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香港交易及結算所有限公司  
HONG KONG EXCHANGES AND CLEARING LIMITED

(Incorporated in Hong Kong with limited liability)

Stock Codes: 388 (HKD counter) and 80388 (RMB counter)

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## **Condensed Consolidated Financial Statements**

### **For the six months ended 30 June 2023**

### **(Unaudited)**

As at 16 August 2023, the Board of Directors of Hong Kong Exchanges and Clearing Limited (HKEX or the Company) comprises 12 Independent Non-executive Directors, namely Mrs Laura May-Lung CHA (Chairman), Mr Nicholas Charles ALLEN, Mr Apurv BAGRI, Mr CHEAH Cheng Hye, Ms CHEUNG Ming Ming, Anna, Mrs CHOW WOO Mo Fong, Susan, Mr HUNG Pi Cheng, Benjamin, Ms LEUNG Nisa Bernice Wing-Yu, Mr LEUNG Pak Hon, Hugo, Mr Carlson TONG, Mr YAM Chi Kwong, Joseph and Mr ZHANG Yichen, and one Executive Director, Mr Alejandro Nicolas AGUZIN, who is also the Chief Executive of HKEX.

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# CONDENSED CONSOLIDATED INCOME STATEMENT (UNAUDITED)

(Financial figures are expressed in Hong Kong Dollar)

	Note	Six months ended 30 Jun 2023 \$m	Six months ended 30 Jun 2022 \$m
Trading fees and trading tariffs	4	3,182	3,553
Clearing and settlement fees		2,028	2,291
Stock Exchange listing fees		785	994
Depository, custody and nominee services fees		556	647
Market data fees		537	546
Other revenue		770	757
<b>Revenue</b>		<b>7,858</b>	<b>8,788</b>
Investment income		5,774	299
Interest rebates to Participants		(3,098)	(210)
Net investment income	5	2,676	89
Donation income of HKEX Foundation		29	37
Sundry income		12	23
<b>Revenue and other income</b>		<b>10,575</b>	<b>8,937</b>
Less: Transaction-related expenses	6	(94)	(87)
<b>Revenue and other income less transaction-related expenses</b>		<b>10,481</b>	<b>8,850</b>
<b>Operating expenses</b>			
Staff costs and related expenses	7	(1,711)	(1,667)
Information technology and computer maintenance expenses		(381)	(363)
Premises expenses		(64)	(58)
Product marketing and promotion expenses		(51)	(50)
Professional fees		(137)	(77)
HKEX Foundation charitable donations		(77)	(56)
Other operating expenses		(201)	(185)
		<b>(2,622)</b>	<b>(2,456)</b>
<b>EBITDA*</b>		<b>7,859</b>	<b>6,394</b>
Depreciation and amortisation		(719)	(717)
<b>Operating profit</b>		<b>7,140</b>	<b>5,677</b>
Finance costs	8	(70)	(73)
Share of profits less losses of joint ventures		39	42
<b>Profit before taxation</b>		<b>7,109</b>	<b>5,646</b>
<b>Taxation</b>	9	<b>(741)</b>	<b>(817)</b>
<b>Profit for the period</b>		<b>6,368</b>	<b>4,829</b>
<b>Profit/(loss) attributable to:</b>			
Shareholders of HKEX		6,312	4,836
Non-controlling interests		56	(7)
<b>Profit for the period</b>		<b>6,368</b>	<b>4,829</b>
<b>Basic earnings per share</b>	10(a)	<b>\$4.99</b>	<b>\$3.82</b>
<b>Diluted earnings per share</b>	10(b)	<b>\$4.98</b>	<b>\$3.82</b>

\* EBITDA represents earnings before interest expenses and other finance costs, taxation, depreciation and amortisation. It excludes the Group's share of results of the joint ventures.

