(7)	-	(7)
Total comprehensive income Total contributions by and distributions to shareholders of HKEX, recognised directly in equity:		-	(7)	-	-	-	7,956	7,949	(25)	7,924
- 2014 final dividend at \$2.15 per share	-	-	-	-	-	-	(2,533)	(2,533)	-	(2,533)
<ul> <li>2015 interim dividend at \$3.08 per share</li> <li>Unclaimed HKEX dividends forfeited (note 31(a))</li> </ul>	-	-	-	-	-	-	(3,679) 18	(3,679)	-	(3,679)
<ul> <li>Shares issued upon exercise of employee share options</li> </ul>	3		_	_			_	3	_	3
- Shares issued in lieu of cash dividends	3,165	-	-	-	-	-	_	3,165	-	3,165
- Shares purchased for Share Award Scheme	(227)	_	_	_	_	_	_	(227)	_	(227)
- Vesting of shares of Share Award Scheme	134	(126)	_	_	_	_	(8)	(227)	_	-
- Employee share-based compensation benefits		183	-	_	_	_	-	183	_	183
- Tax credit relating to Share Award Scheme	_	-	_	_	_	_	3	3	_	3
- Conversion of convertible bonds (note 37(d))	3,877	-	-	(409)	-	-	266	3,734	-	3,734
- Transfer of reserves		-	-	-	135	-	(135)	· -	-	-
<ul> <li>Put options written to non-controlling interests (note 34(c))</li> </ul>	-	-	-	-	-	(76)	-	(76)	-	(76)
Total changes in ownership interests in subsidiaries that do not result in a loss of control:										
- Changes in ownership interests in a subsidiary	-	-	-	-	-	-	3	3	85	88
Total transactions with shareholders recognised directly in equity	6,952	57	-	(409)	135	(76)	(6,065)	594	85	679
At 31 Dec 2015	18,695	199	(254)	-	778	(293)	10,691	29,816	146	29,962
At 1 Jan 2016	18,695	199	(254)	-	778	(293)	10,691	29,816	146	29,962
Profit for the year	-	-	-	-	-	-	5,769	5,769	(28)	5,741
Other comprehensive income	-	-	(6)	-	-	-	-	(6)	-	(6)
Total comprehensive income  Total contributions by and distributions to shareholders of HKEX, recognised directly in equity:	-	-	(6)	-	-	-	5,769	5,763	(28)	5,735
- 2015 final dividend at \$2.87 per share	-	-	-	-	-	-	(3,459)	(3,459)	-	(3,459)
<ul> <li>2016 interim dividend at \$2.21 per share</li> <li>Unclaimed HKEX dividends forfeited</li> </ul>	-	-	-	-	-	-	(2,683)	(2,683)	-	(2,683)
(note 31(a))	-	-	-	-	-	-	22	22	-	22
- Shares issued in lieu of cash dividends	2,782	-	-	-	-	-	-	2,782	-	2,782
- Shares purchased for Share Award Scheme	(188)	-	-	-	-	-	-	(188)	-	(188)
- Vesting of shares of Share Award Scheme	197	(186)	-	-	-	-	(11)	-	-	-
- Employee share-based compensation benefits	-	213	-	-	-	-	-	213	-	213
- Transfer of reserves	-	-	-	-	(5)		5	-	-	-
Total transactions with shareholders recognised directly in equity	2,791	27		-	(5)	-	(6,126)	(3,313)	-	(3,313)
At 31 Dec 2016	21,486	226	(260)	-	773	(293)	10,334	32,266	118	32,384

The notes on pages 106 to 176 are an integral part of these consolidated financial statements.

For the year ended 31 December 2016

Tot the year chaca of December 2010			
	Note	2016 \$m	2015 \$m
CASH FLOWS FROM PRINCIPAL OPERATING ACTIVITIES			
Net cash inflow from principal operating activities	41	6,164	8,921
CASH FLOWS FROM OTHER OPERATING ACTIVITIES			
Net payments to external fund managers for purchases of financial assets measured at fair value through profit or loss		(2,701)	(600)
Net cash inflow from operating activities		3,463	8,321
CASH FLOWS FROM INVESTING ACTIVITIES			
Payments for purchases of fixed assets and intangible assets		(620)	(710)
Net proceeds from disposal of a leasehold property and other fixed assets		-	512
Net (increase)/decrease in financial assets of Corporate Funds:			
Increase in time deposits with original maturities more than three months		(2,419)	(426)
Payments for purchases of financial assets measured at amortised cost			
(excluding time deposits)		(312)	_
Net proceeds from sales of financial assets measured at fair value through profit or loss			187
Interest received from financial assets measured		_	107
at fair value through profit or loss		16	17_
Net cash outflow from investing activities		(3,335)	(420)
CASH FLOWS FROM FINANCING ACTIVITIES			
Proceeds from issuance of shares upon exercise of employee share options		_	3
Purchases of shares for Share Award Scheme		(188)	(227)
Payments of finance costs		(69)	(71)
Dividends paid to shareholders of HKEX		(3,329)	(3,017)
Proceeds from disposal of interest in a subsidiary without loss of control		_	88
Net cash outflow from financing activities		(3,586)	(3,224)
Net (decrease)/increase in cash and cash equivalents		(3,458)	4,677
Cash and cash equivalents at 1 Jan		12,744	8,067
Cash and cash equivalents at 31 Dec		9,286	12,744
Analysis of cash and cash equivalents			
Cash on hand and balances and deposits with banks and short-term			
investments of Corporate Funds	20	9,286	12,744

The notes on pages 106 to 176 are an integral part of these consolidated financial statements.

(a) "Cash flows from principal operating activities" is a non-Hong Kong Financial Reporting Standard (non-HKFRS) measure used by management for monitoring cash flows of the Group (defined in note 1) and represents the cash flows generated from the trading and clearing operations of the three exchanges and five clearing houses and ancillary services of the Group. Cash flows from principal operating activities and cash flows from other operating activities together represent cash flows from operating activities as defined by Hong Kong Accounting Standard (HKAS) 7: Statement of Cash Flows. This non-HKFRS measure may not be comparable to similar measures presented by other companies.

### NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

#### 1. General Information

Hong Kong Exchanges and Clearing Limited (HKEX or the Company) and its subsidiaries (collectively, the Group) own and operate the only stock exchange and futures exchange in Hong Kong and their related clearing houses, a clearing house for clearing over-the-counter derivatives contracts in Hong Kong, and an exchange and a clearing house for the trading and clearing of base metals futures and options contracts operating in the United Kingdom (UK).

HKEX is a limited company incorporated and domiciled in Hong Kong. The address of its registered office is 12th Floor, One International Finance Centre, 1 Harbour View Street, Central, Hong Kong.

These consolidated financial statements were approved for issue by the Board of Directors (Board) on 27 February 2017.

## 2. Principal Accounting Policies

Apart from the accounting policies presented within the corresponding notes to the consolidated financial statements, other principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

#### (a) Statement of compliance

These consolidated financial statements have been prepared in accordance with Hong Kong Financial Reporting Standards (HKFRSs) issued by the Hong Kong Institute of Certified Public Accountants (HKICPA), and accounting principles generally accepted in Hong Kong. These consolidated financial statements also comply with the applicable disclosure requirements of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (Main Board Listing Rules) and the applicable requirements of the Hong Kong Companies Ordinance (Chapter 622).

#### (b) Basis of preparation

These consolidated financial statements have been prepared under the historical cost convention, as modified by the revaluation of certain financial assets and financial liabilities measured at fair value.

The preparation of financial statements requires the use of certain critical accounting estimates, and requires management to exercise its judgement when applying the Group's accounting policies. Areas involving significant estimates and judgement are disclosed in note 3.

#### Adoption of new/revised HKFRSs

In 2016, the Group has adopted the following amendments to HKFRSs which were effective for accounting periods beginning on or after 1 January 2016:

Amendments to HKAS 1
Amendments to HKAS 16
and HKAS 38

Presentation of Financial Statements – Disclosure Initiative Clarification of Acceptable Methods of Depreciation and Amortisation

The adoption of these amendments to HKFRSs does not have any financial impact on the Group.

## 2. Principal Accounting Policies (continued)

#### (b) Basis of preparation (continued)

New/revised HKFRSs issued before 31 December 2016 but not yet effective and not early adopted

The Group has not applied the following new/revised HKFRSs which were issued before 31 December 2016 and are pertinent to its operations but not yet effective:

Amendments to HKAS 7 Statement of Cash Flows – Disclosure Initiative <sup>1</sup>

HKFRS 9 (2014) Financial Instruments<sup>2</sup>

HKFRS 15 Revenue from Contracts with Customers<sup>2</sup>

HKFRS 16 Leases<sup>3</sup>

1 Effective for accounting periods beginning on or after 1 January 2017

- 2 Effective for accounting periods beginning on or after 1 January 2018
- 3 Effective for accounting periods beginning on or after 1 January 2019

The adoption of amendments to HKAS 7, HKFRS 9 (2014) and HKFRS 15 would not have any significant impact on the financial performance and position of the Group.

HKFRS 16 will primarily affect the accounting for the Group's operating leases. At 31 December 2016, the Group had non-cancellable operating lease commitments of \$947 million (note 42(b)). Upon adoption of HKFRS 16 the majority of operating lease commitments will be recognised in the consolidated statement of financial position as lease liabilities and right-of-use assets. The lease liabilities would subsequently be measured at amortised cost and the right-of-use assets will be depreciated on a straight-line basis during the lease term.

There are no other new/revised HKFRSs that are not yet effective that are expected to have any impact on the Group.

#### (c) Basis of consolidation

Subsidiaries are entities (including structured entities) over which the Group has control. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases. All material intra-group transactions and balances have been eliminated on consolidation.

Accounting policies of subsidiaries have been aligned on consolidation to ensure consistency with the policies adopted by the Group.

#### (d) Impairment of non-financial assets

Assets with an indefinite useful life, which include interest in a joint venture (note 26) and goodwill and tradenames (note 27), are not subject to amortisation and are tested at least annually for impairment. Assets subject to amortisation are reviewed for impairment whenever there is any indication that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount (ie, the higher of an asset's fair value less costs to sell and value-in-use). Such impairment losses are recognised in the consolidated income statement. An impairment loss other than goodwill is reversed if the circumstances and events leading to the impairment cease to exist.

## 2. Principal Accounting Policies (continued)

#### (e) Foreign currency translation

### (i) Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the functional currency). The consolidated financial statements are presented in Hong Kong Dollar (HKD), which is the Company's functional and presentation currency.

#### (ii) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the consolidated income statement.

Translation differences on non-monetary financial assets that are classified as financial assets measured at fair value through profit or loss are reported as part of the fair value gain or loss.

#### (iii) Group companies

The results and financial position of all the Group entities that have a non-HKD functional currency are translated into HKD as follows:

- assets and liabilities (including goodwill and fair value adjustments arising on the acquisition of foreign subsidiaries) for each statement of financial position presented are translated at the closing rate at the end of the reporting period;
- income and expenses for each income statement are translated at the exchange rates approximating the foreign exchange rates ruling at the dates of the transactions; and
- all resulting currency translation differences are recognised in other comprehensive income in the exchange reserve under equity.

## 3. Critical Accounting Estimates and Assumptions

The Group makes estimates and assumptions concerning the future when the consolidated financial statements are prepared. The resulting accounting estimates may differ from the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below:

#### (a) Goodwill and tradenames

The Group tests annually whether goodwill and tradenames have suffered any impairment in accordance with the accounting policy stated in note 27.

The recoverable amounts of relevant cash generating units (CGUs) and relevant group of CGUs have been determined based on value-in-use calculations which are disclosed in note 27. These calculations require the use of estimates and significant judgement by management, including the future cash flows expected to arise from the CGUs, discount rates for calculating the present value and growth rates used to extrapolate cash flow projections beyond the financial forecasts approved by management.

## 3. Critical Accounting Estimates and Assumptions (continued)

#### (a) Goodwill and tradenames (continued)

Changes in facts and circumstances may result in revisions to estimates of recoverable amounts and to the conclusion as to whether an indication of impairment exists, which could affect the consolidated income statement in future years.

#### (b) Valuation of investments

The Group has a significant amount of investments that are not classified as Level 1 investments under HKFRS 13: Fair Value Measurement. The valuations have been determined based on quotes from market makers, alternative pricing sources supported by observable inputs, latest transactions prices or redemption prices provided by funds administrators of collective investment schemes.

At 31 December 2016, the financial assets that were not classified as Level 1 investments (excluding the base metals futures and options contracts cleared through LME Clear Limited (LME Clear) that did not qualify for netting under the current accounting standards) under HKFRS 13 amounted to \$3,201 million (31 December 2015: \$3,087 million) which mainly comprised \$2,886 million of investments under collective investment schemes (31 December 2015: \$3,081 million of debt securities).

As the valuation of investments reflects movements in their estimated fair value, fair value gains or losses may fluctuate or reverse until the investments are sold, mature or realised upon redemption. The potential impact of the fair value change of such investments on the Group's consolidated income statement is disclosed in note 47(a)(iv).

## 4. Operating Segments

#### **Accounting Policy**

Operating segments are reported in a manner consistent with the internal management reports that are used to make strategic decisions provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, is the Chief Executive of HKEX. Information relating to segment assets and liabilities is not disclosed as such information is not regularly reported to the chief operating decision-maker.

The accounting policies of the reportable segments are the same as the Group's accounting policies. Taxation charge/credit is not allocated to reportable segments.

The Group has five reportable segments ("Corporate Items" is not a reportable segment). The segments are managed separately as each segment offers different products and services and requires different information technology systems and marketing strategies. The operations in each of the Group's reportable segments are as follows:

The **Cash** segment covers all equity products traded on the Cash Market platforms, the Shanghai Stock Exchange and the Shenzhen Stock Exchange through Shanghai-Hong Kong Stock Connect and Shenzhen-Hong Kong Stock Connect (Stock Connects), sales of market data relating to these products and other related activities. The major sources of revenue of the segment are trading fees, trading tariff, listing fees of equity products and market data fees.

The **Equity and Financial Derivatives** segment refers to derivatives products traded on the two exchanges in Hong Kong and other related activities. These include the provision and maintenance of trading platforms for a range of equity and financial derivatives products, such as stock and equity index futures and options, derivative warrants (DWs), callable bull/bear contracts (CBBCs) and warrants and sales of related market data. The major sources of revenue are trading fees, trading tariff, listing fees of derivatives products and market data fees.

## 4. Operating Segments (continued)

The **Commodities** segment refers to the operations of The London Metal Exchange (LME), which operates an exchange in the UK for the trading of base metals futures and options contracts, and the development and operations of the new commodity trading platform in the Mainland. It also covers the Asia Commodities contracts traded on Hong Kong Futures Exchange Limited (Futures Exchange). The major sources of revenue of the segment are trading fees of commodity products, commodity market data fees and fees from ancillary operations.

The **Clearing** segment refers to the operations of the five clearing houses, which are responsible for clearing, settlement and custodian activities of the exchanges of the Group, and clearing and settlement of over-the-counter derivatives contracts. Its principal sources of revenue are derived from providing clearing, settlement, depository, custody and nominee services and net investment income earned on the Margin Funds and Clearing House Funds.

The **Platform and Infrastructure** segment refers to all services in connection with providing users with access to the platform and infrastructure of the Group. Its major sources of revenue are network, terminal user, dataline and software sub-license fees and hosting services fees.

Central income (including net investment income of Corporate Funds) and central costs (costs of central support functions that provide services to all operating segments, finance costs and other costs not directly related to any operating segment) are included as "Corporate Items".

The chief operating decision-maker assesses the performance of the operating segments principally based on their EBITDA (defined below).

EBITDA is defined as earnings before interest expenses and other finance costs, taxation, depreciation and amortisation. It excludes the Group's share of results of the joint venture. EBITDA is a non-HKFRS measure used by management for monitoring business performance. It may not be comparable to similar measures presented by other companies.

An analysis by operating segment of the Group's EBITDA, profit before taxation and other selected financial information for the year is as follows:

				2016			
	Cash \$m	Equity and Financial Derivatives \$m	Commodities \$m	Clearing \$m	Platform and Infrastructure \$m	Corporate Items \$m	Group \$m
Revenue from external customers	2,683	2,034	1,560	3,577	540	4	10,398
Net investment income	-	-	-	547	-	149	696
Sundry income	-	-	-	14	-	8	22
Revenue and other income	2,683	2,034	1,560	4,138	540	161	11,116
Operating expenses	(544)	(441)	(597)	(702)	(152)	(1,019)	(3,455)
Reportable segment EBITDA	2,139	1,593	963	3,436	388	(858)	7,661
Depreciation and amortisation	(88)	(86)	(298)	(179)	(44)	(76)	(771)
Finance costs	-	-	-	-	-	(82)	(82)
Share of loss of a joint venture	_	(9)	-	-	-	-	(9)
Reportable segment profit before taxation	2,051	1,498	665	3,257	344	(1,016)	6,799
Other segment information:							
Interest income	-	-	-	663	-	81	744
Interest rebates to Participants	-	-	-	(130)	-	-	(130)
Other material non-cash items:							
Employee share-based compensation expenses	(33)	(23)	(41)	(37)	(2)	(77)	(213)
Reversal of provision for impairment losses	1	-	-	-	-	-	1

## 4. Operating Segments (continued)

				2015			
	Cash \$m	Equity and Financial Derivatives \$m	Commodities \$m	Clearing \$m	Platform and Infrastructure \$m	Corporate Items \$m	Group \$m
Revenue from external customers	3,433	2,178	1,735	4,383	499	5	12,233
Net investment income	-	-	-	604	-	74	678
Gain on disposal of a leasehold property	-	-	-	-	-	445	445
Sundry income	2	1	-	15	-	1	19
Revenue and other income	3,435	2,179	1,735	5,002	499	525	13,375
Operating expenses	(531)	(446)	(546)	(692)	(148)	(927)	(3,290)
Reportable segment EBITDA	2,904	1,733	1,189	4,310	351	(402)	10,085
Depreciation and amortisation	(85)	(87)	(275)	(148)	(43)	(46)	(684)
Finance costs	-	-	-	-	-	(114)	(114)
Share of loss of a joint venture		(9)	-	_	-	-	(9)
Reportable segment profit before taxation	2,819	1,637	914	4,162	308	(562)	9,278
Other segment information:							
Interest income	-	-	-	615	-	71	686
Interest rebates to Participants	-	-	-	(24)	-	-	(24)
Other material non-cash items:							
Employee share-based compensation expenses	(27)	(21)	(25)	(38)	(2)	(70)	(183)
(Provision for)/reversal of provision for							
impairment losses	(1)	-	-	77	-	-	76

## (a) Geographical information

The Group's revenue from external customers is derived from its operations in Hong Kong and the UK. Such information and the Group's non-current assets (excluding financial assets and deferred tax assets) by geographical location are detailed below:

	Revenue		Non-curr	ent assets
	2016 \$m	2015 \$m	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m
Hong Kong (place of domicile)	8,192	9,757	1,978	2,059
United Kingdom	2,206	2,476	17,333	17,481
Mainland China	_	_	101	3
	40.000	40.000		10.513
	10,398	12,233	19,412	19,543

### (b) Information about major customers

In 2016 and 2015, the revenue from the Group's largest customer amounted to less than 10 per cent of the Group's total revenue.

#### 5. Revenue

#### **Accounting Policy**

Revenue excludes value added tax or other sales tax, and is recognised in the consolidated income statement on the following basis:

Trading fees and trading tariff are recognised on a trade date basis.

Stock Exchange listing fees mainly comprise annual listing fees and initial listing fees. Annual listing fees are recognised on a straight-line basis over the period covered. Initial listing fees for initial public offering (IPO) are recognised upon the listing of an applicant, cancellation of the application or six months after submission of the application, whichever is earlier. Initial listing fees for warrants, CBBCs and other securities are recognised upon the listing of the securities.