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## CONDENSED CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (UNAUDITED)

(Financial figures are expressed in Hong Kong Dollar)

	Six months ended 30 Jun 2023 \$m	Six months ended 30 Jun 2022 \$m
<b>Profit for the period</b>	<b>6,368</b>	4,829
<b>Other comprehensive income</b>		
<b>Items that may be reclassified subsequently to profit or loss:</b>		
Currency translation differences of foreign subsidiaries	29	66
Cash flow hedges, net of tax	14	(17)
Changes in fair value of financial assets measured at fair value through other comprehensive income, net of tax	56	(247)
<b>Other comprehensive income/(loss)</b>	<b>99</b>	(198)
<b>Total comprehensive income</b>	<b>6,467</b>	4,631
<b>Total comprehensive income/(loss) attributable to:</b>		
Shareholders of HKEX	6,415	4,642
Non-controlling interests	52	(11)
<b>Total comprehensive income</b>	<b>6,467</b>	4,631

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# CONDENSED CONSOLIDATED STATEMENT OF FINANCIAL POSITION (UNAUDITED)

(Financial figures are expressed in Hong Kong Dollar)

	Note	At 30 Jun 2023			At 31 Dec 2022		
		Current \$m	Non-current \$m	Total \$m	Current \$m	Non-current \$m	Total \$m
<b>Assets</b>							
Cash and cash equivalents	12	148,578	-	148,578	184,965	-	184,965
Financial assets measured at fair value through profit or loss	12	6,394	827	7,221	6,177	787	6,964
Financial assets measured at fair value through other comprehensive income	12	18,917	-	18,917	14,962	-	14,962
Financial assets measured at amortised cost	12	68,314	1,507	69,821	70,285	209	70,494
Derivative financial instruments	13	69,073	-	69,073	80,718	-	80,718
Accounts receivable, prepayments and deposits	14	21,388	21	21,409	25,354	21	25,375
Tax recoverable		42	-	42	17	-	17
Interests in joint ventures		-	309	309	-	291	291
Goodwill and other intangible assets		-	19,084	19,084	-	18,968	18,968
Fixed assets		-	1,505	1,505	-	1,640	1,640
Right-of-use assets		-	1,497	1,497	-	1,604	1,604
Deferred tax assets		-	36	36	-	53	53
<b>Total assets</b>		<b>332,706</b>	<b>24,786</b>	<b>357,492</b>	<b>382,478</b>	<b>23,573</b>	<b>406,051</b>
<b>Liabilities and equity</b>							
<b>Liabilities</b>							
Derivative financial instruments	13	69,041	-	69,041	80,705	-	80,705
Margin deposits, Mainland security and settlement deposits, and cash collateral from Participants	15	187,899	-	187,899	227,902	-	227,902
Accounts payable, accruals and other liabilities	16	19,885	-	19,885	19,054	-	19,054
Deferred revenue		721	322	1,043	1,076	333	1,409
Taxation payable		1,037	-	1,037	2,172	-	2,172
Other financial liabilities		100	-	100	40	-	40
Participants' contributions to Clearing House Funds	17	23,072	-	23,072	21,205	-	21,205
Lease liabilities		260	1,363	1,623	297	1,448	1,745
Borrowings	18	432	63	495	430	61	491
Provisions		79	108	187	67	90	157
Deferred tax liabilities		-	1,037	1,037	-	1,072	1,072
<b>Total liabilities</b>		<b>302,526</b>	<b>2,893</b>	<b>305,419</b>	<b>352,948</b>	<b>3,004</b>	<b>355,952</b>
<b>Equity</b>							
Share capital	19			31,918			31,918
Shares held for Share Award Scheme	19			(859)			(918)
Employee share-based compensation reserve	20			455			346
Hedging and revaluation reserves				(196)			(266)
Exchange reserve				(122)			(155)
Designated reserves	21			827			686
Reserve relating to written put options to non-controlling interests				(430)			(430)
Retained earnings				20,057			18,547
<b>Equity attributable to shareholders of HKEX</b>				<b>51,650</b>			<b>49,728</b>
Non-controlling interests				423			371
<b>Total equity</b>				<b>52,073</b>			<b>50,099</b>
<b>Total liabilities and equity</b>				<b>357,492</b>			<b>406,051</b>
<b>Net current assets</b>				<b>30,180</b>			<b>29,530</b>

## CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (UNAUDITED)

(Financial figures are expressed in Hong Kong Dollar)