Clearing and settlement fees arising from trades between Participants transacted on The Stock Exchange of Hong Kong Limited (Stock Exchange) are recognised on the day following the trade day, upon acceptance of the trades. Fees for clearing and settlement of trades transacted on the Shanghai Stock Exchange and Shenzhen Stock Exchange through Stock Connects (A shares) are recognised on the trade day upon acceptance of the trades. Fees for clearing and settlement of trades in respect of base metals futures and options contracts transacted on LME are recognised on the trade day (or trade match day, if later). Fees for all other settlement transactions are recognised upon completion of the settlement.

Custody fees for securities held in the Central Clearing and Settlement System (CCASS) depository are calculated and accrued on a monthly basis.

Income on registration and transfer fees on nominee services are calculated and accrued on the book close dates of the relevant stocks during the financial year.

Market data fees and other fees are recognised when the related services are rendered.

## (a) Trading Fees and Trading Tariff

	2016 \$m	2015 \$m
Equity securities traded on the Stock Exchange and through Stock Connects	1,421	2,252
DWs, CBBCs and warrants traded on the Stock Exchange	502	761
Futures and options contracts traded on the Stock Exchange and		
the Futures Exchange	1,275	1,052
Base metals futures and options contracts traded on the LME	1,230	1,404
	4,428	5,469

## **5. Revenue** (continued)

#### (b) Stock Exchange Listing Fees

		2016			2015				
	Equi	ty	CDDC-		Equi	Equity			
	Main	Main		, , , , , , , , , , , , , , , , , , ,	CBBCs, DWs		Main		
	Board \$m	GEM \$m	& others \$m	Total \$m	Board \$m	GEM \$m	& others \$m	Total \$m	
Annual listing fees	609	34	4	647	557	31	3	591	
Initial and subsequent									
issue listing fees	85	22	331	438	82	15	418	515	
Other listing fees	5	2	-	7	6	2	_	8	
	699	58	335	1,092	645	48	421	1,114	

Listing fees are primarily fees paid by issuers to enable them to gain access to the Stock Exchange and enjoy the privileges and facilities of being admitted, listed and traded on the Stock Exchange.

#### (c) Other Revenue

	2016 \$m	2015 \$m
Network, terminal user, dataline and software sub-license fees	406	389
Commodities stock levies and warehouse listing fees	87	102
Hosting services fees	129	105
Participants' subscription and application fees	76	73
Accommodation income (note (i))	48	72
Post-liquidation interest arising from a Participant's default on market contracts (note (ii))	-	38
Sales of Trading Rights	26	11
Miscellaneous revenue	75	72
	847	862

- (i) Accommodation income mainly comprises income from Participants on securities deposited as alternatives to cash deposits of Margin Funds and interest shortfall collected from LME Clear Participants on cash collateral where the investment return on the collateral is below the benchmarked interest rates stipulated in the clearing rules of LME Clear.
- (ii) In 2015, the liquidators of Lehman Brothers Securities Asia Limited (LBSA) paid post-liquidation interest of \$38 million on LBSA's debts arising from its default on market contracts, and an equal amount was appropriated to the Guarantee Fund reserve of Hong Kong Securities Clearing Company Limited (HKSCC) from retained earnings during the year ended 31 December 2015 (note 39).

#### 6. Net Investment Income

#### **Accounting Policy**

Interest income on investments and interest rebates to Participants are recognised on a time apportionment basis using the effective interest method.

	2016 \$m	2015 \$m
Gross interest income from financial assets measured at amortised cost	744	686
Interest rebates to Participants	(130)	(24)
Net interest income	614	662
Net fair value gains including interest income on financial assets mandatorily measured at fair value through profit or loss and		
financial liabilities at fair value through profit or loss	98	49
Others	(16)	(33)
Net investment income	696	678

## 7. Gain on Disposal of a Leasehold Property

In 2015, the Group sold a leasehold property to a third party at a consideration of \$509 million. The gain on disposal of the leasehold property, after deducting related selling expenses, amounted to \$445 million and was recognised in the consolidated income statement.

## 8. Sundry Income

	2016 \$m	2015 \$m
Forfeiture of unclaimed dividends (note (a))	14	11
Others	8	8
	22	19

(a) In accordance with CCASS Rule 1109, the Group exercised its forfeiture right to appropriate cash dividends of \$14 million (2015: \$11 million) held by HKSCC Nominees Limited, which had remained unclaimed for a period of more than seven years and recognised these as sundry income. The Group has, however, undertaken to honour all forfeited claims amounting to \$171 million at 31 December 2016 (31 December 2015: \$157 million) if adequate proof of entitlement is provided by the beneficial owner claiming any dividends forfeited.

## 9. Staff Costs and Related Expenses

	2016 \$m	2015 \$m
Salaries and other short-term employee benefits	1,675	1,686
Employee share-based compensation benefits of Share Award Scheme (note 38)	213	183
Termination benefits	10	14
Retirement benefit costs (note (a)):		
- ORSO Plan	111	103
- MPF Scheme	2	2
- LME Pension Scheme	24	32
	2,035	2,020

#### (a) Retirement Benefit Costs

#### **Accounting Policy**

Contribution to the defined contribution plans are expensed as incurred.

The Group has sponsored a defined contribution provident fund scheme (ORSO Plan) which is registered under the Occupational Retirement Schemes Ordinance (ORSO) and a Mandatory Provident Fund scheme (MPF Scheme) for the benefits of its employees in Hong Kong. The Group contributes 12.5 per cent of the employee's basic salary to the ORSO Plan if an employee contributes 5 per cent. If the employee chooses not to contribute, the Group will contribute 10 per cent of the employee's salary to the ORSO Plan. Contributions to the MPF Scheme are in accordance with the statutory limits prescribed by the MPF Ordinance. Forfeited contributions of the provident fund for employees who leave before the contributions are fully vested are not used to offset existing contributions but are credited to a reserve account of that provident fund, and are available for distribution to the provident fund members at the discretion of the trustees.

The Group has also sponsored a defined contribution pension scheme for all employees of HKEX Investment (UK) Limited, LME Holdings Limited (LMEH), LME and LME Clear (collectively, LME Group) (LME Pension Scheme). For all employees who joined the LME Group before 1 May 2014, the Group contributes 15 per cent to 17 per cent of the employee's basic salary to the LME Pension Scheme. For all employees who joined the LME Group on or after 1 May 2014, they are auto enrolled into the LME Pension Scheme on a matched contribution basis and may choose a personal contribution level ranging from 3 per cent to 5 per cent of their basic salaries, which is matched by the Group's contribution ranging from 6 per cent to 10 per cent of their basic salaries. Staff may opt-out of the scheme if they wish. There are no forfeited contributions for the LME Pension Scheme as the contributions are fully vested to the employees upon payment to the scheme.

Assets of the ORSO Plan, MPF Scheme and LME Pension Scheme are held separately from those of the Group and are independently administered and are not included in the consolidated statement of financial position.

## 10. Information Technology and Computer Maintenance Expenses

	2016 \$m	2015 \$m
Costs of services and goods:		
- consumed by the Group	427	445
– directly consumed by Participants	73	72
		547
	500	517

## 11. Other Operating Expenses

(a) In 2015, the liquidators of Lehman Brothers Securities Asia Limited paid dividends of \$77 million which were recognised within operating expenses in the Group's consolidated income statement, as a reversal of a provision for impairment losses recognised in prior years. The amount recovered of \$77 million, together with an interim dividend declared in December 2014 but received in January 2015 of \$23 million, were appropriated to the HKSCC Guarantee Fund reserve from retained earnings during the year ended 31 December 2015 (note 39).

#### (b) Others

	2016 \$m	2015 \$m
Insurance	11	14
Financial data subscription fees	25	26
Custodian and fund management related fees	35	31
Bank charges	57	50
Repairs and maintenance expenses	62	66
License fees	32	27
Communication expenses	14	15
Travel expenses	39	41
Security expenses	18	17
Contribution to Financial Reporting Council	7	7
Other miscellaneous expenses	127	102
	427	396

## 12. Operating Profit

	2016 \$m	2015 \$m
Operating profit is stated after charging:		
Auditor's remuneration		
- audit fees	14	13
– other non-audit fees	6	8
Operating lease rentals		
– land and buildings	241	203
- computer systems and equipment	28	28
Net foreign exchange losses on financial assets and liabilities (excluding financial assets and financial liabilities measured		
at fair value through profit or loss)	7	37

#### 13. Finance Costs

#### **Accounting Policy**

Interest expenses are charged to the consolidated income statement and recognised on a time apportionment basis, taking into account the principal outstanding and the applicable interest rates using the effective interest method.

	2016 \$m	2015 \$m
Interest expenses:		
– Bank borrowings (note 34(a))	28	23
- Convertible bonds	-	42
- Notes (note 34(b))	44	44
– Written put options to non-controlling interests (note 34(c))	9	7
Net foreign exchange losses/(gains) on financing activities	1	(2)
	82	114

### 14. Directors' Emoluments and Interests of Directors

All Directors, including one Executive Director (HKEX's Chief Executive), received emoluments during the years ended 31 December 2016 and 31 December 2015. The aggregate emoluments paid and payable to the Directors during the year were as follows:

	2016 \$'000	2015 \$'000
Executive Director:		
Salaries and other short-term employee benefits	9,217	9,178
Performance bonus	11,250	15,000
Retirement benefit costs	1,125	1,125
	21,592	25,303
Employee share-based compensation benefits (note (a))	22,471	19,917
	44,063	45,220
Non-executive Directors:		
Fees	15,727	15,526
	59,790	60,746

(a) Employee share-based compensation benefits represent the fair value of Awarded Shares issued under the Share Award Scheme (note 38) amortised to the consolidated income statement during the year.

## 14. Directors' Emoluments and Interests of Directors (continued)

(b) The emoluments of all Directors, including HKEX's Chief Executive who is an ex-officio member are set out below. The amounts represent emoluments paid or receivable in respect of their services as a director.

	2016							
Name of Director	Fees \$'000	Salary \$'000	Other benefits (note (i)) \$'000	Performance bonus \$'000	Retirement benefit costs (note (ii)) \$'000	Sub-total \$'000	Employee share-based compensation benefits \$'000	Total \$'000
C K Chow	3,283	-	-	-	-	3,283	-	3,283
Charles X Li	-	9,000	217	11,250	1,125	21,592	22,471	44,063
Apurv Bagri (note (v))	525	-	-	-	-	525	-	525
T C Chan	964	-	-	-	-	964	-	964
Timothy G Freshwater	1,018	-	-	-	-	1,018	-	1,018
Anita Y M Fung (note (iii))	964	-	-	-	-	964	-	964
Rafael Gil-Tienda (note (iii))	832	-	-	-	-	832	-	832
John B Harrison	2,486	-	-	-	-	2,486	-	2,486
Fred Z Hu	829	-	-	-	-	829	-	829
Bill C P Kwok	1,597	-	-	-	-	1,597	-	1,597
Vincent K H Lee	1,075	-	-	-	-	1,075	-	1,075
Margaret M Y Leung Ko	964	-	-	-	-	964	-	964
John M M Williamson	964	-	-	-	-	964	-	964
Oscar S H Wong (note (vi))	226	-	-	-	-	226	-	226
Total	15,727	9,000	217	11,250	1,125	37,319	22,471	59,790

				20	015			
Name of Director	Fees \$'000	Salary \$'000	Other benefits (note (i)) \$'000	Performance bonus \$'000	Retirement benefit costs (note (ii)) \$'000	Sub-total \$'000	Employee share-based compensation benefits \$'000	Total \$'000
C K Chow	3,137	-	-	-	-	3,137	-	3,137
Charles X Li	-	9,000	178	15,000	1,125	25,303	19,917	45,220
T C Chan	926	-	-	-	-	926	-	926
Timothy G Freshwater	957	-	-	-	_	957	-	957
Anita Y M Fung (note (iii))	720	-	-	-	-	720	-	720
Rafael Gil-Tienda (note (iii))	621	-	-	-	-	621	-	621
John B Harrison	2,601	-	-	-	_	2,601	-	2,601
Fred Z Hu	799	-	-	-	_	799	-	799
Stephen C C Hui (note (iv))	203	-	-	-	_	203	-	203
Bill C P Kwok	1,417	-	-	-	_	1,417	-	1,417
Vincent K H Lee	991	-	-	-	-	991	-	991
Michael T H Lee (note (iv))	383	-	-	-	_	383	-	383
Margaret M Y Leung Ko	929	-	-	-	_	929	-	929
John M M Williamson	957	-	-	-	-	957	-	957
Oscar S H Wong (note (vi))	885	-	_	_	-	885		885
Total	15,526	9,000	178	15,000	1,125	40,829	19,917	60,746

#### Notes:

- (i) Other benefits represented estimated money value of leave pay, insurance premium and club membership.
- (ii) Employees who retire before normal retirement age are eligible for 18 per cent of the employer's contribution to the provident fund after completion of two years of service. The rate of vested benefit increases at an annual increment of 18 per cent thereafter reaching 100 per cent after completion of seven years of service.
- (iii) Appointment effective 29 April 2015
- (iv) Retired on 29 April 2015
- (v) Elected on 28 April 2016
- (vi) Retired on 28 April 2016

## 14. Directors' Emoluments and Interests of Directors (continued)

(c) Directors' material interests in transactions, arrangement or contracts

No significant transactions, arrangements and contracts in relation to HKEX's business to which HKEX was a party and in which a director of HKEX had a material interest, whether directly or indirectly, subsisted at the end of the year or at any time during the year.

## 15. Five Top-paid Employees

One (2015: one) of the five top-paid employees was a Director whose emoluments are disclosed in note 14. Details of the emoluments of the other four (2015: four) top-paid employees were as follows:

	2016 \$'000	2015 \$'000
Salaries and other short-term employee benefits	19,651	18,476
Performance bonus	16,219	26,136
Retirement benefit costs	2,465	2,682
Employee share-based compensation benefits (note (a))	38,335 21,221	47,294 17,571
	59,556	64,865

- (a) Employee share-based compensation benefits represent the fair value of Awarded Shares issued under the Share Award Scheme (note 38) amortised to the consolidated income statement during the year.
- (b) The emoluments of these four (2015: four) employees, including share-based compensation benefits, were within the following bands:

	2016 Number of employees	2015 Number of employees
\$14,000,001 – \$14,500,000	1	-
\$14,500,001 – \$15,000,000	2	1
\$15,500,001 – \$16,000,000	-	1
\$16,000,001 – \$16,500,000	1	-
\$16,500,001 – \$17,000,000	-	1
\$17,500,001 – \$18,000,000	_	1
	4	4

The above employees included senior executives who were also Directors of the subsidiaries during the years. No Directors of the subsidiaries waived any emoluments.

#### 16. Taxation

#### **Accounting Policy**

Tax charge for the period comprises current and deferred tax. Tax is recognised in the consolidated income statement, except to the extent that it relates to items recognised directly in equity, in which case, the tax is also recognised directly in equity.

The current tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the end of the reporting period in the countries where HKEX and its subsidiaries operate and generate taxable income. Provisions are established where appropriate on the basis of amounts expected to be paid to the tax authorities.

The Group's accounting policy for recognition of deferred tax is described in note 36.

(a) Taxation charge/(credit) in the consolidated income statement represented:

	2016 \$m	2015 \$m
Current tax – Hong Kong Profits Tax		
– Provision for the year	879	1,159
- Overprovision in respect of prior years	(3)	(2)
	876	1,157
Current tax – Overseas Tax		
– Provision for the year	223	280
- Underprovision in respect of prior years	8	3
	231	283
Total current tax (note (i))	1,107	1,440
Deferred tax		
– Reversal of temporary differences	(18)	(28)
– Impact of changes in UK Corporation Tax rates (note (ii))	(31)	(65)
Total deferred tax (note 36(a))	(49)	(93)
Taxation charge	1,058	1,347

- (i) Hong Kong Profits Tax has been provided at the rate of 16.5 per cent (2015: 16.5 per cent) on the estimated assessable profit for the year. Taxation on overseas profits has been calculated on the estimated assessable profit at the rates of taxation prevailing in the countries in which the Group operates, with the average corporation tax rates applicable to the subsidiaries in the UK being 20 per cent (2015: 20.25 per cent).
- (ii) The UK Corporation Tax rate will drop to 19 per cent effective from 1 April 2017 and 18 per cent effective from 1 April 2020 through the enactment of the 2015 Finance Act. The tax rate will be further reduced to 17 per cent effective from 1 April 2020 through the enactment of the 2016 Finance Act. As a result of the reduction in UK Corporation Tax rates, the Group's net deferred tax liabilities decreased by approximately \$31 million and \$65 million in 2016 and 2015 respectively.

## **16. Taxation** (continued)

(b) The taxation on the Group's profit before taxation differs from the theoretical amount that would arise using the weighted average tax rate applicable to profits of the consolidated entities as follows:

	2016 \$m	2015 \$m
Profit before taxation	6,799	9,278
Tax calculated at domestic tax rates applicable to profits in	444	4.554
the respective countries (note (i))	1,144	1,554
Income not subject to taxation	(107)	(190)
Expenses not deductible for taxation purposes	31	33
Remeasurement of deferred tax assets and liabilities arising from changes in UK Corporation Tax rates	(31)	(65)
Change in deferred tax arising from unrecognised tax losses and other deferred tax adjustments	16	14
Underprovision in respect of prior years	5	1_
Taxation charge	1,058	1,347

(i) The weighted average applicable tax rate was 16.8 per cent (2015: 16.7 per cent).

## 17. Earnings Per Share

The calculation of the basic and diluted earnings per share is as follows:

(a) Basic earnings per share

		2016	2015
	Profit attributable to shareholders (\$m)	5,769	7,956
	Weighted average number of shares in issue less shares held for Share Award Scheme (in '000)	1,212,376	1,186,802
	Basic earnings per share (\$)	4.76	6.70
(b)	Diluted earnings per share		
		2016	2015
	Profit attributable to shareholders (\$m)	5,769	7,956
	Interest expense on convertible bonds (net of tax) (\$m)	-	41
	Adjusted profit attributable to shareholders (\$m)	5,769	7,997
	Weighted average number of shares in issue less shares held for Share Award Scheme (in '000)	1,212,376	1,186,802
	Effect of employee share options (in '000)	-	6
	Effect of Awarded Shares (in '000)	3,071	2,721
	Effect of convertible bonds (in '000)	_	8,841
	Weighted average number of shares for the purpose of calculating diluted earnings per share (in '000)	1,215,447	1,198,370
	Diluted earnings per share (\$)	4.75	6.67

#### 18. Dividends

#### **Accounting Policy**

Dividends declared are recognised as liabilities in the consolidated financial statements in the period in which the dividends are approved by shareholders or directors, where appropriate.

	2016 \$m	2015 \$m
Interim dividend paid:		
\$2.21 (2015: \$3.08) per share	2,690	3,688
Less: Dividend for shares held by Share Award Scheme (note (a))	(7)	(9)
	2,683	3,679
Final dividend proposed (note (b)):		
\$2.04 (2015: \$2.87) per share based on issued share capital at 31 Dec	2,498	3,468
Less: Dividend for shares held by Share Award Scheme at 31 Dec (note (a))	(7)	(9)
	2,491	3,459
	2,431	3,439
	5,174	7,138

- (a) The results and net assets of The HKEx Employees' Share Award Scheme are included in HKEX's financial statements. Therefore, dividends for shares held by The HKEx Employees' Share Award Scheme were deducted from the total dividends.
- (b) The final dividend proposed after 31 December is not recognised as a liability at 31 December.
- (c) The 2016 final dividend will be payable in cash with a scrip dividend alternative subject to the permission of the Securities and Futures Commission (SFC) of the listing of and permission to deal in the new shares to be issued.

### 19. Financial Assets

#### **Accounting Policy**

Investments and other financial assets of the Group are classified under financial assets measured at fair value through profit or loss (note 21) or financial assets measured at amortised cost (note 22).

Financial assets of Clearing House Funds and Margin Funds are classified as current assets as they will be liquidated whenever liquid funds are required.

Other financial assets are classified as current assets unless they are expected to mature or be disposed of after twelve months from the end of the reporting period, in which case, they are included in non-current assets. For equities and collective investment schemes, which have no maturity date, they are included in current assets unless they cannot be disposed of or redeemed within twelve months from the end of the reporting period.

Financial assets are derecognised when the rights to receive cash flows from the assets have expired or the Group has transferred substantially all the risks and rewards of ownership of the assets.

#### 19. Financial Assets (continued)

The financial assets of the Group include:

- Margin Funds (note 30);
- Clearing House Funds (note 33);
- Base metals derivatives contracts (note 21);
- Cash prepayments for A shares (note 20); and
- Corporate Funds (note 23).

## 20. Cash and Cash Equivalents

#### **Accounting Policy**

Cash and cash equivalents comprise cash on hand, bank balances and other short-term highly liquid investments that are readily convertible into known amounts of cash and are subject to an insignificant risk of changes in value (mainly reverse repurchase investments and time deposits), with original maturities of three months or less.

	Clearing House Funds (notes (b) and 33) \$m	Margin Funds (notes (b) and 30) \$m	Cash prepayments for A shares (notes (a) and (b)) \$m	Corporate Funds (note 23) \$m	Total \$m
Cash on hand and balances and deposits with banks	4,969	31,142	263	8,079	44,453
Reverse repurchase investments	4,507	65,556	_	1,207	71,270
	9,476	96,698	263	9,286	115,723
			At 31 Dec 2015		
	Clearing House Funds (notes (b) and 33) \$m	Margin Funds (notes (b) and 30) \$m	Cash prepayments for A shares (notes (a) and (b)) \$m	Corporate Funds (note 23) \$m	Total \$m
Cash on hand and balances and deposits with banks	5,067	35,812	129	11,308	52,316
Reverse repurchase investments	3,143	53,995	_	1,436	58,574
	8,210	89,807	129	12,744	110,890

- a) Cash prepayments for A shares represent cash received by HKSCC from its Clearing Participants for releasing their allocated A shares for same day settlement. Such prepayments will be used to settle HKSCC's Continuous Net Settlement (CNS) obligations payable on the next business day.
- (b) The cash and cash equivalents of Clearing House Funds, Margin Funds and cash prepayments for A shares are held for specific purposes and cannot be used by the Group to finance other activities. These balances are not included in cash and cash equivalents of the Group for cash flow purpose in the consolidated statement of cash flows.

## 21. Financial Assets Measured at Fair Value through Profit or Loss

#### **Accounting Policy**

#### Classification

Investments and other financial assets are classified under financial assets measured at fair value through profit or loss if they do not meet the conditions to be measured at amortised cost (note 22). Derivative financial instruments (see below) are classified as financial assets measured at fair value through profit or loss when their fair values are positive.

#### Recognition and measurement

Purchases and sales of financial assets measured at fair value through profit or loss are recognised on the trade date. They are initially recognised at fair value with transaction costs recognised as expenses in the consolidated income statement and subsequently carried at fair value. Gains and losses arising from changes in fair value are included in the consolidated income statement in the period in which they arise.

Interest income is included in net fair value gains/(losses) from these financial assets.

Dividend income is recognised when the right to receive a dividend is established and included under "others" in net investment income.

Fair values of quoted investments are based on the most representative prices within the bid-ask spreads which are currently considered as the bid-prices. The collective investment schemes are valued based on the latest available transaction price or redemption price for each funds, as determined by the funds' administrators. For unlisted securities or financial assets without an active market, the Group establishes the fair value by using valuation techniques including the use of recent arm's length transactions, reference to other instruments that are substantially the same and discounted cash flow analysis.

#### Derivative financial instruments

Derivative financial instruments include forward foreign exchange, futures and options contracts, as well as the outstanding derivatives contracts of LME Clear, which acts as a central counterparty to the base metals futures and options contracts traded on the LME. Derivatives are initially recognised at fair value on trade date and subsequently remeasured at their fair values. Except where outstanding derivatives contracts are held in the capacity as a central counterparty, derivatives are categorised as held for trading with changes in fair value recognised in the consolidated income statement.

		At 31 De	c 2016	
	Margin Funds (note 30) \$m	Corporate Funds (note 23) \$m	Base metals derivatives contracts (note (a)) \$m	Total \$m
Mandatorily measured at fair value				
Collective investment schemes:				
– listed outside Hong Kong	-	2,225	-	2,225
– unlisted	_	2,886	_	2,886
	_	5,111	_	5,111
Debt securities:				
– unlisted	3,323	-	-	3,323
Derivative financial instruments:				
- forward foreign exchange contracts (note 47(b))	_	14	_	14
- base metals futures and options contracts				
cleared through LME Clear	-	_	61,618	61,618
	-	14	61,618	61,632
	3,323	5,125	61,618	70,066
The expected recovery dates of the financial assets				
are analysed as follows:				
Within twelve months	3,323	5,125	61,618	70,066

## 21. Financial Assets Measured at Fair Value through Profit or Loss (continued)

		At 31 De	c 2015	
	Margin Funds (note 30) \$m	Corporate Funds (note 23) \$m	Base metals derivatives contracts (note (a)) \$m	Total \$m
Mandatorily measured at fair value				
Equity securities:				
– listed in Hong Kong	_	79	_	79
– listed outside Hong Kong	_	106	_	106
	-	185	-	185
Debt securities:				
– listed in Hong Kong	-	712	-	712
– listed outside Hong Kong	-	1,000	-	1,000
– unlisted	5,844	478	_	6,322
	5,844	2,190	-	8,034
Derivative financial instruments:				
- forward foreign exchange contracts (note 47(b))	-	6	-	6
<ul> <li>base metals futures and options contracts cleared through LME Clear</li> </ul>	_	_	64,480	64,480
		6	64,480	64,486
	5,844	2,381	64,480	72,705
The expected recovery dates of the financial assets are analysed as follows:				
Within twelve months (note (b))	5,844	2,381	64,480	72,705

- (a) Base metals derivatives contracts represent the fair value of the outstanding base metals futures and options contracts cleared through LME Clear that do not qualify for netting under HKAS 32, where LME Clear is acting in its capacity as a central counterparty to the contracts traded on the LME.
- (b) Balance at 31 December 2015 includes financial assets maturing after twelve months of \$300 million attributable to the Margin Funds that could readily be liquidated to meet liquidity requirements of the Funds (note 47(b)).

#### 22. Financial Assets Measured at Amortised Cost

#### **Accounting Policy**

#### Classification

Investments are classified under financial assets measured at amortised cost if they satisfy both of the following conditions:

- the assets are held within a business model whose objective is to hold assets in order to collect contractual cash flows; and
- the contractual terms of the financial assets give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

The nature of any derivatives embedded in the financial assets is considered in determining whether the cash flows are solely payment of principal and interest on the principal outstanding and are not accounted for separately.

Accounts receivable and other deposits are also classified under this category (note 24).

#### Recognition and measurement

Financial assets measured at amortised cost are initially recognised at fair value plus transaction costs and subsequently carried at amortised cost using the effective interest method less any impairment.

#### Impairment

The Group assesses at the end of each reporting period whether there is objective evidence that a financial asset or a group of financial assets is impaired. Impairment losses are incurred when there is objective evidence of impairment that, as a result of one or more loss events that have occurred after the initial recognition of the financial assets, the estimated future cash flows of the financial assets have been affected. Objective evidence of impairment could include:

- significant financial difficulty of the debtor or obligor;
- fees receivable that have been outstanding for over 180 days;
- it is becoming probable that the debtor or obligor will enter into bankruptcy or other financial reorganisation;
- the disappearance of an active market for that financial asset because of financial difficulties; or
- observable data indicating that there is a measurable decrease in the estimated future
  cash flows from a group of financial assets since the initial recognition of those assets,
  although the decrease cannot yet be identified with the individual financial assets in the
  Group.

The Group first assesses whether objective evidence of impairment exists individually for financial assets that are individually significant, and individually or collectively for financial assets that are not individually significant.

For the purposes of a collective evaluation of impairment, financial assets are grouped on the basis of similar credit risk characteristics relevant to the estimation of future cash flows. These financial assets are collectively assessed based on historical loss experience on each type of assets and management judgement of the current economic and credit environment.

If there is objective evidence that an impairment loss has been incurred, the loss is measured as the difference between the assets' carrying amounts and the present values of estimated future cash flows discounted at the financial assets' original effective interest rates. The carrying amounts of the assets are reduced through the use of a doubtful debt allowance account and the amount of the loss is recognised in the consolidated income statement.

If, in a subsequent period, the amount of impairment loss decreases and the decrease can be shown to relate objectively to an event occurring after the impairment was recognised, the previously recognised impairment loss is reversed by adjusting the doubtful debt allowance account. The amount of reversal is recognised in the consolidated income statement.

## 22. Financial Assets Measured at Amortised Cost (continued)

		At 31 De	c 2016	
	Clearing House Funds (note 33) \$m	Margin Funds (note 30) \$m	Corporate Funds (note 23) \$m	Total \$m
Debt securities listed outside Hong Kong	_	_	312	312
Time deposits with original maturities over three months	126	25,782	2,873	28,781
Other financial assets	_	_	74	74
	126	25,782	3,259	29,167
The expected recovery dates of the financial assets are analysed as follows:				
Within twelve months	126	25,782	3,185	29,093
More than twelve months	_	_	74	74
	126	25,782	3,259	29,167
		At 31 De	c 2015	
	Clearing House Funds (note 33) \$m	Margin Funds (note 30) \$m	Corporate Funds (note 23) \$m	Total \$m
Time deposits with original maturities over				
three months	220	18,765	454	19,439
Other financial assets			57	57
	220	18,765	511	19,496
The expected recovery dates of the financial assets are analysed as follows:				
Within twelve months	220	18,765	454	19,439
More than twelve months		_	57	57
	220	18,765	511	19,496

a) The fair values of financial assets maturing after twelve months are disclosed in note 47(d)(ii).

# 23. Corporate Funds

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m
Corporate Funds comprised the following instruments:		
Cash and cash equivalents (note 20)	9,286	12,744
Financial assets measured at fair value through profit or loss (note 21)	5,125	2,381
Financial assets measured at amortised cost (note 22)	3,259	511
	47.670	45.626
	17,670	15,636

Financial assets belonging to the Group, which are funded by share capital and funds generated from operations (other than base metals derivatives contracts, amounts received for the Margin Funds, Clearing House Funds and cash prepayments for A shares), are classified as Corporate Funds.

## 24. Accounts Receivable, Prepayments and Deposits

#### **Accounting Policy**

Accounts receivables and other deposits are classified as financial assets measured at amortised cost less impairment. The accounting policy for financial assets measured at amortised cost is disclosed in note 22.

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m
Receivable from ChinaClear, Exchange and Clearing Participants:		
- CNS money obligations receivable (note (a))	10,052	13,529
- transaction levy, stamp duty and fees receivable	469	455
– Settlement Reserve Fund and Settlement Guarantee Fund held by ChinaClear	1,032	794
- others	14	6
Payment in advance for collective investment schemes traded on 1 Jan 2017	600	_
Other receivables, prepayments and deposits	785	778
Less: Provision for impairment losses of receivables (note (b))	(3)	(4)
	12,949	15,558

(a) Upon acceptance of Stock Exchange trades for settlement in CCASS under the CNS basis, HKSCC interposes itself between the HKSCC Clearing Participants as the settlement counterparty to the trades through novation. The CNS money obligations due by/to HKSCC Clearing Participants on the Stock Exchange trades are recognised as receivables and payables (note 31) when they are confirmed and accepted on the day after the trade day.

For a trade in A shares transacted for Stock Exchange Participants, the rights and obligations of the parties to the trade will be transferred to China Securities Depository and Clearing Corporation Limited (ChinaClear), and a market contract between HKSCC and the relevant HKSCC Clearing Participant is created through novation. The CNS money obligations due by/to HKSCC Clearing Participants and ChinaClear are recognised as receivables and payables (note 31) when they are confirmed on the trade day.

(b) The movements in provision for impairment losses of receivables were as follows:

	2016 \$m	2015 \$m
At 1 Jan	4	82
Reversal of provision for impairment losses of receivables under other operating expenses	(1)	(76)
Receivables written off during the year as uncollectible	_	(2)
At 31 Dec	3	4

(c) CNS money obligations receivable mature within two days after the trade date. Fees receivable are due immediately or up to 60 days depending on the type of services rendered. The majority of the remaining accounts receivable, prepayments and deposits were due within three months.

## 25. Principal Subsidiaries and Controlled Structured Entity

#### **Accounting Policy**

Subsidiaries are entities (including structured entities (note (b)) over which the Group has control. The Group controls an entity when the Group is exposed to, or has the rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

A structured entity is an entity that has been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity, such as when any voting rights relate to administrative tasks only and the relevant activities are directed by means of contractual arrangements.

The Group considers all of its investments in collective investment schemes (note 21) to be investments in unconsolidated structured entities.

#### (a) Principal Subsidiaries

HKEX had direct or indirect interests in the following principal subsidiaries at 31 December 2016:

Company		Issued and fully paid up share/ registered capital	Principal activities	Interest held by the Group
Direct principal subsidiari	es:			
The Stock Exchange of Hong Kong Limited	Hong Kong	929 ordinary shares (\$929)	Operates the single Stock Exchange in Hong Kong	100%
Hong Kong Futures Exchange Limited	Hong Kong	230 ordinary shares (\$28,750,000)	Operates a futures and options exchange	100%
Hong Kong Securities Clearing Company Limited	Hong Kong	2 ordinary shares (\$2)	Operates a clearing house for securities traded on the Stock Exchange in Hong Kong, Shanghai Stock Exchange and Shenzhen Stock Exchange in Mainland China through Stock Connects and the central securities depository, and provides custody and nominee services for eligible securities listed in Hong Kong and Mainland China	
OTC Clearing Hong Kong Limited (OTC Clear) (note (i))	Hong Kong	4,860 ordinary shares (\$614,600,001) 1,620 non-voting ordinary shares (\$340,200,000)	Operates a clearing house for over- the-counter derivatives	75%
The SEHK Options Clearing House Limited (SEOCH) (note (iii))	Hong Kong	1,000,000 ordinary shares (\$1,000,000)	Operates a clearing house for stock options contracts traded on the Stock Exchange in Hong Kong	100%
HKFE Clearing Corporation Limited (HKCC) (note (iii))	Hong Kong	1,000,000 ordinary shares (\$1,000,000)	Operates a clearing house for derivatives contracts traded on the Futures Exchange	100%
Indirect principal subsidia	ries:			
The London Metal Exchange	United Kingdom	100 ordinary shares of £1 each	Operates an exchange for the trading of base metals futures and options contracts	100%
LME Clear Limited	United Kingdom	107,500,001 ordinary share of £1 each	Operates a clearing house for base metals futures and options contracts	100%
Gangrong Trading Services (Shenzhen) Limited (note (iv))	Mainland China	RMB 250,000,000	Developing a commodity trading platform in the Mainland China	100%

The above table lists the subsidiaries of the Group which, in the opinion of its directors, principally affect the results or assets of the Group.

## 25. Principal Subsidiaries and Controlled Structured Entity (continued)

#### (a) Principal Subsidiaries (continued)

#### (i) Subsidiary with non-controlling interests

At 31 December 2016, the Group held 75 per cent interest of OTC Clear, while the remaining 25 per cent interest was held by non-controlling interests. The non-controlling interests do not have voting rights at general meetings of OTC Clear. No summarised financial information of OTC Clear is presented as the non-controlling interests are not material to the Group.

#### (ii) Significant restrictions

Cash and saving deposits are held by subsidiaries in Mainland China and are subject to exchange control restrictions. The carrying amount of these restricted assets in the consolidated financial statements at 31 December 2016 was \$218 million (31 December 2015: \$11 million).

#### (iii) Internal reorganisation of subsidiaries

The Group completed an internal reorganisation of its subsidiaries on 22 January 2016 under which certain indirect subsidiaries including HKCC and SEOCH became direct wholly-owned subsidiaries of HKEX.

(iv) Gangrong Trading Services (Shenzhen) Limited was newly established in Mainland China as a wholly foreign owned enterprise during the year ended 31 December 2016.

#### (b) Controlled structured entity

HKEX controls a structured entity which operates in Hong Kong, particulars of which are as follows:

Structured entity	Principal activities
The HKEx Employees' Share Award Scheme	Purchases, administers and holds HKEX shares for the Share
(HKEX Employee Share Trust)	Award Scheme for the benefit of eligible HKEX employees
	(note 38)

HKEX has the power to direct the relevant activities of the HKEX Employee Share Trust and it has the ability to use its power over the HKEX Employee Share Trust to affect its exposure to returns. Therefore, the assets and liabilities of HKEX Employee Share Trust are included in HKEX's statement of financial position and the HKEX shares it held are presented as a deduction in equity as Shares held for Share Award Scheme.

#### 26. Interest in a Joint Venture

#### **Accounting Policy**

An interest in a joint venture is accounted for in the consolidated financial statements under the equity method. The entire carrying amount of the investment is tested for impairment in accordance with the accounting policy stated in note 2(d).

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m
Share of net assets of a joint venture	59	68

#### (a) Details of the joint venture at 31 December 2016 were as follows:

Name	Place of business and country of incorporation	Principal activities	Issued and fully paid up share capital held	% of ownership interest	Measurement method
China Exchanges Services	Hong Kong	Development of index- linked and equity	100,000,000 ordinary shares	33.33%	Equity
Company Limited (CESC)		derivatives products	(\$100,000,000)		

In 2012, HKEX, the Shanghai Stock Exchange and the Shenzhen Stock Exchange established a joint venture, CESC, with an aim of developing financial products and related services. CESC, a private company, is a strategic investment for the Group and it is expected to enhance the competitiveness of Hong Kong, help promote the development of Mainland China's capital markets and the internationalisation of the Group.

No summarised financial information of CESC is presented as the joint venture is not material to the Group.

## 27. Goodwill and Other Intangible Assets

### **Accounting Policy**

#### Goodwill

Goodwill arising on the acquisition of subsidiaries is carried at cost as established at the date of acquisition less accumulated impairment losses, if any.

For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each CGU, or group of CGUs, that is expected to benefit from the synergies of the combination. Each CGU or group of CGUs to which the goodwill is allocated represents the lowest level within the entity at which the goodwill is monitored for internal management purposes (ie, operating segment level).

Goodwill is not amortised but impairment reviews are undertaken annually or more frequently if events or changes in circumstances indicate a potential impairment. The carrying value of goodwill is compared to the recoverable amount, which is the higher of value-in-use and the fair value less costs to sell. Any impairment is recognised immediately in the consolidated income statement and is not subsequently reversed.

## 27. Goodwill and Other Intangible Assets (continued)

#### **Accounting Policy** (continued)

#### **Tradenames**

Tradenames acquired in a business combination are recognised at fair value at the acquisition date. The fair value is based on the discounted estimated royalty payments that are expected to be avoided as a result of the tradenames being owned. Tradenames arising from the acquisition of the LME Group have indefinite useful lives and are carried at cost less accumulated impairment losses, if any. Tradenames are reviewed annually to determine whether events and circumstances continue to support the indefinite useful life assessment.

#### Customer relationships

Customer relationships acquired in a business combination are recognised at fair value at the acquisition date. The fair value is determined using the multi-period excess earnings method, whereby the asset is valued after deducting a fair return on all other assets that are part of creating the related cash flows. The customer relationships are carried at cost less accumulated amortisation and impairment losses, if any. Amortisation is calculated using the straight-line method over the expected lives of the customer relationships, which are determined to be 20 to 25 years.