	Attributable to shareholders of HKEX									
	Share capital and shares held for Share Award Scheme (note 19) \$m	Employee share-based compensation reserve (note 20) \$m	Hedging and revaluation reserves \$m	Exchange reserve \$m	Designated reserves (note 21) \$m	Reserve relating to written put options to non-controlling interests \$m	Retained earnings \$m	Total \$m	Non-controlling interests \$m	Total equity \$m
At 1 Jan 2023	31,000	346	(266)	(155)	686	(430)	18,547	49,728	371	50,099
Profit for the period	-	-	-	-	-	-	6,312	6,312	56	6,368
Other comprehensive income	-	-	70	33	-	-	-	103	(4)	99
Total comprehensive income	-	-	70	33	-	-	6,312	6,415	52	6,467
Total transactions with shareholders of HKEX, recognised directly in equity:										
- 2022 second interim dividend at \$3.69 per share	-	-	-	-	-	-	(4,669)	(4,669)	-	(4,669)
- Unclaimed HKEX dividends forfeited	-	-	-	-	-	-	10	10	-	10
- Shares purchased for Share Award Scheme	(9)	-	-	-	-	-	-	(9)	-	(9)
- Vesting of shares of Share Award Scheme	68	(66)	-	-	-	-	(2)	-	-	-
- Employee share-based compensation benefits	-	175	-	-	-	-	-	175	-	175
- Transfer of reserves	-	-	-	-	141	-	(141)	-	-	-
	59	109	-	-	141	-	(4,802)	(4,493)	-	(4,493)
At 30 Jun 2023	31,059	455	(196)	(122)	827	(430)	20,057	51,650	423	52,073

## CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (UNAUDITED)

(Financial figures are expressed in Hong Kong Dollar)

	Attributable to shareholders of HKEX							Total \$m	Non- controlling interests \$m	Total equity \$m
	Share capital and shares held for Share Award Scheme \$m	Employee share-based compensation reserve \$m	Hedging and revaluation reserves \$m	Exchange reserve \$m	Designated reserves \$m	Reserve relating to written put options to non-controlling interests \$m	Retained earnings \$m			
At 1 Jan 2022	30,995	306	15	(117)	623	(369)	18,173	49,626	284	49,910
Profit for the period	-	-	-	-	-	-	4,836	4,836	(7)	4,829
Other comprehensive income	-	-	(264)	70	-	-	-	(194)	(4)	(198)
Total comprehensive income	-	-	(264)	70	-	-	4,836	4,642	(11)	4,631
Total transactions with shareholders of HKEX, recognised directly in equity:										
- 2021 second interim dividend at \$4.18 per share	-	-	-	-	-	-	(5,290)	(5,290)	-	(5,290)
- Unclaimed HKEX dividends forfeited	-	-	-	-	-	-	15	15	-	15
- Shares purchased for Share Award Scheme	(42)	-	-	-	-	-	-	(42)	-	(42)
- Vesting of shares of Share Award Scheme	82	(81)	-	-	-	-	(1)	-	-	-
- Employee share-based compensation benefits	-	204	-	-	-	-	-	204	-	204
- UK tax relating to Share Award Scheme	-	-	-	-	-	-	(2)	(2)	-	(2)
- Transfer of reserves	-	-	-	-	1	-	(1)	-	-	-
	40	123	-	-	1	-	(5,279)	(5,115)	-	(5,115)
At 30 Jun 2022	31,035	429	(249)	(47)	624	(369)	17,730	49,153	273	49,426

## CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS (UNAUDITED)

(Financial figures are expressed in Hong Kong Dollar)

	Note	Six months ended 30 Jun 2023 \$m	Six months ended 30 Jun 2022 \$m
<b>Cash flows from principal operating activities</b>			
Net cash inflow from principal operating activities	22	5,395	6,778
<b>Cash flows from other operating activities</b>			
Net redemption from external fund managers for sales of financial assets measured at fair value through profit or loss		186	90
Net cash inflow from operating activities		5,581	6,868
<b>Cash flows from investing activities</b>			
Payments for purchases of fixed assets and intangible assets		(630)	(616)
Net (increase)/decrease in financial assets of Corporate Funds:			
Increase in time deposits with original maturities more than three months		(1,918)	(1,097)
Proceeds received upon maturity of financial assets measured at amortised cost (excluding time deposits)		1,108	302
Payments for purchases of financial assets measured at amortised cost (excluding time deposits)		(2,115)	(813)
Interest received from financial assets measured at fair value through other comprehensive income		328	59
Dividend received from a joint venture		21	24
Net cash outflow from investing activities		(3,206)	(2,141)
<b>Cash flows from financing activities</b>			
Purchases of shares for Share Award Scheme		(9)	(42)
Payments of other finance costs		(36)	(35)
Dividends paid to shareholders of HKEX		(4,649)	(5,313)
Lease payments:			
- Capital elements		(155)	(152)
- Interest elements		(30)	(36)
Net cash outflow from financing activities		(4,879)	(5,578)
<b>Net decrease in cash and cash equivalents</b>		<b>(2,504)</b>	<b>(851)</b>
Cash and cash equivalents at 1 Jan		15,258	12,398
Exchange differences on cash and cash equivalents		(9)	(12)
<b>Cash and cash equivalents at 30 Jun</b>		<b>12,745</b>	<b>11,535</b>
<b>Analysis of cash and cash equivalents</b>			
Cash on hand and balances and deposits with banks and short-term investments of Corporate Funds	12	13,621	12,076
Less: Cash reserved for supporting Skin-in-the-Game and default fund credits of clearing houses	12(b)	(876)	(541)
		12,745	11,535

- (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 2) and represents the cash flows generated from the trading and clearing operations of the four exchanges and five clearing houses and ancillary services of the Group. This non-HKFRS measure may not be comparable to similar measures presented by other companies. Cash flows from principal operating activities and cash flows from other operating activities together represent cash flows from operating activities as defined by Hong Kong Accounting Standard (HKAS) 7: Statement of Cash Flows.

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## NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

### 1. Basis of Preparation

These unaudited condensed consolidated financial statements are prepared in accordance with HKAS 34: Interim Financial Reporting, issued by the Hong Kong Institute of Certified Public Accountants.

The financial information relating to the year ended 31 December 2022 that is included in these unaudited condensed consolidated financial statements for the six months ended 30 June 2023 as comparative information does not constitute the statutory annual consolidated financial statements of Hong Kong Exchanges and Clearing Limited (HKEX or the Company) for that year but is derived from those consolidated financial statements. Further information relating to these statutory financial statements required to be disclosed in accordance with section 436 of the Hong Kong Companies Ordinance (Chapter 622) is as follows:

The Company has delivered the consolidated financial statements for the year ended 31 December 2022 to the Registrar of Companies as required by section 662(3) of, and Part 3 of Schedule 6 to, the Hong Kong Companies Ordinance (Chapter 622).

The Company's auditor has reported on those consolidated financial statements. The auditor's report was unqualified; did not include a reference to any matters to which the auditor drew attention by way of emphasis without qualifying its report; and did not contain a statement under sections 406(2), 407(2) or (3) of the Hong Kong Companies Ordinance (Chapter 622).

### 2. Accounting Policies

These unaudited condensed consolidated financial statements should be read in conjunction with the 2022 annual consolidated financial statements. Except as described below and the change in operating segments as described in note 3, the accounting policies and methods of computation used in the preparation of these unaudited condensed consolidated financial statements are consistent with those used in the annual consolidated financial statements for the year ended 31 December 2022.

#### (a) Adoption of new/revised Hong Kong Financial Reporting Standards (HKFRSs)

In 2023, the Company and its subsidiaries (collectively, the Group) has adopted the following amendments to HKFRSs which are pertinent to the Group's operations and effective for accounting periods beginning on or after 1 January 2023:

Amendments to HKAS 1 and HKFRS Practice Statement 2	Disclosure of Accounting Policies
Amendments to HKAS 8	Accounting Policies, Changes in Accounting Estimates and Errors: Definition of Accounting Estimates
Amendments to HKAS 12	Income Taxes: Deferred Tax related to Assets and Liabilities arising from a Single Transaction
Amendments to HKAS 12	Income Taxes: International Tax Reform – Pillar Two Model Rules

The adoption of these amendments did not have any financial impact on the Group during the six months ended 30 June 2023.



### 3. Operating Segments

The Group determines its operating segments based on the internal management reports that are used to make strategic decisions reviewed by the chief operating decision-maker.