#### Computer software systems

Development costs that are directly attributable to the design and testing of identifiable and unique software products controlled by the Group are recognised as intangible assets if the related software does not form an integral part of the hardware on which it operates and when the following criteria are met:

- It is technically feasible to complete the software so that it will be available for use;
- Management intends to complete the software and use or sell it;
- There is an ability to use or sell the software;
- It can be demonstrated how the software will generate probable future economic benefits;
- Adequate technical, financial and other resources to complete the development and to use or sell the software are available; and
- The expenditure attributable to the software during its development can be reliably measured.

Other development expenditures that do not meet these criteria are recognised in the consolidated income statement as incurred. Development costs previously recognised in the consolidated income statement are not recognised as an asset in a subsequent period.

Qualifying software system development expenditure and related directly attributable costs capitalised as intangible assets are amortised when they are available for use. They are amortised at rates sufficient to write off their costs net of residual values over their estimated useful lives on a straight-line basis, which do not exceed five years. The residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

Costs associated with maintaining computer systems and software programmes are recognised in the consolidated income statement as incurred.

The Group's accounting policy for impairment is described in note 2(d).

## 27. Goodwill and Other Intangible Assets (continued)

	_	Other Intangible Assets	s		
	<b>Goodwill</b> \$m	<b>Tradenames</b> \$m	<b>Customer</b> <b>relationships</b> \$m	Software systems \$m	<b>Total</b> \$m
Cost:					
At 1 Jan 2015	13,170	891	3,112	1,450	18,623
Exchange differences	(8)	(1)	(3)	(1)	(13)
Additions		_		427	427
At 31 Dec 2015	13,162	890	3,109	1,876	19,037
At 1 Jan 2016	13,162	890	3,109	1,876	19,037
Exchange differences	5	1	2	-	8
Additions	-	-	-	422	422
Disposals	-	-	-	(6)	(6)
At 31 Dec 2016	13,167	891	3,111	2,292	19,461
Accumulated amortisation:					
At 1 Jan 2015	_	-	269	453	722
Exchange differences	_	_	(1)	(1)	(2)
Amortisation		-	129	316	445
At 31 Dec 2015			397	768	1,165
At 1 Jan 2016	-	-	397	768	1,165
Exchange differences	-	-	1	-	1
Amortisation	-	-	129	360	489
Disposals	_	-	-	(6)	(6)
At 31 Dec 2016	-	-	527	1,122	1,649
Net book value:					
At 31 Dec 2016	13,167	891	2,584	1,170	17,812
At 31 Dec 2015	13,162	890	2,712	1,108	17,872
Cost of software systems under development:					
At 31 Dec 2016	-		-	560	560
At 31 Dec 2015				336	336

Amortisation of \$489 million (2015: \$445 million) is included in "depreciation and amortisation" in the consolidated income statement.

Tradenames are regarded as having indefinite useful lives and there is no foreseeable limit to the period over which they are expected to generate cash flows for the Group as it is expected that their values will not be reduced through usage and there are no legal or similar limits on the period for their use.

## 27. Goodwill and Other Intangible Assets (continued)

Impairment tests for CGUs containing goodwill and intangible assets with indefinite useful lives

Goodwill and tradenames that arose on the acquisition of the LME Group in 2012 are monitored by management at the operating segment level. They are allocated to the CGUs, or groups of CGUs that are expected to benefit from synergies of combination with the acquired businesses. A summary of the allocation of goodwill and tradenames to these operating segments is as follows:

	At 31 Dec 2016		At 31 De	c 2015
	Goodwill \$m	Tradenames \$m	Goodwill \$m	Tradenames \$m
Commodities segment	10,310	698	10,306	697
Clearing segment	2,857	193	2,856	193
	13,167	891	13,162	890

Following the planned expansion of the Group's commodities business in the Mainland, management has determined the development and operations of the new commodities trading platform in Mainland China (China commodities CGU) as a separate CGU. This new CGU and the existing commodities trading platform in the UK (LME commodities CGU) are considered to be within the same Commodities operating segment at which goodwill is monitored for internal management purposes.

The recoverable amounts of each CGU are determined based on value-in-use calculations. These calculations use cash flow projections based on financial forecasts approved by management covering a five-year period. Cash flows beyond the five-year period are extrapolated using the estimated terminal growth rates stated below. The key assumptions, EBITDA margins, growth rates and discount rates used for value-in-use calculations are as follows:

	At 31 Dec 2016		At 31 Dec 2015	
	Commodities segment	Clearing segment	Commodities segment	Clearing segment
EBITDA margin (average of next five years)	57%	63%	62%	66%
Growth rate	3%	3%	3%	3%
Discount rate	9-11%	9%	9%	9%

For the LME commodities CGU and the Clearing segment, management determined the EBITDA margins based on past performance and its expectations regarding market development and fee adjustments relating to the products. For the China commodities CGU, management determined the EBITDA margin based on its expectations regarding market development and the level of fees relating to services and products expected to be introduced. The growth rates do not exceed the long-term average growth rate for the business in the countries in which each of the CGUs currently operates. The discount rates used are pre-tax and reflect specific risks relating to each CGU.

The recoverable amounts of the operating segments (including goodwill and tradenames) based on the estimated value-in-use calculations were higher than their carrying amounts at 31 December 2016 and 31 December 2015. Accordingly, no provision for impairment loss for goodwill or tradenames is considered necessary. Any reasonably possible changes in the key assumptions used in the value-in-use assessment would not affect management's view on impairment at 31 December 2016 (31 December 2015: recoverable amount of commodities segment would be approximately equal to its carrying amount if discount rate rose to 11 per cent).

### 28. Fixed Assets

#### **Accounting Policy**

Tangible fixed assets are stated at historical cost less accumulated depreciation and impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the assets.

Tangible fixed assets are depreciated when they are available for use. They are depreciated at rates sufficient to write off their costs net of expected residual values over their estimated useful lives on a straight-line basis. The residual values and useful lives are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

The useful lives of major categories of fixed assets are as follows:

Leasehold buildings Up to 35 years or remaining lives of the leases

if shorter

Leasehold improvements Over the remaining lives of the leases but not

exceeding 10 years

Computer trading and clearing systems

hardware and software
 Other computer hardware and software
 Furniture, equipment and motor vehicles
 3 to 5 years
 3 to 5 years

Data centre facilities and equipment 3 to 20 years

Expenditure incurred in the construction of leasehold buildings and other directly attributable costs are capitalised when it is probable that future economic benefits associated with the expenditure will flow to the Group and the costs can be measured reliably.

Qualifying software system development expenditure and related directly attributable costs are capitalised and recognised as a fixed asset if the software forms an integral part of the hardware on which it operates.

Subsequent costs and qualifying development expenditure incurred after the completion of a system are included in the asset's carrying amount or recognised as a separate asset only when it is probable that future economic benefits associated with that item will flow to the Group and the cost of the item can be measured reliably. All other repairs and maintenance costs and other subsequent expenditure are charged to the consolidated income statement when incurred.

## 28. Fixed Assets (continued)

	Leasehold land under finance lease \$m	Leasehold buildings \$m	Computer trading and clearing systems \$m	Other computer hardware and software \$m	Data centre facilities and equipment \$m	Leasehold improvements, furniture, equipment and motor vehicles \$m	<b>Total</b> \$m
Cost:	7111	7111	YIII	7111	Y'''	YIII	7111
At 1 Jan 2015	70	724	1,362	456	403	697	3,712
Additions	-	-	60	76	3	116	255
Disposals	(70)	(16)	(11)	(20)		(19)	(136)
At 31 Dec 2015		708	1,411	512	406	794	3,831
At 1 Jan 2016	-	708	1,411	512	406	794	3,831
Exchange differences	-	-	(1)	-	-	(2)	(3)
Additions	-	-	56	34	4	130	224
Disposals	_		(118)	(23)	_	(34)	(175)
At 31 Dec 2016	-	708	1,348	523	410	888	3,877
Accumulated depreciation:							
At 1 Jan 2015	12	80	1,232	326	60	399	2,109
Depreciation	-	28	35	83	26	67	239
Disposals	(12)	(15)	(11)	(20)	_	(19)	(77)
At 31 Dec 2015	_	93	1,256	389	86	447	2,271
At 1 Jan 2016	_	93	1,256	389	86	447	2,271
Depreciation	-	28	49	72	26	107	282
Disposals	-	-	(118)	(23)	_	(34)	(175)
At 31 Dec 2016	-	121	1,187	438	112	520	2,378
Net book value:							
At 31 Dec 2016	-	587	161	85	298	368	1,499
At 31 Dec 2015	_	615	155	123	320	347	1,560
Cost of fixed assets in the course of construction:							
At 31 Dec 2016	-	-	71	10	1	72	154
At 31 Dec 2015		-	83	8	_	41	132

## 29. Financial Liabilities at Fair Value through Profit or Loss

#### **Accounting Policy**

Financial liabilities at fair value through profit or loss are initially recognised at fair value on trade date and subsequently remeasured at their fair values. Changes in fair value of the liabilities are recognised in the consolidated income statement. Derivative financial instruments (note 21) outstanding on the reporting date are classified as financial liabilities at fair value through profit or loss when their fair values are negative.

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m
Held by LME Clear in its capacity as a central counterparty		
Derivative financial instruments:		
– base metals futures and options contracts cleared through LME Clear (note (a))	61,618	64,480
Held for trading		
Derivative financial instruments:		
- forward foreign exchange contracts (note 47(b))	9	6
	61,627	64,486

(a) The amount represents the fair value of outstanding base metals futures and options contracts of LME Clear that do not qualify for netting under HKAS 32, where LME Clear is acting in its capacity as a central counterparty to the contracts traded on the LME.

# 30. Margin Deposits, Mainland Security and Settlement Deposits, and Cash Collateral from Clearing Participants

#### **Accounting Policy**

The obligation to refund the Margin deposits, Mainland security and settlement deposits, and cash collateral from Clearing Participants is disclosed under current liabilities. Non-cash collateral received from Clearing Participants is not recognised on the consolidated statement of financial position.

Margin Funds are established by cash received or receivable from the Clearing Participants in respect of margin deposits, Mainland security and settlement deposits, and cash collateral of the five clearing houses to cover their open positions. Part of the Mainland security and settlement deposits is used by HKSCC to satisfy its obligations as a clearing participant of ChinaClear in respect of trades transacted through Stock Connects. These funds are held in segregated accounts of the respective clearing houses for this specified purpose and cannot be used by the Group to finance any other activities.

# 30. Margin Deposits, Mainland Security and Settlement Deposits, and Cash Collateral from Clearing Participants (continued)

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m
Margin deposits, Mainland security and settlement deposits, and cash		
collateral from Clearing Participants comprised (note 19):		
SEOCH Clearing Participants' margin deposits	5,389	6,773
HKCC Clearing Participants' margin deposits	46,974	45,123
HKSCC Clearing Participants' margin deposits, Mainland security		
and settlement deposits, and cash collateral	5,484	4,103
OTC Clear Clearing Participants' margin deposits	296	54
LME Clear Clearing Participants' margin deposits	68,703	59,160
	126,846	115,213
The margin deposits, Mainland security and settlement deposits, and cash collateral were invested in the following instruments for managing the obligations of the Margin Funds:		
Cash and cash equivalents (note 20)	96,698	89,807
Financial assets measured at fair value through profit or loss (note 21)	3,323	5,844
Financial assets measured at amortised cost (note 22)	25,782	18,765
Settlement Reserve Fund and Settlement Guarantee Fund held by ChinaClear	1,032	794
Margin receivable from Clearing Participants	11	3
	126,846	115,213

## 31. Accounts Payable, Accruals and Other Liabilities

### **Accounting Policy**

Financial liabilities, other than financial liabilities at fair value through profit or loss (note 29) and financial guarantee contracts (note 32), are initially recognised at fair value and subsequently carried at amortised cost using the effective interest method.

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m
Payable to ChinaClear, Exchange and Clearing Participants:		
– CNS money obligations payable (note 24(a))	10,315	13,658
- others	174	324
Transaction levy payable to the SFC	79	85
Unclaimed dividends (note (a))	257	230
Stamp duty payable to the Collector of Stamp Revenue	258	172
Payables for collective investment schemes traded before 31 Dec 2016	300	_
Other payables, accruals and deposits received	893	816
	12,276	15,285

## 31. Accounts Payable, Accruals and Other Liabilities (continued)

- Unclaimed dividends represent dividends declared by listed companies which were held by HKSCC Nominees Limited (HKSN) but not yet claimed by shareholders of the companies concerned, and dividends declared by HKEX but not yet claimed by its shareholders. During the year, cash dividends held by HKSN which had remained unclaimed for a period of more than seven years amounting to \$14 million (2015: \$11 million) were forfeited and recognised as sundry income (note 8) and dividends declared by HKEX which were unclaimed over a period of six years from the date of payment amounting to \$22 million (2015: \$18 million) were forfeited and transferred to retained earnings in accordance with HKEX's Articles of Association (note 40).
- (b) CNS money obligations payable mature within two days after the trade date. The majority of the remaining accounts payable, accruals and other liabilities would mature within three months.

## 32. Other Financial Liabilities

### **Accounting Policy**

Financial guarantee contracts are initially recognised at fair value. Subsequently, such contracts are measured at the higher of the best estimate of the amount required to settle the guarantee and the amount initially recognised less, where appropriate, cumulative amortisation over the life of the guarantee on a straight-line basis.

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m
Financial liabilities of Clearing House Funds (note 33)	17	22
Financial liabilities of Corporate Funds:		
Financial guarantee contract (note (a))	20	20
	37	42

(a) The amount represents the carrying value of a financial guarantee provided by the Group to the Collector of Stamp Revenue, details of which are disclosed in note 43(b).

## 33. Clearing House Funds

#### **Accounting Policy**

Clearing Participants' cash contributions to Clearing House Funds are included under current liabilities. Non-cash collateral received from Clearing Participants is not recognised on the consolidated statement of financial position.

## 33. Clearing House Funds (continued)

Clearing House Funds are established under the Clearing House Rules. Assets contributed by the Clearing Participants and the Group are held by the respective clearing houses (together with the accumulated income less related expenses for the clearing houses in Hong Kong) expressly for the purpose of ensuring that the respective clearing houses are able to fulfil their counterparty obligations in the event that one or more of the Clearing Participants fail to meet their obligations to the clearing houses. The HKSCC Guarantee Fund also provides resources to enable HKSCC to discharge its liabilities and obligations if defaulting Clearing Participants deposit defective securities into CCASS. The amounts earmarked for contribution to the Rates and FX Guarantee Resources of OTC Clear and its accumulated investment income was also included in Clearing House Funds for presentation purpose. These funds are held in segregated accounts of the respective clearing houses for this specified purpose and cannot be used by the Group to finance any other activities.

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m
The Clearing House Funds comprised (note 19):		
Clearing Participants' cash contributions	8,656	7,474
Contribution to OTC Clear Rates and FX Guarantee Resources	156	156
Designated reserves (notes (a) and 39)	773	778
	9,585	8,408
The Clearing House Funds were invested in the following		
instruments for managing the obligations of the Funds:		
Cash and cash equivalents (note 20)	9,476	8,210
Financial assets measured at amortised cost (note 22)	126	220
	9,602	8,430
Less: Other financial liabilities of Clearing House Funds (note 32)	(17)	(22)
	9,585	8,408
The Clearing House Funds comprised the following Funds:		
HKSCC Guarantee Fund	2,219	2,926
SEOCH Reserve Fund	724	542
HKCC Reserve Fund	1,316	1,134
OTC Clear Rates and FX Guarantee Fund	659	505
OTC Clear Rates and FX Guarantee Resources	160	158
LME Clear Default Fund	4,507	3,143
	9,585	8,408

(a) Designated reserves comprise contributions from the clearing houses and accumulated income net of expenses of the Clearing House Funds appropriated from retained earnings.

## 34. Borrowings

#### **Accounting Policy**

Borrowings are recognised initially at fair value of proceeds received, net of transaction costs incurred. They are subsequently carried at amortised cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognised in the consolidated income statement as interest expense over the period of the borrowings using the effective interest method.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least twelve months after the end of the reporting period.

## **34.** Borrowings (continued)

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m
Bank borrowings (note (a))	1,586	1,585
Notes (note (b))	1,519	1,516
Written put options to non-controlling interests (note (c))	317	308
Total borrowings	3,422	3,409

The borrowings were repayable as follows:

	Bank borrowings		Other borrowings	
	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m
After two years but within five years	1,586	793	1,836	1,824
After five years	_	792	_	
	1,586	1,585	1,836	1,824

#### (a) Bank borrowings

At 31 December 2016, bank borrowings mature within 5 years (31 December 2015: 6 years). During the year, the bank borrowings bore average coupons of 1.7 per cent (2015: 1.4 per cent) per annum, and the average effective interest rate was 1.8 per cent (2015: 1.5 per cent) per annum.

#### (b) Notes

In December 2013 and January 2014, HKEX issued US\$100 million (HK\$775 million) and US\$95 million (HK\$737 million) of fixed rate senior notes which will be due in December 2018 and January 2019 respectively. The average effective interest rate of the senior notes was 2.9 per cent (2015: 2.9 per cent) per annum.

#### (c) Written put options to non-controlling interests

#### **Accounting Policy**

The potential cash payments related to put options issued by HKEX for the non-voting ordinary shares of a subsidiary held by non-controlling interests are accounted for as financial liabilities, which are initially recognised at fair value with a corresponding charge directly to equity under "reserve relating to written put options to non-controlling interests".

The written put option financial liabilities are subsequently measured at amortised cost, using the effective interest rate method. The charge arising is recorded under finance costs in the consolidated income statement.

## 34. Borrowings (continued)

(c) Written put options to non-controlling interests (continued)

	2016 \$m	2015 \$m
At 1 Jan	308	225
Issuance of written put options to non-controlling interests debited against related reserve under equity attributable		
to shareholders of HKEX (note (i))	-	76
Interest expenses (notes (ii) and 13)	9	7
At 31 Dec	317	308

- (i) OTC Clear issued non-voting ordinary shares to certain third party shareholders at a total consideration of \$340 million. As part of the arrangement, put options were written by HKEX to the non-controlling interests to sell part or all of their non-voting ordinary shares in OTC Clear to HKEX at the initial subscription price of \$210,000 per share less accumulated dividends received by the non-controlling interests. The put options are exercisable by the non-controlling interests at any time following the date falling five years after the shares were issued if the non-controlling interests can demonstrate to HKEX that they have used reasonable endeavours for at least three months to find a suitable purchaser for their shares at a price equal to or more than their fair market values. The carrying amount of written put options represents the present value of the amount payable by HKEX to acquire the non-controlling interests at the date at which the written put options first become exercisable.
- (ii) The effective interest rate of the liabilities was 3.0 per cent (2015: 3.0 per cent) per annum.

## 35. Provisions

#### **Accounting Policy**

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate of the amount can be made. The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period.

	Reinstatement costs \$m	Employee benefit costs \$m	Total \$m
At 1 Jan 2016	71	64	135
Exchange differences	(2)	-	(2)
Provision for the year	22	87	109
Amount used during the year	-	(75)	(75)
Amount paid during the year	(1)	(7)	(8)
At 31 Dec 2016	90	69	159

- (a) The provision for reinstatement costs represents the estimated costs of restoring the leased office premises to their original state upon the expiry of the leases. The leases are expected to expire within 14 years.
- (b) The provision for employee benefit costs represents unused annual leave that has been accumulated at the end of the reporting period. It is expected to be fully utilised in the coming twelve months.

## 36. Deferred Taxation

#### **Accounting Policy**

Deferred tax is recognised, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements, except that deferred tax liabilities are not recognised if they arise from the initial recognition of goodwill. Deferred tax is determined using tax rates that have been enacted or substantively enacted by the end of the reporting period and are expected to apply when the related deferred tax asset is realised or the deferred tax liability is settled.

Deferred tax assets are recognised to the extent that it is probable that future taxable profit will be available against which the temporary differences or the current tax losses can be utilised.