In prior years, the Group had five reportable segments ("Corporate Items" is not a reportable segment): Cash, Equity and Financial Derivatives, Commodities, Post Trade and Technology.

To optimise resources to successfully deliver the initiatives set out in HKEX's vision to build the Marketplace of the Future, the Group's operating segments have been reorganised: trading and clearing businesses are now being managed together in each asset class and therefore Post Trade revenue and expenses are reallocated to the Cash, Equity and Financial Derivatives and Commodities segments for each asset class. In addition, HKEX's data business has become one of the Group's key strategic development focuses, and revenue and expenses for Hong Kong's data business have been reallocated from the Cash and Equity and Financial Derivatives segments, and grouped together with other non-cyclical businesses formerly included in the Technology segment and renamed as the Data and Connectivity segment.

The operations in each of the Group's reportable segments after reorganisation are as follows:

The **Cash** segment covers all equity products traded on the Cash Market platforms of The Stock Exchange of Hong Kong Limited (Stock Exchange) and those traded through Shanghai-Hong Kong Stock Connect and Shenzhen-Hong Kong Stock Connect (Stock Connect), the clearing, settlement and custodian activities relating to these products and any other related activities. The major sources of revenue of the segment are trading fees, clearing and settlement fees, listing fees, depository, custody and nominee services fees and net investment income earned on the Margin Funds and Clearing House Funds relating to these products.

The **Equity and Financial Derivatives** segment refers to derivatives products traded on the Stock Exchange and Hong Kong Futures Exchange Limited (Futures Exchange), the clearing, settlement and custodian activities relating to these products and over-the-counter (OTC) derivatives contracts and other related activities. These include the provision and maintenance of trading and clearing 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 OTC derivatives contracts. The major sources of revenue are trading fees and trading tariffs, clearing and settlement fees, listing fees, depository, custody and nominee services fees and net investment income earned on the Margin Funds and Clearing House Funds relating to these products.

### 3. Operating Segments (continued)

The **Commodities** segment refers to the operations of The London Metal Exchange (LME), which operates a global exchange in the UK, for the trading of base and ferrous metals futures and options contracts and the operations of its clearing house, LME Clear Limited (LME Clear); it also covers the operations of Qianhai Mercantile Exchange Co., Ltd. (QME), the commodity trading platform in Mainland China, and the commodities contracts traded on the Futures Exchange. The major sources of revenue of the segment are trading fees and clearing and settlement fees of commodity products, commodity market data fees, net investment income earned on the Margin Funds and Clearing House Funds relating to these products, and fees for ancillary operations.

The **Data and Connectivity** segment covers sales of market data relating to the Hong Kong Cash and Derivatives Markets, all services in connection with providing users with access to the platform and infrastructure of the Group and services provided by BayConnect Technology Company Limited (BayConnect). Its major sources of revenue are market data fees, network, terminal user, data line and software sub-license fees and hosting services fees.

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

Comparative figures have been restated to conform to the current period’s presentation.

The chief operating decision-maker assesses the performance of the operating segments principally based on their EBITDA.

An analysis by operating segment of the Group’s EBITDA, profit before taxation and analysis of revenue by timing of revenue recognition for the period, is set out as follows:

	Six months ended 30 Jun 2023					
	Cash \$m	Equity and Financial Derivatives \$m	Commodities \$m	Data and Connectivity \$m	Corporate Items \$m	Group \$m
Timing of revenue recognition:						
Point in time	3,387	1,414	780	49	5	5,635
Over time	713	374	164	969	3	2,223
Revenue	4,100	1,788	944	1,018	8	7,858
Net investment income	99	1,665	95	-	817	2,676
Donation income of HKEX Foundation	-	-	-	-	29	29
Sundry income	7	-	-	4	1	12
Revenue and other income	4,206	3,453	1,039	1,022	855	10,575
Less: Transaction-related expenses	(5)	(89)	-	-	-	(94)
Revenue and other income less transaction-related expenses	4,201	3,364	1,039	1,022	855	10,481
Operating expenses	(552)	(426)	(591)	(213)	(840)	(2,622)
Reportable segment EBITDA	3,649	2,938	448	809	15	7,859
Depreciation and amortisation	(179)	(124)	(165)	(74)	(177)	(719)
Finance costs	(17)	(24)	(2)	(1)	(26)	(70)
Share of profits less losses of joint ventures	38	1	-	-	-	39
Reportable segment profit before taxation	3,491	2,791	281	734	(188)	7,109

NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (CONT'D)

3. Operating Segments (continued)

	As restated Six months ended 30 Jun 2022					
	Cash \$m	Equity and Financial Derivatives \$m	Commodities \$m	Data and Connectivity \$m	Corporate Items \$m	Group \$m
Timing of revenue recognition:						
Point in time	3,929	1,607	784	36	1	6,357
Over time	745	539	204	940	3	2,431
Revenue	4,674	2,146	988	976	4	8,788
Net investment income/(loss)	16	345	106	-	(378)	89
Donation income of HKEX Foundation	-	-	-	-	37	37
Sundry income	11	-	6	4	2	23
Revenue and other income	4,701	2,491	1,100	980	(335)	8,937
Less: Transaction-related expenses	(5)	(82)	-	-	-	(87)
Revenue and other income less transaction-related expenses	4,696	2,409	1,100	980	(335)	8,850
Operating expenses	(505)	(427)	(515)	(214)	(795)	(2,456)
Reportable segment EBITDA	4,191	1,982	585	766	(1,130)	6,394
Depreciation and amortisation	(187)	(119)	(190)	(63)	(158)	(717)
Finance costs	(18)	(23)	(3)	(2)	(27)	(73)
Share of profits less losses of joint ventures	42	-	-	-	-	42
Reportable segment profit before taxation	4,028	1,840	392	701	(1,315)	5,646

4. Trading Fees and Trading Tariffs

	Six months ended 30 Jun 2023 \$m	Six months ended 30 Jun 2022 \$m
Equity securities traded on the Stock Exchange and through Stock Connect	1,525	1,791
DWs, CBBCs and warrants traded on the Stock Exchange	223	349
Futures and options contracts traded on the Stock Exchange and the Futures Exchange	926	910
Base, ferrous and precious metals futures and options contracts traded on the LME and QME	508	503
	<b>3,182</b>	<b>3,553</b>

NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (CONT'D)

**5. Net Investment Income**

	Six months ended 30 Jun 2023 \$m	Six months ended 30 Jun 2022 \$m
Gross interest income from financial assets measured at amortised cost	5,225	735
Gross interest income from financial assets measured at fair value through other comprehensive income	328	59
Interest rebates to Participants	(3,098)	(210)
<b>Net interest income</b>	<b>2,455</b>	<b>584</b>
Net gains/(losses) on financial assets mandatorily measured at fair value through profit or loss:		
- investment funds	215	(511)
- other investments	(14)	(12)
	201	(523)
Others	20	28
<b>Net investment income</b>	<b>2,676</b>	<b>89</b>

**6. Transaction-related Expenses**

Transaction-related expenses comprise of license fees, bank charges and other costs which directly vary with trading and clearing transactions.

**7. Staff Costs and Related Expenses**

	Six months ended 30 Jun 2023 \$m	Six months ended 30 Jun 2022 \$m
Salaries and other short-term employee benefits	1,426	1,361
Employee share-based compensation benefits of HKEX Share Award Scheme (Share Award Scheme)	175	204
Termination benefits	1	4
Retirement benefit costs (note (a))	109	98
	<b>1,711</b>	<b>1,667</b>

(a) The Group has sponsored a defined contribution provident fund scheme (ORSO Plan) and a Mandatory Provident Fund scheme (MPF Scheme) for the benefits of its employees in Hong Kong. The Group has also sponsored a defined contribution pension scheme for all employees of the LME and LME Clear (LME Pension Scheme). In addition, the Group has made contributions for employees of other overseas subsidiaries subject to the relevant regulations in the countries in which the overseas subsidiaries operate. The retirement benefit costs charged to the condensed consolidated income statement represent contributions paid and payable by the Group to the ORSO Plan, the MPF Scheme, the LME Pension Scheme, contribution plans of other overseas subsidiaries and related fees.

NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (CONT'D)

**8. Finance Costs**

	Six months ended 30 Jun 2023 \$m	Six months ended 30 Jun 2022 \$m
Interest on borrowings	4	2
Interest on lease liabilities	30	36
Banking facility commitment fees	26	25
Negative interest on Euro and Japanese Yen deposits	10	10
	<b>70</b>	<b>73</b>

**9. Taxation**

Taxation charge/(credit) in the condensed consolidated income statement represents:

	Six months ended 30 Jun 2023 \$m	Six months ended 30 Jun 2022 \$m
Current tax - Hong Kong Profits Tax	703	771
Current tax - Overseas Tax	76	85
Total current tax	779	856
Deferred tax	(38)	(39)
Taxation charge	<b>741</b>	<b>817</b>

- (a) Hong Kong Profits Tax has been provided at the rate of 16.5 per cent (2022: 16.5 per cent) and overseas profits tax at the rates of taxation prevailing in the countries in which the Group operates, with the average corporation tax rate applicable to the subsidiaries in the UK being 23.5 per cent (2022: 19 per cent).
- (b) Amendments to HKAS 12 International Tax Reform – Pillar Two Model Rules apply to income taxes arising from tax law enacted or substantively enacted to implement the Pillar Two model rules published by the Organisation for Economic Co-operation and Development. Pillar Two legislation has been substantively enacted in the UK as at 30 June 2023 and will become applicable to UK entities from 1 January 2024. The Group has applied the exception to recognising and disclosing information about deferred tax assets and liabilities related to Pillar Two income taxes.

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NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (CONT'D)

**10. Earnings Per Share**

The calculation of the basic and diluted earnings per share is as follows:

(a) Basic earnings per share

	Six months ended 30 Jun 2023	Six months ended 30 Jun 2022
Profit attributable to shareholders (\$m)	6,312	4,836
Weighted average number of shares in issue less shares held for Share Award Scheme (in '000)	1,265,477	1,265,460
<b>Basic earnings per share (\$)</b>	<b>4.99</b>	<b>3.82</b>

(b) Diluted earnings per share

	Six months ended 30 Jun 2023	Six months ended 30 Jun 2022
Profit attributable to shareholders (\$m)	6,312	4,836
Weighted average number of shares in issue less shares held for Share Award Scheme (in '000)	1,265,477	1,265,460
Effect of shares awarded under Share Award Scheme (in '000)	2,337	1,996
Weighted average number of shares for the purpose of calculating diluted earnings per share (in '000)	1,267,814	1,267,456
<b>Diluted earnings per share (\$)</b>	<b>4.98</b>	<b>3.82</b>

**11. Dividends**

	Six months ended 30 Jun 2023 \$m	Six months ended 30 Jun 2022 \$m
Interim dividend declared of \$4.50 (2022: \$3.45) per share at 30 Jun	5,705	4,374
Less: Dividend for shares held by Share Award Scheme at 30 Jun	(10)	(8)
	<b>5,695</b>	<b>4,366</b>

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NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (CONT'D)

12. Financial Assets

	At 30 Jun 2023 \$m	At 31 Dec 2022 \$m
Cash and cash equivalents	148,578	184,965
Financial assets measured at fair value through profit or loss	7,221	6,964
Financial assets measured at fair value through other comprehensive income	18,917	14,962
Financial assets measured at amortised cost	69,821	70,494
Derivative financial instruments	69,073	80,718
	<b>313,610</b>	358,103

The Group's financial assets comprised financial assets of cash prepayments and collateral for A-shares (Cash for A-shares), Margin Funds, Clearing House Funds, Corporate Funds and derivative financial instruments as follows:

	At 30 Jun 2023 \$m	At 31 Dec 2022 \$m
<u>Cash for A-shares (note (a))</u>		
Cash and cash equivalents	7,206	2,810
<u>Margin Funds<sup>1</sup></u>		
Cash and cash equivalents	107,157	147,182
Financial assets measured at fair value through other comprehensive income	15,391	11,931
Financial assets measured at amortised cost	54,993	58,580
	<b>177,541</b>	217,693
<u>Clearing House Funds (note 17)</u>		
Cash and cash equivalents	20,594	19,021
Financial assets measured at fair value through other comprehensive income	3,526	3,031
	<b>24,120</b>	22,052
<u>Corporate Funds</u>		
Cash and cash equivalents (note (b))	13,621	15,952
Financial assets measured at fair value through profit or loss	7,221	6,964
Financial assets measured at amortised cost (note (b))	14,828	11,914
	<b>35,670</b>	34,830
Derivative financial instruments (note 13)	69,073	80,718
	<b>313,610</b>	358,103