(a) The movements on the net deferred tax liabilities account were as follows:

	2016 \$m	2015 \$m
At 1 Jan	739	834
Exchange differences	-	(1)
Credited to the consolidated income statement (note 16(a))	(49)	(93)
Charged/(credited) directly to retained earnings	1	(1)
At 31 Dec (note (d))	691	739

- (b) The Group had unrecognised tax losses of \$764 million at 31 December 2016 (31 December 2015: \$666 million) that may be carried forward for offsetting against future taxable income indefinitely.
- (c) The movements on the net deferred tax liabilities/(assets) were as follows:

		ated tax ciation	Intangil	ole assets	Financ	ial assets	Tax l	osses	Employe	e benefits	To	otal
	2016 \$m	2015 \$m	2016 \$m	2015 \$m	2016 \$m	2015 \$m	2016 \$m	2015 \$m	2016 \$m	2015 \$m	2016 \$m	2015 \$m
At 1 Jan	168	141	655	747	-	31	(64)	(70)	(20)	(15)	739	834
Exchange differences	-	-	-	(1)	-	-	-	-	-	-	-	(1)
(Credited)/charged to the consolidated income												
statement	(7)	27	(56)	(91)	2	(31)	12	6	-	(4)	(49)	(93)
Charged/(credited) directly to retained earnings	-	-	-	-	-	-	-	-	1	(1)	1	(1)
At 31 Dec	161	168	599	655	2	-	(52)	(64)	(19)	(20)	691	739

#### **36. Deferred Taxation** (continued)

(d) Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when the deferred taxes relate to tax levied by the same taxation authority on the same taxable entity or different taxable entities where there is an intention to settle the balances on a net basis. The following amounts, determined after appropriate offsetting, are shown in the consolidated statement of financial position:

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m
Deferred tax assets	(22)	(22)
Deferred tax liabilities	713	761
	691	739

(e) The analysis of deferred tax (assets)/liabilities is as follows:

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m
Deferred tax assets		
Amounts to be recovered after more than 12 months	(17)	(14)
Amounts to be recovered within 12 months	(5)	(8)
	(22)	(22)
Deferred tax liabilities		
Amounts to be recovered or settled after more than 12 months	699	745
Amounts to be recovered or settled within 12 months	14	16
	713	761
Net deferred tax liabilities	691	739

# 37. Share Capital and Shares Held for Share Award Scheme

## **Accounting Policy**

#### **Shares**

Ordinary shares are classified as equity.

#### Shares held for Share Award Scheme

Where HKEX shares are acquired by the HKEX Share Award Scheme (Share Award Scheme) from the market or by electing for scrip in lieu of cash dividends, the total consideration of shares acquired from the market (including any directly attributable incremental costs) or under the scrip dividend scheme is presented as Shares held for Share Award Scheme and deducted from total equity.

Upon vesting, the related costs of the vested Awarded Shares purchased from the market and shares acquired under the scrip dividend scheme (dividend shares) are credited to Shares held for Share Award Scheme, with a corresponding decrease in employee share-based compensation reserve for Awarded Shares, and decrease in retained earnings for dividend shares.

# 37. Share Capital and Shares Held for Share Award Scheme (continued)

Issued and fully paid – ordinary shares with no par:

	Number of shares	Share capital \$m	Shares held for Share Award Scheme \$m	<b>Total</b> \$m
At 1 Jan 2015	1,165,264	12,225	(482)	11,743
Shares issued upon exercise of employee share options	144	3	-	3
Shares issued in lieu of cash dividends (note (a))	15,559	3,180	(15)	3,165
Shares purchased for Share Award Scheme (note (b))	(1,137)	-	(227)	(227)
Vesting of shares of Share Award Scheme (note (c))	853	-	134	134
Conversion of the convertible bonds (note (d))	24,594	3,877		3,877
At 31 Dec 2015	1,205,277	19,285	(590)	18,695
At 1 Jan 2016	1,205,277	19,285	(590)	18,695
Shares issued in lieu of cash dividends (note (a))	15,694	2,798	(16)	2,782
Shares purchased for Share Award Scheme (note (b))	(992)	-	(188)	(188)
Vesting of shares of Share Award Scheme (note (c))	1,126	2	195	197
At 31 Dec 2016	1,221,105	22,085	(599)	21,486

(a) During the year, the following shares were issued to shareholders who elected to receive HKEX shares in lieu of cash dividends pursuant to the scrip dividend scheme:

	2016						
	Number of shares	Scrip price \$	Share capital \$m	Shares held for Share Award Scheme \$m	Total \$m		
Issued as 2015 final scrip dividends:							
– total	8,862,992	172.81	1,531	_	1,531		
– to Share Award Scheme	(53,390)	172.81	-	(9)	(9)		
Issued as 2016 interim scrip dividends:							
– total	6,923,255	183.01	1,267	-	1,267		
– to Share Award Scheme	(38,754)	183.01	_	(7)	(7)		
	15,694,103		2,798	(16)	2,782		
			2015				
	Number of shares	Scrip price \$	Share capital \$m	Shares held for Share Award Scheme \$m	Total \$m		
Issued as 2014 final scrip dividends:							
– total	4,532,307	286.64	1,299	_	1,299		
– to Share Award Scheme	(21,660)	286.64	-	(6)	(6)		
Issued as 2015 interim scrip dividends:							
– total	11,100,157	169.40	1,881	_	1,881		
– to Share Award Scheme	(51,576)	169.40	-	(9)	(9)		
	15,559,228		3,180	(15)	3,165		

# 37. Share Capital and Shares Held for Share Award Scheme (continued)

- (b) During the year, the Share Award Scheme (note 38) acquired 991,700 HKEX shares (2015: 1,137,400 shares) through purchases on the open market. The total amount paid to acquire the shares during the year was \$188 million (2015: \$227 million).
- (c) During the year, a total of 1,125,802 HKEX shares (2015: 852,317 shares) were vested. The total cost of the vested shares was \$195 million (2015: \$134 million). In 2016, \$2 million (2015: \$Nil) was credited to share capital in respect of vesting of certain shares whose fair values were higher than the costs.
- (d) During the year ended 31 December 2015, all of the convertible bonds issued in 2012 were converted into HKEX's shares at the prevailing adjusted conversion price of \$157.62 per share and cancelled upon the exercise of the conversion rights by the bondholders. As a result, a total number of 24,594,225 shares in HKEX were issued and credited as fully paid.

# 38. Employee Share-based Arrangements

#### **Accounting Policy**

The Group operates the Share Award Scheme (the Scheme), which is an equity-settled shared-based compensation plan under which share awards are granted under the Share Award Scheme (Awarded Shares) to employees of the Group (including the Executive Director) as part of their remuneration package.

The amount to be expensed as share-based compensation expenses is determined by reference to the fair value of the Awarded Shares granted, taking into account all non-vesting conditions associated with the grants on grant date. The total expense is recognised on a straight-line basis over the relevant vesting periods (or on the grant date if the shares vest immediately), with a corresponding credit to an employee share-based compensation reserve under equity.

For those Awarded Shares which are amortised over the vesting periods, the Group revises its estimates of the number of Awarded Shares that are expected to ultimately vest based on the vesting conditions at the end of each reporting period. Any resulting adjustment to the cumulative fair value recognised in prior years is charged/credited to employee share-based compensation expense in the current year, with a corresponding adjustment to the employee share-based compensation reserve.

The movements of employee share-based compensation reserve were as follows:

	2016 \$m	2015 \$m
At 1 Jan	199	142
Employee share-based compensation benefits (note 9)	213	183
Vesting of shares of Share Award Scheme	(186)	(126)
At 31 Dec	226	199

The Scheme allows the Board to make awards as long-term incentives for selected senior executives of the Group (Senior Executive Awards) in addition to any other awards (Employee Share Awards) which they may be eligible to receive under the Scheme.

Following the Board's decision to award an award sum (Awarded Sum) for the purchase of Awarded Shares to eligible employees and/or selected senior executives, the Awarded Shares are either purchased from the market or are awarded by regranting the forfeited or unallocated shares held by the Scheme. Before vesting, the Awarded Shares are held in a trust set up by the Scheme.

Further shares are derived from dividends payable on the Awarded Shares held in the Scheme from scrip shares received under the scrip dividend scheme (dividend shares), and are allocated to the awardees on a pro rata basis and have the same vesting periods as the related Awarded Shares.

## (a) Employee Share Awards

Employee Share Awards vest progressively over the vesting period after the awards are granted, provided that the relevant awardee (i) remains employed by the Group (ii) is made redundant or (iii) is deemed to be a "good leaver", and Employee Share Awards vest immediately if the relevant awardee retires on reaching normal retirement age or suffers from permanent disability. Unless otherwise determined by the Board, the Remuneration Committee or the Chief Executive, the vesting period of Employee Share Awards granted was three years, and the shares would be vested in two equal tranches from the second to the third year after the shares are granted.

For awardees who do not meet the vesting criteria, the unvested shares are forfeited. The forfeited shares are held by the trustee of the Scheme who may award such shares to the awardees, taking into consideration recommendations of the Board.

## Details of Awarded Shares awarded during 2015 and 2016

Date of award	Number of Awarded Shares awarded	Average fair value per share \$	Vesting period
2 Jan 2015	1,386,492 1,2	171.89	15 Dec 2016 – 15 Dec 2017
18 Nov 2015	17,364	209.67	23 Nov 2015 -1 May 2016
18 Nov 2015	8,941	209.67	9 Dec 2015 - 9 Dec 2016
18 Nov 2015	10,749	209.67	19 Jan 2017 – 19 Jan 2018
18 Nov 2015	14,658	209.67	1 Mar 2017 - 1 Mar 2018
18 Nov 2015	3,908	209.67	13 Apr 2017 – 13 Apr 2018
18 Nov 2015	4,177	209.67	7 Oct 2017 – 7 Oct 2018
26 Nov 2015	1,900	211.14	23 Nov 2017 – 23 Nov 2018
31 Dec 2015	1,179,457 <sup>1, 2</sup>	199.07	9 Dec 2017 – 9 Dec 2018
12 Aug 2016	11,648	197.45	6 Jul 2018 – 6 Jul 2019
12 Aug 2016	4,051	197.45	1 Feb 2017 – 25 Jul 2019
25 Aug 2016	4,700	189.45	3 May 2018 - 3 May 2019
30 Dec 2016	1,083,456 1,2	190.33	7 Dec 2018 – 7 Dec 2019

<sup>1 88,345, 60,429</sup> and 63,210 shares were awarded to HKEX's Chief Executive on 2 January 2015, 31 December 2015 and 30 December 2016 respectively.

## Details of Awarded Shares vested during 2015 and 2016

During the year, 1,046,334 HKEX shares (2015: 813,851 shares) were vested at an aggregate fair value of \$183 million (2015: \$126 million), of which 68,513 shares (2015: 59,618 shares) were for HKEX's Chief Executive.

<sup>2 98,608, 160,685</sup> and 179,706 shares were awarded by re-granting the forfeited or unallocated shares held by the Scheme on 2 January 2015, 31 December 2015 and 30 December 2016 respectively.

#### (b) Senior Executive Awards

The actual number of shares to be transferred to the awardees under the Senior Executive Awards is conditional on the satisfaction of performance conditions set by the Board. The Board has full discretion to determine the actual amount of award to be paid at the end of a performance assessment period (which shall normally be a period of at least three financial years) in accordance with these criteria.

The vesting of Senior Executive Awards is not affected by the awardees ceasing employment with the Group before the end of the performance assessment period. The Senior Executive Awards are considered to be vested immediately upon grant and the performance conditions are considered as non-vesting conditions.

## Details of Senior Executive Awards awarded during 2015 and 2016

Date of award	Number of Awarded Shares awarded	Average fair value per share \$	Total fair value \$m	Performance period
2 Jan 2015	95,100	128.92	12	2015 – 2017
31 Dec 2015	56,800	149.30	8	2016 – 2018
30 Dec 2016	67,400	142.25	10	2017 – 2019

All of the Senior Executive Awards were awarded to the HKEX's Chief Executive. The fair value per share is determined by taking into account various factors including the probability of the performance conditions being satisfied.

#### Details of Senior Executive Awards vested during 2016

In 2016, 23,021 HKEX shares granted under the Senior Executive Awards were vested at a fair value of \$3 million, and 593 related dividend shares were vested at a cost of \$0.1 million. An additional \$1 million was charged to retained earnings in respect of the vesting as the cost of Awarded Shares vested was higher than the fair value of shares previously charged to the consolidated income statement.

(c) Summary of Awarded shares awarded and dividend shares

Movements in number of Awarded Shares awarded and dividend shares

	2016	2015
	Number of Awarded Shares and dividend shares	Number of Awarded Shares and dividend shares
Outstanding at 1 Jan	3,248,284	1,419,290
Awarded <sup>3</sup>	1,171,255	2,779,546
Forfeited	(160,473)	(166,034)
Vested	(1,069,355)	(813,851)
Dividend shares:		
– allocated to awardees	89,211	69,945
– allocated to awardees but subsequently forfeited	(5,266)	(2,146)
- vested	(56,447)	(38,466)
Outstanding at 31 Dec	3,217,209	3,248,284

3 Average fair value per share was \$187.66 (2015: \$182.33)

Remaining vesting periods or performance period of Awarded Shares awarded and dividend shares outstanding at 31 December

	At 31 Dec 2	016	At 31 Dec 20	15
	Remaining vesting or performance period	Number of Awarded Shares and dividend shares outstanding	Remaining vesting or performance period	Number of Awarded Shares and dividend shares outstanding
Shares awarded in				
2013	N/A	-	0.00 year to 0.02 year	9,650
2014	0.00 year to 0.05 year	50,754	0.02 year to 1.05 years	501,778
2015	0.05 year to 2.00 years	1,917,691	0.33 year to 3.00 years	2,686,845
2016	0.09 year to 3.00 years	1,171,255	N/A	_
Dividend shares	0.02 year to 2.56 years	77,509	0.00 year to 2.00 years	50,011
		3,217,209		3,248,284

#### Dividend shares

During the year, 92,144 HKEX shares (2015: 73,236 shares) were issued to the Scheme in lieu of cash dividends at a total consideration of \$16 million (2015: \$15 million), of which 89,211 shares (2015: 69,945 shares) were subsequently allocated to awardees.

During the year, 56,447 dividend shares (2015: 38,466 shares), including 4,388 shares (2015: 3,334 shares) for HKEX's Chief Executive, at a cost of \$10 million (2015: \$8 million) were vested.

(c) Summary of Awarded shares awarded and dividend shares (continued)

Forfeited or unallocated shares held by the Scheme

At 31 December 2016, 150 forfeited or unallocated shares (31 December 2015: 11,033 shares) were held by the Scheme and would be regranted to eligible employees in future.

Vested shares held by the Scheme

At 31 December 2016, 2,750 shares (31 December 2015: 2,466 shares) were vested but had not yet been transferred to the awardees.

# 39. Designated Reserves

Clearing House Funds reserves (note 33(a))

	HKSCC Guarantee Fund reserve \$m	SEOCH Reserve Fund reserve \$m	HKCC Reserve Fund reserve \$m	OTC Clear Rates and FX Guarantee Fund reserve \$m	OTC Clear Rates and FX Guarantee Resources reserve \$m	<b>Total</b> \$m
At 1 Jan 2015	184	103	353	2	1	643
(Deficit)/surplus of net investment income net of expenses of Clearing House Funds	(4)	1	(2)	1	1	(3)
Post-liquidation interest arising from a Participant's default on market contracts (note 5(c)(ii))	38	_	-	-	-	38
Surplus of reversal of provision for closing-out losses by a defaulting Clearing Participant (note 11(a))	100	_	_	_	_	100
Transfer from/(to) retained earnings (note 40)	134	1	(2)	1	1	135
At 31 Dec 2015	318	104	351	3	2	778
At 1 Jan 2016	318	104	351	3	2	778
(Deficit)/surplus of net investment income net of expenses of Clearing House Funds transferred (to)/from retained earnings						
(note 40)	(7)	-	(1)	1	2	(5)
At 31 Dec 2016	311	104	350	4	4	773

# 40. Retained Earnings

	2016 \$m	2015 \$m
At 1 Jan	10,691	8,800
Profit attributable to shareholders	5,769	7,956
Transfer from/(to) Clearing House Funds reserves (note 39)	5	(135)
Dividends:		
2015/2014 final dividend	(3,459)	(2,533)
2016/2015 interim dividend	(2,683)	(3,679)
Unclaimed HKEX dividends forfeited (note 31(a))	22	18
Vesting of shares of Share Award Scheme	(11)	(8)
Tax credit relating to Share Award Scheme	-	3
Transfer from convertible bond reserve upon conversion of convertible bonds	-	266
Changes in ownership interests in a subsidiary	_	3
At 31 Dec	10,334	10,691

## 41. Notes to the Consolidated Statement of Cash Flows

Reconciliation of profit before taxation to net cash inflow from principal operating activities:

	2016 \$m	2015 \$m
Profit before taxation	6,799	9,278
Adjustments for:		
Net interest income	(614)	(662)
Net fair value gains including interest income on financial assets mandatorily measured at fair value through profit or loss and financial liabilities at fair value through profit or loss	(98)	(49)
Finance costs	82	114
Depreciation and amortisation	771	684
Employee share-based compensation benefits	213	183
Gain on disposal of a leasehold property and other fixed assets		(453)
Reversal of provision for impairment losses of receivables	(1)	(76)
Other non-cash adjustments	(6)	-
Net (increase)/decrease in financial assets of Margin Funds	(11,636)	14,268
Net increase/(decrease) in financial liabilities of Margin Funds	11,633	(14,271)
Net (increase)/decrease in Clearing House Fund financial assets	(1,172)	1,859
Net increase/(decrease) in Clearing House Fund financial liabilities	1,177	(1,994)
(Increase)/decrease in cash prepayments for A shares	(134)	490
Net (increase)/decrease in financial assets measured at fair value through profit or loss less financial liabilities at fair value through profit or loss	(380)	133
Decrease in accounts receivable, prepayments and deposits	3,432	7,226
Decrease in other current liabilities	(3,241)	(7,404)
Net cash inflow from principal operations	6,825	9,326
Dividends received	7	5
Interest received from bank deposits	744	686
Interest received from financial assets measured at fair value through profit or loss	120	55
Interest paid to Participants	(130)	(24)
Income tax paid	(1,402)	(1,127)
Net cash inflow from principal operating activities	6,164	8,921

#### 42. Commitments

(a) Commitments in respect of capital expenditures:

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m
Contracted but not provided for:		
- fixed assets	66	4
– intangible assets	57	43
Authorised but not contracted for:		
- fixed assets	273	264
- intangible assets	585	650
	981	961

(b) Commitments for total future minimum lease payments under non-cancellable operating leases:

#### **Accounting Policy**

Leases where substantially all the rewards and risks of ownership of assets remain with the lessor are accounted for as operating leases. Rentals under such operating leases net of any incentives received from the lessor are charged to the consolidated income statement on a straight-line basis over the lease term.

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m
Land and buildings		
- within one year	230	186
- in the second to fifth years	490	438
– after the fifth year	155	213
	875	837
Computer systems, software and equipment		
- within one year	18	16
- in the second to fifth years	54	23
	72	39
	947	876

At 31 December 2016 and 31 December 2015, the Group did not have any purchase options in respect of computer systems, software and equipment.

(c) Commitments in respect of financial contributions to Financial Reporting Council

The Financial Reporting Council (FRC) is an independent statutory body established to receive and investigate complaints concerning irregularities of auditors and reporting accountants of listed companies and non-compliances in the financial reports of listed companies. Since the establishment of the FRC in 2006, the Group has been contributing to the funding of the FRC's operations.

Under a memorandum of understanding signed in November 2014, the Group has agreed to make recurrent contributions to the FRC from 2015 to 2019. The first two contributions for 2015 and 2016 were \$7 million per annum, while the contributions during 2017 to 2019 will be \$8 million per annum.

# 43. Contingent Liabilities

#### **Accounting Policy**

A contingent liability is a possible obligation that arises from past events and whose existence will only be confirmed by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group. It can also be a present obligation arising from past events that is not recognised because it is not probable that outflow of economic resources will be required or the amount of obligation cannot be measured reliably.

A contingent liability is not recognised but is disclosed in the consolidated financial statements. When a change in the probability of an outflow occurs so that outflow is probable or when the amount of obligation becomes reliably measurable, it will then be recognised as a provision.

At 31 December 2016, the Group's material contingent liabilities were as follows:

- (a) The Group had a contingent liability in respect of potential calls to be made by the SFC to replenish all or part of compensation less recoveries paid by the Unified Exchange Compensation Fund established under the Securities Ordinance up to an amount not exceeding \$71 million (31 December 2015: \$71 million). Up to 31 December 2016, no calls had been made by the SFC in this connection.
- (b) The Group had undertaken to indemnify the Collector of Stamp Revenue against any underpayment of stamp duty by its Participants of up to \$200,000 for each Participant (note 32(a)). In the unlikely event that all of its 556 trading Participants (31 December 2015: 515) covered by the indemnity at 31 December 2016 defaulted, the maximum contingent liability of the Group under the indemnity would amount to \$111 million (31 December 2015: \$103 million).
- (c) HKEX has given an undertaking in favour of HKSCC to contribute up to \$50 million in the event of HKSCC being wound up while it is a wholly-owned subsidiary of HKEX or within one year after HKSCC ceases to be a wholly-owned subsidiary of HKEX, for payment of the liabilities of HKSCC contracted before HKSCC ceases to be a wholly-owned subsidiary of HKEX, and for the costs of winding up.
- (d) Litigation in United States (US)

All claims against the LME and HKEX defendants that existed in US litigation related to LME aluminium warehousing and that were disclosed in prior periods have now been concluded. Plaintiffs in the aluminium warehousing litigation are not appealing the US District Court's dismissal of those claims.

# 44. Connected Transactions and Material Related Party Transactions

(a) Connected transactions and material related party transactions

Certain Directors of HKEX may be directors and/or shareholders of (i) Stock Exchange Participants and Futures Exchange Participants (Exchange Participants) and Clearing Participants of HKSCC, HKCC and SEOCH (Clearing Participants); (ii) companies listed on the Stock Exchange; and (iii) Exchange Participants for buying shares on behalf of HKSCC. Securities and derivatives contracts traded by, and fees levied on, these Exchange Participants and Clearing Participants, fees levied on these listed companies and fees paid to these Exchange Participants for buying shares on behalf of HKSCC are all undertaken in the ordinary course of business of the Group on the standard terms and conditions applicable to all other Exchange Participants, Clearing Participants, listed companies and Exchange Participants for buying shares on behalf of HKSCC.

(b) Material related party transactions

In addition to the above and those disclosed elsewhere in these consolidated financial statements, the Group entered into the following material related party transactions:

(i) Key management personnel compensation

	2016 \$m	2015 \$m
Salaries and other short-term employee benefits	157	184
Employee share-based compensation benefits	76	68
Retirement benefit costs	8	9
	241	261

(ii) Post-retirement benefit plans

The Group has sponsored an ORSO Plan, a MPF Scheme and the LME Pension Scheme as its post-retirement benefit plans (note 9(a)).

(iii) Save as aforesaid, the Group has entered into other transactions in the ordinary course of business with companies that are related parties but the amounts were immaterial.

# 45. Pledges of Assets

LME Clear receives securities and gold bullion as collateral for margins posted by its Clearing Participants. The total fair value of this collateral was US\$1,781 million (HK\$13,808 million) at 31 December 2016 (31 December 2015: US\$2,015 million (HK\$15,617 million)). LME Clear is obliged to return this non-cash collateral upon request when the Clearing Participants' collateral obligations have been substituted with cash collateral or otherwise discharged.

LME Clear also holds securities as collateral in respect of its investments in overnight triparty reverse repurchase agreements under which it is obliged to return equivalent securities to the counterparties at maturity of the reverse repurchase agreements. The fair value of this collateral was US\$9,418 million (HK\$73,022 million) at 31 December 2016 (31 December 2015: US\$7,911 million (HK\$61,311 million)).

## 45. Pledges of Assets (continued)

The above non-cash collateral, which LME Clear is permitted to sell or repledge in the absence of default by the counterparties, was not recorded on the consolidated statement of financial position of the Group at 31 December 2016. Such non-cash collateral, together with certain financial assets amounting to US\$430 million (HK\$3,334 million) at 31 December 2016 (31 December 2015: US\$639 million (HK\$4,953 million)), have been repledged to LME Clear's investment agent and custodian banks under first floating charge and security arrangements for the settlement and depository services they provide in respect of the collateral and investments held. The floating charge could convert to a fixed charge in the event of contract termination, or default or insolvency of LME Clear.

# 46. Capital Management

The Group's objectives when managing capital are:

- To safeguard the Group's ability to continue as a going concern, so that it continues to provide returns for shareholders and benefits for other stakeholders;
- To support the Group's stability and growth;
- To provide capital for the purpose of strengthening the Group's risk management capability;
- To ensure that the Group's regulated entities comply with their respective regulatory capital requirements.

The Group actively and regularly reviews and manages its capital structure to ensure an optimal capital structure and shareholder returns. The Group takes into consideration the expected capital requirements and capital efficiency, regulatory capital requirements of its regulated entities, prevailing and projected profitability, projected operating cash flows, projected capital expenditures and projected strategic investment opportunities.

The Group has a number of regulated entities that are subject to capital requirements set by the respective regulators. The regulatory capital requirements of the Group's subsidiaries at 31 December 2016 are summarised as follows:

Subsidiaries	Regulatory authority	Regulatory capital requirements
Stock Exchange, Futures Exchange	SFC, Hong Kong	Maintain at all times net current assets funded by equity sufficient to cover its projected total operating expenses for at least the following six months (approximately \$1,176 million), and net current assets funded by equity or long-term loans from HKEX sufficient to cover its projected total operating expenses for at least the following twelve months (approximately \$2,352 million).

## 46. Capital Management (continued)

Subsidiaries	Regulatory authority	Regulatory capital requirements
HKSCC, HKCC, SEOCH, OTC Clear	SFC, Hong Kong	Maintain at all times net current assets funded by equity sufficient to cover its projected total operating expenses for at least the following six months (approximately \$527 million), and net current assets funded by equity or long-term loans from HKEX sufficient to cover its projected total operating expenses for at least the following twelve months (approximately \$1,053 million).
LME	Financial Conduct Authority, UK	Maintain at all times liquid financial assets amounting to at least six months' operating costs plus a risk based capital charge (approximately US\$57.4 million (HK\$445 million)), and net capital of at least this amount.
LME Clear	Bank of England, UK	Maintain cash or highly liquid financial instruments with minimal market and credit risk, amounting to US\$74.2 million (HK\$575 million), plus 10 per cent minimum reporting threshold of US\$7.4 million (HK\$57 million) and US\$18.6 million (HK\$144 million) financial resources available to set off losses in the event of default. Capital resources must be in the form of share capital, retained earnings and reserves, reduced by intangible assets and retained losses.

At 31 December 2016, the Group had set aside \$4,000 million (31 December 2015: \$4,000 million) of shareholders' funds for the purpose of supporting the risk management regime of the clearing houses in their roles as central counterparties.

All regulated entities of the Group had adequate capital to meet their regulatory requirements at 31 December 2016 and 31 December 2015.

The Group adopts a dividend policy of providing shareholders with regular dividends with a normal target payout ratio of 90 per cent of the Group's profit of the year and it also offers a scrip dividend alternative to shareholders. The consideration of share capital issued under the scrip dividend scheme, together with the 10 per cent of the profit not declared as dividends, are retained as capital of the Group for future use.

The Group monitors capital on the basis of its gross gearing ratio (ie, gross debt divided by adjusted capital) and net gearing ratio (ie, net debt divided by adjusted capital). For this purpose, the Group defines gross debt as total borrowings, net debt as total borrowings less cash and cash equivalents of Corporate Funds, and adjusted capital as all components of equity attributable to shareholders of HKEX other than designated reserves. The Group's strategy is to maintain the ratios at less than 50 per cent.

# 46. Capital Management (continued)

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m
Total borrowings	3,422	3,409
Less: cash and cash equivalents of Corporate Funds (note 20)	(9,286)	(12,744)
Net debt (note (a))	_	
Equity attributable to shareholders of HKEX	32,266	29,816
Less: designated reserves	(773)	(778)
Adjusted capital	31,493	29,038
Gross gearing ratio	11%	12%
Net gearing ratio	0%	0%

(a) Net debt is zero when the amount of cash and cash equivalents of Corporate Funds is higher than total borrowings.

# 47. Financial Risk Management

The Group's activities expose it to a variety of financial risks: market risk (including foreign exchange risk, price risk and interest rate risk), liquidity risk and credit risk. The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's performance.

#### (a) Market risk

## Nature of risk

Market risk is the risk of loss arising from movements in observable market variables such as foreign exchange rates, equity prices and interest rates. The Group is exposed to market risk primarily through its financial assets and financial liabilities (including borrowings).

## Risk management

The Group's investment policy is to prudently invest all funds managed by the Group in a manner which will satisfy liquidity requirements, safeguard financial assets and manage risks while optimising return on investments.

Investment and fund management by HKEX and the Group's subsidiaries is governed by the HKEX Investment Policy, Restrictions and Guidelines (Investment Guidelines), which is approved by the Board and reviewed regularly. Investment restrictions and guidelines form an integral part of risk control. Fund-specific restrictions and guidelines are set according to the investment objectives of each fund (ie, Corporate Funds, Clearing House Funds, Margin Funds and cash prepayments for A shares). Investments are diversified to minimise risks and no investments are made for speculative purposes. In addition, specific limits are set for each fund to control risks (eg, permissible asset type, asset allocation, liquidity, credit requirement, counterparty concentration, maturity, foreign exchange exposures and interest rate risks) of the investments.

An Investment Advisory Committee, comprised of Non-executive Directors of HKEX, advises the Board on portfolio management and monitors the risk and performance of HKEX's investments. A Treasury team in the Finance Division is dedicated to the day-to-day management and investment of the funds.

#### (a) Market risk (continued)

## Risk management (continued)

In 2016, the Board approved new External Investment Guidelines (the Investment Policy, Restrictions and Guidelines for externally-managed Corporate Funds) to optimise risk return positioning whilst maintaining the moderate risk appetite of the Group. The External Investment Guidelines include a new asset allocation policy for externally-managed Corporate Funds (External Portfolio) which aims to preserve and enhance its return by investing in a diverse mix of asset classes whose returns are not highly correlated to each other over time to mitigate portfolio volatility and asset class concentration risk. The guidelines also define the risk-return parameters for the External Portfolio and restrictions to be observed, and the governance structure on selection and monitoring of investment managers. Under the new guidelines, the External Portfolio comprises collective investment schemes managed by selected fund managers based on their performance track records and areas of expertise, and each should be financially strong and have a worldwide aggregate fund size of a minimum of US\$5 billion under management. Specific risk management limits are set for the External Portfolio (eg, permissible asset type, asset allocation, liquidity, foreign exchange exposure). The performance of these external funds is monitored on a monthly basis and reviewed by the Investment Advisory Committee on a quarterly basis.

## (i) Foreign exchange risk

#### Nature of risk

Foreign exchange risk is the risk that the value or cash flows of an asset, liability or forecast transaction denominated in foreign currency (ie, a currency other than the functional currency of the entity to which the transactions relate) will fluctuate because of changes in foreign exchange rates. The functional currency of the Hong Kong entities is HKD and the functional currency of LME entities is United States Dollar (USD). Foreign exchange risks mainly arise from the Group's investment and bank deposits in currencies other than HKD and USD and its Pound sterling (GBP) expenditure for the LME entities.

#### Risk management

Forward foreign exchange contracts and foreign currency bank deposits may be used to hedge the currency exposure of the Group's non-HKD and non-USD assets and liabilities to mitigate risks arising from fluctuations in exchange rates.

Under the Investment Guidelines, investment in non-HKD financial instruments is subject to the following restrictions:

- Under the new External Investment Guidelines, up to 50 per cent (20 per cent before adoption of the new Guidelines) of the External Portfolio may be invested in non-HKD or non-USD investments or investment not hedged back to HKD or USD.
- For internally-managed Corporate Funds, Clearing House Funds, Margin Funds and cash prepayments for A shares, unhedged investments in currencies other than HKD or USD must fully match the respective liabilities or forecast payments for the funds. Unhedged investments in USD may not exceed 20 per cent of the respective funds. Holdings in Renminbi (RMB) are permitted if the currencies have been received in connection with the trading, clearing, settlement or services in respect of the Group's RMB products (including products traded through Stock Connects).

- (a) Market risk (continued)
  - (i) Foreign exchange risk (continued)

## Risk management (continued)

The Group's non-HKD borrowings by the Hong Kong entities are denominated in USD, which is pegged against HKD, and are not therefore subject to significant foreign currency risks.

For LME Clear, investments of the Margin Fund and Default Fund will generally take place in the currency in which cash was received.

## Exposure

The following table details the Group's financial assets and financial liabilities denominated in a currency other than the functional currency of the entity to which they relate and the net open foreign currency positions (ie, gross positions less forward foreign exchange contracts and other offsetting exposures (economic hedges)), at 31 December presented in HKD equivalents.

		At 31 Dec 2016		At 31 Dec 2015			
	Foreign currency	Gross open position \$m	Economic hedges \$m	Net open position \$m	Gross open position \$m	Economic hedges \$m	Net open position \$m
Financial assets <sup>1</sup>	EUR	5,161	(5,158)	3	5,004	(4,981)	23
	GBP	7,926	(7,490)	436	803	(360)	443
	JPY	1,058	(1,057)	1	2,790	(2,774)	16
	RMB	5,470	(5,453)	17	3,220	(3,168)	52
	USD	3,401	(2,102)	1,299	4,361	(403)	3,958
	Others	-	-	-	255	(161)	94
Financial liabilities <sup>2</sup>	EUR	(5,158)	5,158	-	(4,967)	4,967	-
	GBP	(7,668)	7,490	(178)	(759)	316	(443)
	JPY	(1,057)	1,057	-	(2,774)	2,774	-
	RMB	(5,456)	5,453	(3)	(3,124)	3,118	(6)
	USD	(5,555)	2,107	(3,448)	(3,317)	150	(3,167)
Total net open	EUR			3			23
positions for	GBP			258			-
the Group	JPY			1			16
	RMB			14			46
	USD			2,149			791
	Others			-			94
				2,425			970

<sup>1</sup> Financial assets comprised cash and cash equivalents, financial assets measured at fair value through profit or loss (excluding collective investment schemes), financial assets measured at amortised cost, and accounts receivable and deposits.

<sup>2</sup> Financial liabilities comprised margin deposits, Mainland security and settlement deposits, and cash collateral from Clearing Participants, financial liabilities at fair value through profit or loss, borrowings and accounts payable and other liabilities.

- (a) Market risk (continued)
  - (ii) Equity and commodity price risk

## Nature of risk

The Group is exposed to equity price risk as collective investment schemes and equity securities are held as part of the External Portfolio in Hong Kong. The Group is not exposed to commodity price risk as investment in commodities is not permitted under the Group's Investment Guidelines. The movements of fair value of base metals futures and options contracts held by LME Clear would not have any financial impact on the Group's results as the assets and liabilities will move by the same amount and fully offset each other.

#### Risk management

Equity price risk is capped by an asset allocation limit. The Group sets prudent investment limits and restrictions to control investment in equity securities and collective investment schemes. The Group selects external fund managers after an extensive assessment of the underlying funds, its strategy and the overall quality of the fund managers, and the performance of the funds is monitored on a monthly basis.

#### (iii) Interest rate risk

#### Nature of risk

There are two types of interest rate risk:

- Fair value interest rate risk the risk that the value of a financial instrument will fluctuate because of changes in market interest rates; and
- Cash flow interest rate risk the risk that the future cash flows of a financial instrument will fluctuate because of changes in market interest rates.

The Group is exposed to both fair value and cash flow interest rate risks as the Group has significant assets and liabilities (including borrowings) which are interest-bearing.

#### Risk management

The Group manages its interest rate risks by setting limits on the residual maturity of the investments and on the fixed and floating rate mismatches of its assets and liabilities.

#### Exposure

The following tables present the highest and lowest contractual interest rates of the financial assets held by the Group (excluding bank deposits held at savings and current accounts and zero coupon bonds purchased at discounts) at 31 December:

	Fixed rate financial assets		Floating rate financial assets	
	At 31 Dec 2016	At 31 Dec 2015	At 31 Dec 2016	At 31 Dec 2015
Highest contractual interest rates	10.50%	6.88%	1.99%	3.75%
Lowest contractual interest rates <sup>1</sup>	0.00%	0.00%	-7.25%	-3.00%

<sup>1</sup> The contractual interest rates for certain reverse repurchase investments held by LME Clear were below 0 per cent.

The contractual interest rates of the borrowings are disclosed in note 34 to the consolidated financial statements.

#### (a) Market risk (continued)

## (iv) Sensitivity analysis

## Investments other than collective investment schemes

The Group uses Value-at-Risk (VaR) and portfolio stress testing to identify, measure, monitor and control foreign exchange risk, equity price risk and interest rate risks of the Group's investments other than collective investment schemes.

VaR measures the expected maximum loss over a given time interval (a holding period of 10 trading days is used by the Group) at a given confidence level (95 per cent confidence interval is adopted by the Group) based on historical data (one year is used by the Group). VaR is monitored on a weekly basis and the Board sets a limit on total VaR for the Group.

VaR is a statistical measure of risks and has limitations associated with the assumptions employed. The calculation is based on historical simulation and therefore vulnerable to sudden changes in market behaviour. The use of a 10-day holding period may be insufficient at times of severe illiquidity. Also, VaR does not necessarily reflect all aspects of risks that affect the price of financial instruments and may underestimate real market risk exposure. In addition, VaR does not factor in the possibility of catastrophic risk but the use of stress testing for abnormal market conditions can mitigate this limitation.

The VaR for each risk factor and the total VaR of the investments other than collective investment schemes and related economic hedges of the Group at 31 December were as follows:

	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m
Foreign exchange risk	16	13
Equity price risk	-	7
Interest rate risk	11	6
Total VaR	21	16

VaR for each risk factor is the independently derived largest potential loss due to fluctuations solely in that risk factor. The individual VaRs did not add up to the total VaR as there was diversification effect due to correlation amongst the risk factors.

- (a) Market risk (continued)
  - (iv) Sensitivity analysis (continued)

#### Collective investment schemes

At 31 December 2016, the fair value of the Group's collective investment schemes (Funds) by strategy employed was as follows:

Strategy	At 31 Dec 2016 \$m
Low Volatility Equities	1,798
Credit	602
Absolute Return	904
Multi-Asset Fixed Income	601
US Government Bonds and mortgage-backed securities	1,206
Total	5,111

The Group monitors the market value sensitivity of the Funds through a high-level simulation of the Funds' 1-year Value at Risk (simplified 1-year VaR) using the Funds' return and volatility. The simplified 1-year VaR helps to determine the potential change in the market value of the Funds over a 1-year period. At 31 December 2016, the simplified 1-year VaR calculated at a 95 per cent confidence level was 3.8 per cent, implying that the market value for the Group's Funds during the year ended 31 December 2016 could potentially change by approximately \$193 million. At 31 December 2016, the maximum exposure to loss from the Funds was equal to their carrying amounts.

The simplified 1-year VaR is computed using historical monthly returns of the Funds with the following steps:

- Compute blended monthly returns of the Group's Funds using monthly historical returns of the respective Fund, from the period January 2015 to December 2016, and their corresponding portfolio weights, assuming monthly rebalancing to the intended portfolio weights of the respective Fund;
- 2. Compute the average monthly return and standard deviation of the Funds' returns and derive the annualised amounts; and
- 3. Compute the simplified 1-year VaR, at a 95 per cent confidence level, by subtracting 1.65 times of the annualised standard deviation from the annualised average return.

The simplified 1-year VaR is a statistical measure of the historical risks and has limitations associated with the assumptions employed. Historical simulation assumes that actual observed historical changes in the respective Fund's monthly performance reflect possible future changes. This implies that the approach is vulnerable to sudden changes in market behaviour. In addition, it does not cover stressed market events, nor does it represent the Group's forecast of the Funds' future returns.

#### (b) Liquidity risk

## Nature of risk

Liquidity risk is the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities that are settled by delivering cash or another financial asset, and it results from amount and maturity mismatches of assets and liabilities.

## Risk management

The Group employs projected cash flow analysis to manage liquidity risk by forecasting the amount of cash required and monitoring the working capital of the Group to ensure that all liabilities due and known funding requirements could be met.

Surplus cash of the Group in Hong Kong is invested by the Treasury team, and the investments are kept sufficiently liquid to meet the operating needs, regulatory capital requirements of the regulated entities in Hong Kong, and possible liquidity requirements of the Clearing House Funds and Margin Funds. The Group also sets a limit on the minimum level of cash or bank deposits held for the Corporate Funds, and the minimum level of investments to be held that would mature the same day for the Clearing House Funds and Margin Funds.

The LME Group also employs prudent liquidity risk management which involves maintaining sufficient cash to meet ongoing operational commitments and its adherence to the regulatory requirements of the two regulated entities. As a recognised clearing house, LME Clear has to comply with stringent liquidity requirements set by the European Market Infrastructure Regulation. Surplus cash is invested in high quality short-term investments and such investments are kept sufficiently liquid to meet operating needs and possible liquidity requirements of the LME Clear's Margin Fund and Default Fund.

Apart from the borrowings used to fund the acquisition of the LME Group, banking facilities have been put in place for contingency purposes. At 31 December 2016, the Group's total available banking facilities for its daily operations amounted to \$18,947 million (31 December 2015: \$17,012 million), which included \$11,938 million (31 December 2015: \$10,000 million) of committed banking facilities and \$7,000 million (31 December 2015: \$7,000 million) of repurchase facilities.

The Group also put in place foreign exchange facilities for its daily clearing operations and for the RMB Equity Trading Support Facility to support the trading of RMB stocks listed on the Stock Exchange. At 31 December 2016, the total amount of such facilities was RMB21,500 million (HK\$23,927 million) (31 December 2015: RMB17,000 million (HK\$20,057 million)).

In addition, the Group has arranged contingency banking facilities amounting to RMB13,000 million (HK\$14,468 million) (31 December 2015: RMB13,000 million (HK\$15,338 million)) for settling payment obligations to ChinaClear should there be events that disrupt normal settlement arrangements for Stock Connects.

#### (b) Liquidity risk (continued)

## Exposure

The tables below analyse the Group's financial assets into the relevant maturity buckets based on the following criteria:

- Investments held under the collective investment schemes are allocated taking into account of the redemption notice periods, lock-up periods and redemption restrictions;
- the expected amounts, subject to costs to liquidate that are expected to be immaterial, that could be realised from the investments (other than collective investment schemes), bank deposits and cash and cash equivalents within one month to meet cash outflows on financial liabilities if required are allocated to the up to 1 month bucket; and
- other financial assets are allocated based on their contractual maturity dates or the expected dates of disposal.

		4	At 31 Dec 2016	5	
	Up to 1 month \$m	>1 month to 3 months \$m	>3 months to 1 year \$m	>1 year to 5 years \$m	Total \$m
Cash and cash equivalents	115,723	-	-	-	115,723
Financial assets measured at fair value through profit or loss <sup>2</sup>	8,448	-	_	_	8,448
Financial assets measured at amortised cost	29,093	-	-	74	29,167
Accounts receivable and deposits <sup>3</sup>	12,814	35	7	_	12,856
	166,078	35	7	74	166,194
			At 31 Dec 2015	i	
	Up to 1 month <sup>1</sup> \$m	>1 month to 3 months \$m	>3 months to 1 year \$m	>1 year to 5 years \$m	Total \$m
Cash and cash equivalents	110,890	_	_	_	110,890
Financial assets measured at fair value through profit or loss <sup>2</sup>	8,225	-	-	_	8,225
Financial assets measured at amortised cost	19,439	_	1	56	19,496
Accounts receivable and deposits <sup>3</sup>	15,402	33	3	_	15,438
	153,956	33	4	56	154,049

<sup>1</sup> Amounts at 31 December 2015 included \$300 million of financial assets with contractual maturity over one year. They could readily be liquidated whenever liquid funds are required.

The table below analyses the Group's financial liabilities (excluding forward foreign exchange contracts and outstanding base metals futures and options contracts cleared through LME Clear) at 31 December into relevant maturity buckets based on their contractual maturity dates. The amounts disclosed in the tables are the contractual undiscounted cash flows.

<sup>2</sup> Amounts excluded fair value of base metals futures and options contracts of \$61,618 million (31 December 2015: \$64,480 million), which cannot be realised to meet cash outflows.

<sup>3</sup> Amounts excluded prepayments of \$93 million (31 December 2015: \$120 million).

## (b) Liquidity risk (continued)

## Exposure (continued)

	At 31 Dec 2016					
	Up to 1 month \$m	>1 month to 3 months \$m	>3 months to 1 year \$m	>1 year to 5 years \$m	>5 years \$m	Total \$m
Margin deposits, Mainland security and settlement deposits, and cash						
collateral from Clearing Participants	126,846	_	_	_	_	126,846
Accounts payable, accruals and	120,040					120,040
other liabilities 4	12,135	8	103	_	_	12,246
Other financial liabilities:	·					,
Other financial liabilities of Clearing						
House Funds	17	_	_	_	_	17
Other financial liabilities of						
Corporate Funds:						
Financial guarantee contract						
(maximum amount guaranteed)						
(note 43(b))	111	-	-	_	_	111
Participants' contributions to Clearing						
House Funds	7,815	793	48	-	-	8,656
Borrowings:						
Bank borrowings	3	5	24	1,686	-	1,718
Notes	11	_	31	1,564	_	1,606
Written put options to non-controlling						
interests	_	_	_	340	_	340
Total	146,938	806	206	3,590	_	151,540
			Λ+ 21 F	ec 2015		,
	Up to	>1 month	>3 months	>1 year		
		to 3 months \$m	to 1 year \$m	to 5 years \$m	>5 years \$m	Total \$m
Margin deposits, Mainland security and settlement deposits, and cash						
collateral from Clearing Participants	115,213	_	_	_	_	115,213
Accounts payable, accruals and						
other liabilities 4	15,153	12	104	_	_	15,269
Other financial liabilities:						
Other financial liabilities of Clearing						
House Funds	22	_	_	_	_	22
Other financial liabilities of						
Corporate Funds:						
Financial guarantee contract						
(maximum amount guaranteed)						
(note 43(b))	100	_	_	_	_	103
	103					
Participants' contributions to Clearing	103					
Participants' contributions to Clearing House Funds	6,648	780	46	_	_	7,474
-		780	46	-	-	
House Funds		780 4	46 16	- 877	- 800	
House Funds Borrowings:	6,648			- 877 1,606	- 800 -	7,474
House Funds Borrowings: Bank borrowings	6,648		16		- 800 -	7,474 1,699
House Funds Borrowings: Bank borrowings Notes	6,648		16		- 800 - -	7,474 1,699

<sup>4</sup> Amounts excluded non-financial liabilities of \$30 million (31 December 2015: \$16 million).

#### (b) Liquidity risk (continued)

## Exposure (continued)

The table below analyses the Group's outstanding forward foreign exchange contracts at 31 December (which include all contracts regardless of whether they had gains or losses at the year end) that would be settled on a gross basis into relevant maturity buckets based on their contractual maturity dates. The amounts disclosed in the table are contractual undiscounted cash flows, which are different from the carrying amounts (ie, fair values) in the consolidated statement of financial position.

	At 31 Dec 2016			At 31 Dec 2015		
	Up to 1 month \$m	>1 month to 3 months \$m	Total \$m	Up to 1 month \$m	>1 month to 3 months \$m	Total \$m
Forward foreign exchange contracts						
– outflows	1,323	201	1,524	1,382	879	2,261
– inflows	1,328	201	1,529	1,384	877	2,261

The Group is not exposed to liquidity risk on the outstanding base metals futures and options contracts cleared through LME Clear.

#### (c) Credit risk

#### Nature of risk

The Group is exposed to credit risk, which is the risk that a counterparty will be unable to pay amounts in full when due. It arises primarily from the Group's investments and accounts receivables. Impairment provisions are made for losses that have been incurred at the end of the reporting period.

The Group is also exposed to clearing and settlement-related risk, as the clearing houses of the Group act as the counterparties to eligible trades concluded on the Stock Exchange, the Futures Exchange, the over-the-counter market and the LME through the novation of the obligations of the buyers and sellers. HKSCC is also responsible for the good title to the securities deposited and accepted in the CCASS depository. As a result, the Group has considerable market risk and credit risk since the Participants' ability to honour their obligations in respect of their trades and securities deposited may be adversely impacted by economic conditions. If the Participants default on their obligations on settlement or there are defects in the title of securities deposited and accepted in the CCASS depository, the Group could be exposed to potential risks not otherwise accounted for in these consolidated financial statements.

## Risk management – Investment and accounts receivable-related risk

The Group limits its exposure to credit risk by rigorously selecting the counterparties (ie, deposit-takers, bond issuers, debtors and external fund managers) and by diversification. At 31 December 2016, the investment in debt securities held by the Hong Kong entities were of investment grade and had a weighted average credit rating of A1 (Moody) (31 December 2015: A1 (Moody)). External fund managers are financially strong and stable and each has a minimum worldwide aggregate fund size of US\$5 billion under management. Deposits in Hong Kong are placed only with the note-issuing banks in Hong Kong, investment grade licensed banks and restricted licence banks approved by the Board. All investments are subject to a maximum concentration limit approved by the Board and except certain Hong Kong note-issuing banks there was no significant concentration risk to a single counterparty. The investment in debt securities held by the LME Group were of investment grade, and the cash, deposit and cash equivalents balances of the LME Group are held only with investment grade licensed banks. The LME Group's only significant concentration risk is with the banks. Certain cash equivalents are invested in reverse repurchase investments where collateral is held against the default of such investments. The Group mitigates its exposure to risks relating to accounts receivable from its Participants by requiring the Participants to meet the Group's established financial requirements and criteria for admission as Participants.

#### (c) Credit risk (continued)

## Risk management - Clearing and settlement-related risk

The Group mitigates its exposure to clearing and settlement-related risks by requiring the Participants to meet the Group's established financial requirements and criteria for admission as Participants, monitoring compliance with risk management measures such as imposing position limits and requiring Clearing Participants to deposit margins, Mainland security and settlement deposits, and cash collateral and contribute to the Clearing House Funds set up by the Group's five clearing houses. HKSCC also retains recourse against those Participants whose securities are deposited and accepted in the CCASS depository.

Under the HKSCC Margining and Guarantee Fund arrangements, each HKSCC Clearing Participant is allowed by HKSCC a Margin Credit of \$5 million and a Dynamic Contribution Credit of \$1 million. If a Clearing Participant defaults and any loss arises, HKSCC will absorb the default loss up to the Margin Credit and Dynamic Contribution Credit utilised by the defaulting Clearing Participant, after deducting its collateral and Guarantee Fund contribution kept by HKSCC. After the initial losses, HKSCC is required to absorb further losses after the HKSCC Guarantee Fund reserve and the Guarantee Fund contribution (excluding the Dynamic Contribution portion) of non-defaulting Clearing Participants are depleted. The amount of losses borne by HKSCC will be calculated on a pro rata basis with reference to the nondefaulting Clearing Participants' Dynamic Contributions and Dynamic Contribution Credits granted by HKSCC. At 31 December 2016, HKSCC has 542 Clearing Participants (31 December 2015: 502) and the total amounts of Margin Credit and Dynamic Contribution Credit granted to Clearing Participants amounted to \$865 million (31 December 2015: \$722 million).

The HKSCC Margin Credit and Dynamic Contribution Credit are supported by the \$4 billion of shareholders' funds set aside by the HKEX Group for risk management purpose.

#### Exposure

At 31 December, the maximum exposure to credit risk of the financial assets of the Group was equal to their carrying amounts. The maximum exposure to credit risk of the financial guarantee contract issued by the Group was as follows:

	At 31 De	c 2016	At 31 Dec 2015		
	Carrying amount in consolidated statement of financial position \$m	Maximum exposure to credit risk \$m	Carrying amount in consolidated statement of financial position \$m	Maximum exposure to credit risk \$m	
Financial guarantee contract					
Undertaking to indemnify the Collector of Stamp Revenue (note 43(b))	(20)	111	(20)	103	

#### (c) Credit risk (continued)

## Collateral held for mitigating credit risk

Certain securities, cash deposits and non-cash collateral are being held by the Group to mitigate the Group's exposure to credit risk. The financial effect of the collateral, which is capped by the amount receivable from each counterparty, was as follows:

	At 31 Dec	2016	At 31 Dec 2015		
	Carrying amount in consolidated statement of financial position \$m	Collateral held for mitigating credit risk \$m	Carrying amount in consolidated statement of financial position \$m	Collateral held for mitigating credit risk \$m	
Accounts receivable and deposits	12,856	3,536	15,438	5,023	
Fair value of base metals futures and options contracts cleared through LME Clear	61,618	61,618	64,480	64,480	
Reverse repurchase investments	71,270	71,270	58,574	58,574	

#### Financial assets that were not impaired

At 31 December 2016, accounts receivable and deposits of \$12,415 million (31 December 2015: \$15,082 million) were neither past due nor impaired. They relate to a wide range of customers for whom there was no recent history of default.

At 31 December 2016, the age analysis of the financial assets (which mainly relate to receivables from Participants and listed companies) of the Group that were determined to be not impaired according to the period past due was as follows:

	At	At
	31 Dec 2016	31 Dec 2015
	\$m	\$m
Up to six months	441	356

#### Financial assets that were impaired at the end of the reporting period

At 31 December 2016, receivables of the Group amounting to \$3 million (31 December 2015: \$4 million) were determined to be impaired and full provision had been made. These receivables were outstanding for over 180 days at the end of the reporting period or were due from companies with financial difficulties. The factors the Group considered in determining whether the financial assets were impaired are disclosed in note 22.

- (d) Fair values of financial assets and financial liabilities
  - (i) Financial assets and financial liabilities carried at fair value

At 31 December 2016 and 31 December 2015, no non-financial assets or liabilities were carried at fair values.

The following tables present the carrying value of financial assets and financial liabilities measured at fair value at 31 December according to the levels of the fair value hierarchy defined in HKFRS 13, with the fair value of each financial asset and financial liability categorised based on the lowest level of input that is significant to that fair value measurement. The levels are defined as follows:

- Level 1: fair values measured using quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: fair values measured using valuation techniques in which all significant inputs other than quoted prices included within Level 1 are directly or indirectly based on observable market data.
- Level 3: fair values measured using valuation techniques in which any significant input is not based on observable market data.

	At 31 Dec 2016			At 31 Dec 2015			
Recurring fair value measurements:	Level 1 \$m	Level 2 \$m	Total \$m	Level 1 \$m	Level 2 \$m	Total \$m	
Financial assets							
Financial assets measured at fair value through profit or loss:							
– collective investment schemes	2,225	2,886	5,111	_	_	-	
<ul><li>equity securities</li></ul>	-	-	-	185	_	185	
– debt securities	3,022	301	3,323	4,953	3,081	8,034	
– forward foreign exchange contracts	-	14	14	_	6	6	
<ul> <li>base metals futures and options</li> </ul>							
contracts cleared through LME Clear	_	61,618	61,618	_	64,480	64,480	
	5,247	64,819	70,066	5,138	67,567	72,705	
Financial liabilities							
Financial liabilities at fair value through profit or loss:							
– forward foreign exchange contracts	-	9	9	_	6	6	
- base metals futures and options							
contracts cleared through LME Clear	_	61,618	61,618	_	64,480	64,480	
	-	61,627	61,627	_	64,486	64,486	

During 2016 and 2015, there were no transfers of instruments between Level 1 and Level 2.

Level 2 fair values of debt securities, forward foreign exchange contracts, base metals futures and options contracts and collective investment schemes have been determined based on quotes from market makers, funds administrators or alternative pricing sources supported by observable inputs. The most significant input are market interest rates, market prices of metals, net asset values and latest redemption prices or transaction prices of the respective collective investment scheme.

The Group's policy is to recognise transfers into and out of fair value hierarchy levels as of the date of the event or change in circumstances that caused the transfer.

- (d) Fair values of financial assets and financial liabilities (continued)
  - (ii) Fair values of financial assets and financial liabilities not reported at fair values

Summarised in the following table are the carrying amounts and fair values of financial assets and financial liabilities not presented in the consolidated statement of financial position at their fair values. These assets and liabilities were classified under Level 2 in the fair value hierarchy.

	At 31 Dec 2016		At 31 Dec 2015		
	Carrying amount in consolidated statement of financial position \$m	Fair value \$m	Carrying amount in consolidated statement of financial position \$m	Fair value \$m	
Assets					
Financial assets measured at amortised cost:					
<ul> <li>other financial assets maturing over one year<sup>1</sup></li> </ul>	74	66	57	53	
Liabilities					
Borrowings:					
- notes <sup>2</sup>	1,519	1,542	1,516	1,544	
<ul> <li>written put options to non-controlling interests<sup>2</sup></li> </ul>	317	320	308	316	
Financial guarantee to the Collector of Stamp Revenue <sup>3</sup>	20	76	20	85	

- 1 The fair values are based on cash flows discounted using Hong Kong Government bond rates of a tenor similar to the contractual maturity of the respective assets, adjusted by an estimated credit spread.

  The discount rates used ranged from 2.62 per cent to 3.72 per cent at 31 December 2016

  (31 December 2015: 0.80 per cent to 2.32 per cent).
- 2 The fair values are based on cash flows discounted using the prevailing market interest rates for loans with similar credit rating and similar tenor of the respective loans. The discount rates used ranged from 2.09 per cent to 2.95 per cent at 31 December 2016 (31 December 2015: 2.20 per cent to 2.40 per cent).
- The fair values are based on the fees charged by financial institutions for granting such guarantees discounted using a ten-year Hong Kong Government bond rate to perpetuity but capped at the maximum exposure of the financial guarantee. The discount rate used was 1.83 per cent at 31 December 2016 (31 December 2015: 1.52 per cent).

The carrying amounts of bank borrowings with floating interest rates, short-term receivables (eg, accounts receivable, financial assets measured at amortised cost and cash and cash equivalents) and short-term payables (eg, accounts payable and other liabilities) approximated their fair values, and accordingly no disclosure of the fair values of these items is presented.

(e) Offsetting financial assets and financial liabilities

#### **Accounting Policy**

Financial assets and liabilities are offset and the net amount reported in the consolidated statement of financial position when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the company or the counterparty.

For base metals derivatives contracts cleared through LME Clear, the asset and liability positions of LME Clear arising through its activities as a central counterparty are matched. Therefore, the same amounts are recorded for both assets and liabilities with the fair value gains and losses recognised, but offset, in the consolidated income statement.

The disclosures set out in the tables below include financial assets and financial liabilities that:

- are offset in the Group's consolidated statement of financial position; or
- are subject to an enforceable master netting arrangement or similar agreement that covers similar financial instruments, irrespective of whether they are offset in the consolidated statement of financial position.
- (i) Financial assets and financial liabilities subject to offsetting, enforceable master netting arrangements or similar agreements

	At 31 Dec 2016						
				Related amounts not offset in the consolidated statement of financial position			
Type of financial instruments	Gross amount \$m	Gross amount offset in the consolidated statement of financial position \$m	Net amount presented in the consolidated statement of financial position <sup>3</sup> \$m	Amounts subject to master netting arrangements \$m	Cash collateral \$m	Net amount \$m	
Financial assets:							
CNS money obligations receivable <sup>1</sup>	82,814	(72,762)	10,052	(455)	(3,298)	6,299	
Base metals futures and options contracts cleared through LME Clear <sup>2</sup>	1,122,855	(1,061,237)	61,618	(38,427)	(23,191)	-	
Other accounts receivable from Participants, ChinaClear, information vendors and hosting services customers,							
net of provision for impairment losses	1,353	-	1,353	-	(89)	1,264	
Total	1,207,022	(1,133,999)	73,023	(38,882)	(26,578)	7,563	
Financial liabilities:							
CNS money obligations payable <sup>1</sup>	83,077	(72,762)	10,315	(455)	-	9,860	
Base metals futures and options contracts cleared through LME Clear $^{\mathrm{2}}$	1,122,855	(1,061,237)	61,618	(38,427)	-	23,191	
Total	1,205,932	(1,133,999)	71,933	(38,882)	-	33,051	

- (e) Offsetting financial assets and financial liabilities (continued)
  - (i) Financial assets and financial liabilities subject to offsetting, enforceable master netting arrangements or similar agreements (continued)

			At 31 [	Dec 2015		
				Related amounts not offset in the consolidated statement of financial position		
Type of financial instruments	Gross amount \$m	Gross amount offset in the consolidated statement of financial position \$m	Net amount presented in the consolidated statement of financial position <sup>3</sup> \$m	Amounts subject to master netting arrangements \$m	Cash collateral \$m	Net amount \$m
Financial assets:						
CNS money obligations receivable 1	128,003	(114,474)	13,529	(3,057)	(3,511)	6,961
Base metals futures and options contracts cleared through LME Clear <sup>2</sup>	1,342,331	(1,277,851)	64,480	(30,624)	(33,856)	_
Other accounts receivable from Participants, ChinaClear, information vendors and hosting services customers, net of provision for impairment losses	1,068	_	1,068	_	(91)	977
Total	1,471,402	(1,392,325)	79,077	(33,681)	(37,458)	7,938
Financial liabilities:						
CNS money obligations payable <sup>1</sup>	128,132	(114,474)	13,658	(3,057)	-	10,601
Base metals futures and options contracts cleared through LME Clear $^{\!2}$	1,342,331	(1,277,851)	64,480	(30,624)	-	33,856
Total	1,470,463	(1,392,325)	78,138	(33,681)	-	44,457

- 1 HKSCC currently has a legally enforceable right to set off certain CNS money obligations receivable and payable relating to the same Clearing Participant and it intends to settle on a net basis.
- 2 LME Clear has a legally enforceable right to set off open positions of certain contracts within an individual member's account for those securities settling on the same date and it intends to settle on a net basis.
- For the net amounts of CNS money obligations receivable or payable and net fair value of base metals futures and options contracts (ie, after set-off) and other accounts receivables due from customers, they do not meet the criteria for offsetting in the consolidated statement of financial position since the right of set-off of the recognised amounts is only enforceable following an event of default of the customers. In addition, the Group does not intend to settle the balances on a net basis.
- (ii) The tables below reconcile the "net amounts of financial assets and financial liabilities presented in the consolidated statement of financial position", as set out above, to the "accounts receivables, prepayments and deposits", "accounts payable, accruals and other liabilities", "financial assets measured at fair value through profit or loss" and "financial liabilities at fair value through profit or loss" presented in the consolidated statement of financial position.

## (e) Offsetting financial assets and financial liabilities (continued)

## (ii) (continued)

		eceivables, and deposits	Financial assets measured at f value through profit or loss		
	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m	
Net amount of financial assets after offsetting as stated above:					
- CNS money obligations receivable	10,052	13,529	-	-	
<ul> <li>Other accounts receivable from Participants, ChinaClear, information vendors and hosting services customers, net of provision for impairment</li> </ul>					
losses	1,353	1,068	-	-	
<ul> <li>Base metals futures and options contracts cleared through LME Clear</li> </ul>	-	_	61,618	64,480	
Financial assets not in scope of					
offsetting disclosures	1,451	841	8,448	8,225	
Prepayments	93	120	-	_	
Amounts presented in the consolidated	12.040	15 550	70.055	72 705	
statement of financial position	12,949	15,558	70,066	72,705	

	Accounts accruals and o	payable, other liabilities	Financial liabilities at fair value through profit or loss		
	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m	At 31 Dec 2016 \$m	At 31 Dec 2015 \$m	
Net amount of financial liabilities after offsetting as stated above:					
- CNS money obligations payable	10,315	13,658	-	_	
<ul> <li>Base metals futures and options contracts cleared through LME</li> </ul>					
Clear	-	-	61,618	64,480	
Financial liabilities not in scope of					
offsetting disclosures	1,931	1,611	9	6	
Non-financial liabilities	30	16	-		
Amounts presented in the consolidated	12 276	15 205	61 627	64.496	
statement of financial position	12,276	15,285	61,627	64,486	

Except for financial assets measured at fair value through profit or loss and financial liabilities at fair value through profit or loss which are measured at fair value, the remaining gross amounts of financial assets and financial liabilities and their net amounts as presented in the consolidated statement of financial position that are disclosed in the above tables are measured at amortised cost. The amounts in the above tables that are offset in the consolidated statement of financial position are measured on the same basis.

## 48. Statement of Financial Position and Reserve Movement of HKEX

#### **Accounting Policy**

In HKEX's statement of financial position, investments in subsidiaries are stated at cost less impairment, if any. Provision for impairment in a subsidiary is made when the recoverable amount of the subsidiary is lower than HKEX's respective cost of investment. The results of subsidiaries are accounted for by HKEX on the basis of dividends received and receivable.

Impairment testing of the investment in a subsidiary is required upon receiving a dividend from that subsidiary if the dividend exceeds the total comprehensive income of the subsidiary concerned in the period the dividend is declared or if the carrying amount of the subsidiary in HKEX's statement of financial position exceeds the carrying amount of the subsidiary's net assets including goodwill in the consolidated statement of financial position.

Written put options to non-controlling interests initially recognised at fair value are accounted for as an investment in subsidiaries with a corresponding credit to financial liabilities at fair value through profit or loss under other financial liabilities. Subsequent changes in fair value of the financial liabilities are recognised in HKEX's income statement.

Financial guarantee contracts issued by HKEX to guarantee borrowings of subsidiaries are eliminated on consolidation.

# 48. Statement of Financial Position and Reserve Movement of HKEX (continued)

## Statement of Financial Position of HKEX

	At 31 Dec 2016		At 31 Dec 2015			
	Current \$m	Non- current \$m	Total \$m	Current \$m	Non- current \$m	Total \$m
ASSETS						
Cash and cash equivalents	4,357	-	4,357	5,245	_	5,245
Financial assets measured at fair value through profit or loss	5,125	_	5,125	2,375	_	2,375
Financial assets measured at amortised cost	980	1	981	_	1	1
Accounts receivable, prepayments and deposits	633	21	654	42	21	63
Amounts due from subsidiaries	2,097	16,708	18,805	2,119	16,584	18,703
Interest in a joint venture	_	100	100	_	100	100
Intangible assets	_	109	109	_	95	95
Fixed assets	_	193	193	_	216	216
Investments in subsidiaries	_	7,349	7,349	_	5,648	5,648
Total assets	13,192	24,481	37,673	9,781	22,665	32,446
LIABILITIES AND EQUITY						
Liabilities						
Financial liabilities at fair value through profit or loss	230	-	230	223	_	223
Accounts payable, accruals and other liabilities	668	-	668	359	_	359
Amounts due to subsidiaries	1,882	-	1,882	275	_	275
Taxation payable	41	-	41	27	-	27
Other financial liabilities	11	-	11	11	_	11
Borrowings	-	3,105	3,105	_	3,101	3,101
Provisions	66	1	67	59	2	61
Deferred tax liabilities	_	14	14	_	18	18
Total liabilities	2,898	3,120	6,018	954	3,121	4,075
Equity						
Share capital			22,085			19,285
Shares held for Share Award Scheme			(599)			(590)
Employee share-based compensation reserve			226			199
Merger reserve			694			694
Retained earnings			9,249			8,783
Equity attributable to shareholders of HKEX			31,655			28,371
Total liabilities and equity			37,673			32,446
Net current assets			10,294			8,827

Approved by the Board of Directors on 27 February 2017

**CHOW Chung Kong** 

Director

LI Xiaojia, Charles

Director

# 48. Statement of Financial Position and Reserve Movement of HKEX (continued)

## (a) Reserve movement of HKEX

	Employee share-based compensation reserve \$m	Convertible bond reserve \$m	Merger reserve \$m	Retained earnings \$m
At 1 Jan 2015	142	409	694	8,452
Profit attributable to shareholders	_	_	_	10,001
2014 final dividend at \$2.15 per share	-	-	_	(2,533)
2015 interim dividend at \$3.08 per share	_	_	_	(3,679)
Unclaimed HKEX dividends forfeited	-	_	_	18
Vesting of shares of Share Award Scheme	(126)	_	_	(8)
Employee share-based compensation benefits	183	_	_	-
Conversion of convertible bonds		(409)	_	(3,468)
At 31 Dec 2015	199	_	694	8,783
At 1 Jan 2016	199	-	694	8,783
Profit attributable to shareholders	-	-	-	6,597
2015 final dividend at \$2.87 per share	-	-	-	(3,459)
2016 interim dividend at \$2.21 per share	-	-	-	(2,683)
Unclaimed HKEX dividends forfeited	-	-	-	22
Vesting of shares of Share Award Scheme	(186)	-	-	(11)
Employee share-based compensation benefits	213	_	_	_
At 31 Dec 2016	226	_	694	9,249

## Financial Calendar 2017

Announce 2016 final results	27 February
2017 AGM	26 April
Ex-dividend date for final dividend	28 April
Despatch scrip dividend circular and election form	On or about 10 May
Announce scrip share subscription price	On or about 16 May
Despatch dividend warrants/definitive share certificates	2 June
Announce 2017 first quarter results	May
Announce 2017 interim results	August
Announce 2017 third quarter results	November

#### For Shareholders to attend and vote at 2017 AGM

Latest time to lodge transfer documents for registration with HKEX's registrar	At 4:30 pm on 21 April 2017
Closure of HKEX's Register of Members	24 to 26 April 2017 (both dates inclusive)
Record date	26 April 2017

## **2016 Dividends**

Interim dividend	\$2.21 per share
Proposed final dividend	\$2.04 per share

Subject to Shareholders' approval at the 2017 AGM of the proposed final dividend and a general mandate to issue shares, the final dividend will be payable in cash with a scrip alternative where a 5 per cent discount on the subscription price will be offered to Shareholders who elect to subscribe for shares. The scrip dividend alternative is also conditional upon the SFC's granting the listing of, and permission to deal in, new shares of HKEX to be issued pursuant thereto. Details of the scrip dividend alternative will be set out in a circular to Shareholders.

Further information about HKEX's scrip dividend scheme and dividend history is available on the HKEX Group website IR.

## **Share Information**

HKEX shares are listed on the Stock Exchange. HKEX is currently a constituent stock of the HSI and a number of sustainability indices as disclosed on the HKEX Group website CG.

Listing	
As at 31 December 2016	
- Number of issued shares	1,224,322,572 shares
<ul> <li>Market capitalisation</li> </ul>	\$224.3 billion
Board lot size	100 shares

#### For Shareholders to be entitled to 2016 final dividend

Latest time to lodge transfer documents for registration with HKEX's registrar	At 4:30 pm on 2 May 2017
Closure of HKEX's Register of Members	4 to 5 May 2017 (both dates inclusive)
Record date	5 May 2017

# Stock CodesStock Exchange388Reuters0388.HKBloomberg388 HK Equity

SEDOL1

ISIN

HKXCY
43858F109

6267359 HK

HK0388045442

#### HKEX share performance vs HSI in 2016



## Shareholding Distribution as at 31 December 2016 (based on HKEX's Register of Members)

Size of shareholding	Number of Shareholders	% of Shareholders	Number of shares held ('000)	% of HKEX shares in issue
1 – 1,000	2,594	46.8	1,219	0.1
1,001 – 5,000	1,816	32.7	4,481	0.4
5,001 – 10,000	460	8.3	3,490	0.3
10,001 – 100,000	545	9.8	16,085	1.3
100,001 and above	131	2.4	1,199,048	97.9
Total	5,546	100.0	1,224,323	100.0

Details about HKEX's major Shareholder are disclosed in the Corporate Governance Report contained in this Annual Report.

## **Electronic Communication**

This Annual Report is printed in English and Chinese, and is available under the Regulatory Disclosure (Regulatory Reports) section of the HKEX Group website IR.

Shareholders are encouraged to access HKEX's corporate communications electronically via the HKEX Group website to help protect the environment. Shareholders may at any time change their choice of language or means of receiving HKEX's corporate communications free of charge by giving not less than seven days' notice in writing to HKEX's registrar.

## HKEX's Registrar - Hong Kong Registrars Limited

## For corporate communications:

By post: 17M Floor, Hopewell Centre,

183 Queen's Road East, Wan Chai, Hong Kong

By email: hkex.ecom@computershare.com.hk

#### For transfer of shares:

Address: Shops 1712-1716, 17th Floor, Hopewell Centre,

183 Queen's Road East, Wan Chai, Hong Kong

Tel: +852 2862 8555

Fax: +852 2865 0990 / +852 2529 6087

## **Registration for News Alerts**

Shareholders who would like to be alerted when HKEX publishes its corporate communications on the HKEXnews website can register for alerts in the Investment Service Centre section of the HKEX Market website (<a href="https://www.hkex.com.hk">www.hkex.com.hk</a>). Further information about Shareholder communications can be found in the Corporate Governance Report contained in this Annual Report.

# **Feedback on Annual Report**

HKEX values feedback on this Annual Report as well as its reporting of the Group's financial and governance performance. Shareholders may give their comments via the online form at <a href="https://www.hkexgroup.com/Investor-Relations/Regulatory-Disclosure/Regulatory-Reports">www.hkexgroup.com/Investor-Relations/Regulatory-Disclosure/Regulatory-Reports</a> or email at ssd@hkex.com.hk.

## **GLOSSARY**

2016 AGM AGM held on 28 April 2016 at 4:30 pm at the Exchange

Auditorium in the Exchange Exhibition Hall, One and Two

Exchange Square, Central, Hong Kong

2017 AGM AGM to be held on 26 April 2017
ADT Average daily turnover value
AGM(s) HKEX's annual general meeting(s)
AHFT After-Hours Futures Trading

Awarded Shares Shares awarded under the Share Award Scheme

BBS Bronze Bauhinia Star
Board HKEX's board of directors

Cash Market HKEX's securities related business excluding stock options

CBBCs Callable Bull/Bear Contracts

CCASS Central Clearing and Settlement System

CCP Central counterparty

ChinaClear China Securities Depository and Clearing Corporation Limited

CNH Offshore RMB traded outside Mainland China

Refer to Appendix 14 to the Main Board Listing Rules

Corporate Governance Code and Corporate Governance Report

Ps Clearing Participants

CSR Corporate Social Responsibility

Derivatives Market HKEX's derivatives related business including stock options

Director(s) HKEX's director(s)
DWs Derivative warrants

Elected Directors Directors elected by the Shareholders at general meetings

EPs or Participant(s) Exchange Participant(s)

ESG Environmental, Social and Governance

ETF(s) Exchange Traded Fund(s)

EU European Union

Euro The official currency of the Eurozone
Exchange or SEHK or Stock Exchange The Stock Exchange of Hong Kong Limited

FCA Financial Conduct Authority
FIC Fixed income and currency
Financial Secretary Financial Secretary of the HKSAR
Futures Exchange or HKFE Hong Kong Futures Exchange Limited

GBS Gold Bauhinia Star

GEM The Growth Enterprise Market

GEM Listing Rules Rules Governing the Listing of Securities on the Growth

Enterprise Market of The Stock Exchange of Hong Kong Limited

Government HKSAR Government

Government Appointed Director(s) Director(s) appointed by the Financial Secretary pursuant to

Section 77 of the SFO

Group HKEX and its subsidiaries

HKCC HKFE Clearing Corporation Limited

HKEX or the Company Hong Kong Exchanges and Clearing Limited

HKEX's Articles HKEX's Articles of Association

HKFRS(s) Hong Kong Financial Reporting Standard(s)

HKICPA Hong Kong Institute of Certified Public Accountants
HKSAR Hong Kong Special Administrative Region of the People's

Republic of China

HKSCC Hong Kong Securities Clearing Company Limited

HSCEI/H-shares Index Hang Seng China Enterprises Index

HSI Hang Seng Index

INED(s) Independent Non-executive Director(s) of HKEX

IPO(s) Initial Public Offering(s)
IT Information Technology

January 2003 MOU MOU Governing Listing Matters between the SFC and SEHK,

dated 28 January 2003

JP Justice of the Peace

Lehman Brothers Securities Asia Limited Lehman

LCH.Clearnet Group Limited I CH

**Listing Committees** Listing Committee and GEM Listing Committee Listing Rule(s) or Rule(s) Main Board Listing Rules and GEM Listing Rules

The London Metal Exchange

LME Clear Limited LME Clear

HKEX Investment (UK) Limited, LMEH, the LME and LME Clear LME Group

**LMEH** LME Holdings Limited

LME Clear's clearing system which enables its Members to view **LMEmercury** 

their risk positions in real time

London Aluminium/Zinc/Copper/Nickel/Tin/Lead Mini Futures London Metal Mini Futures Main Board Listing Rules Rules Governing the Listing of Securities on The Stock Exchange

of Hong Kong Limited

Model Code Model Code for Securities Transactions by Directors of Listed

Issuers, Appendix 10 to the Main Board Listing Rules

MOU Memorandum of Understanding

Hong Kong and overseas investors trading in eligible securities Northbound Trading

that are listed on the Shanghai Stock Exchange and SZSE

through the Stock Connects

OTC Over-the-counter

OTC Clear OTC Clearing Hong Kong Limited

"Principles for financial market infrastructures" published by the **PFMI** 

Committee on Payment and Settlement Systems (now known as the Committee on Payments and Market Infrastructures) and the International Organization of Securities Commissions

**RMB** Renminbi

Silver Bauhinia Star SBS

Senior Management The Group's senior executives, and the list of Senior Management

as at the date of this Annual Report is set out in the Board of Directors and Senior Management section of this Annual Report

**SEOCH** The SEHK Options Clearing House Limited

**SFC** Securities and Futures Commission **SFO** 

Securities and Futures Ordinance (Chapter 571 of the Laws of

Hong Kong)

Shanghai-Hong Kong Stock Connect

or Shanghai Connect

A mutual market access programme that links the stock markets in Shanghai and Hong Kong, enabling investors in Hong Kong and Mainland China to trade and settle shares listed on the other market via the exchange and clearing house in their home

Shenzhen-Hong Kong Stock Connect

or Shenzhen Connect

A mutual market access programme that links the stock markets in Shenzhen and Hong Kong, enabling investors in Hong Kong and Mainland China to trade and settle shares listed on the other market via the exchange and clearing house in their home

market

Shareholder(s) HKEX's shareholder(s)

Share Award Scheme or Scheme The Employees' Share Award Scheme adopted by the Board

on 14 September 2005 which was subsequently amended on 16 August 2006, 13 May 2010, 17 December 2013 and 17 June

Southbound Trading Mainland investors trading in eligible securities that are listed on

the Stock Exchange through the Stock Connects

**Stock Connects** Shanghai-Hong Kong Stock Connect and Shenzhen-Hong Kong

Stock Connect

**SZSE** Shenzhen Stock Exchange

UK United Kingdom

United States of America US **USD** United States dollar \$/HK\$/HKD Hong Kong dollar

\$bn/bn Hong Kong dollar in billion/billion Hong Kong dollar in million \$m

£/GBP Pound sterling