1 Excludes Settlement Reserve Fund and Settlement Guarantee Fund paid to China Securities Depository and Clearing Corporation Limited (ChinaClear) under Stock Connect, inter-central counterparties (inter-CCP) margin paid to Shanghai Clearing House (SHCH) under Swap Connect, and margin receivable from Clearing Participants of \$10,358 million (31 December 2022: \$10,209 million), which are included in accounts receivable, prepayments and deposits.

**12. Financial Assets (continued)**

The expected maturity dates of the financial assets are analysed as follows:

	At 30 Jun 2023						At 31 Dec 2022					
	Cash for A-shares	Margin Funds	Clearing House Funds	Corporate Funds	Derivative financial instruments	Total	Cash for A-shares	Margin Funds	Clearing House Funds	Corporate Funds	Derivative financial instruments	Total
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Within twelve months	7,206	177,541	24,120	33,336	69,073	311,276	2,810	217,693	22,052	33,834	80,718	357,107
Over twelve months	-	-	-	2,334	-	2,334	-	-	-	996	-	996
	7,206	177,541	24,120	35,670	69,073	313,610	2,810	217,693	22,052	34,830	80,718	358,103

- (a) Cash for A-shares includes:
- (i) Renminbi (RMB) cash prepayments received by HKSCC from its Clearing Participants for releasing their allocated A-shares on the trade day. Such prepayments will be used to settle HKSCC's Continuous Net Settlement (CNS) obligations payable on the next business day; and
  - (ii) Hong Kong Dollar/ United States Dollar cash collateral received by HKSCC from its Clearing Participants for releasing their allocated A-shares on the trade day. Such collateral will be refunded to the Clearing Participants when they settle their RMB CNS obligations on the next business day.
- (b) At 30 June 2023, cash and cash equivalents of Corporate Funds of \$876 million (31 December 2022: \$694 million) and financial assets measured at amortised cost of Corporate Funds of \$724 million (31 December 2022: \$604 million) were solely used to support Skin-in-the-Game and default fund credits for Clearing House Funds (note 17(a)).
- (c) The cash and cash equivalents of Margin Funds, Clearing House Funds, Corporate Funds reserved for supporting Skin-in-the-Game and default fund credits of Clearing House Funds (note (b)), and Cash for A-shares are held for specific purposes and cannot be used by the Group to finance other activities. These balances are not included in cash and cash equivalents of the Group for cash flow purposes in the condensed consolidated statement of cash flows.



13. Derivative Financial Instruments

	At 30 Jun 2023 \$m	At 31 Dec 2022 \$m
<u>Mandatorily measured at fair value</u>		
Derivative financial assets:		
- base and ferrous metals futures and options contracts cleared through LME Clear (note (a))	69,039	80,705
- forward foreign exchange contracts held as cash flow hedging instruments (note (b))	32	13
- foreign exchange swaps (note(c))	2	-
	<b>69,073</b>	80,718
Derivative financial liabilities:		
- base and ferrous metals futures and options contracts cleared through LME Clear (note (a))	69,039	80,705
- foreign exchange swaps (note(c))	2	-
	<b>69,041</b>	80,705

(a) The amounts represent the fair value of the outstanding base and ferrous metals futures and options contracts cleared through LME Clear that do not qualify for netting under HKAS 32 - Financial Instruments: Presentation, where LME Clear is acting in its capacity as a central counterparty to the contracts traded on the LME.

(b) Forward foreign exchange contracts have been designated as cash flow hedges for hedging foreign exchange risk of certain expenditure of LME and LME Clear.

At 30 June 2023, the notional amount of the outstanding forward foreign exchange contracts amounted to GBP 52 million (31 December 2022: GBP 97 million).

(c) The Group has entered into foreign exchange swaps for optimising foreign currency cash flows while hedging the overall foreign exchange exposures of the Group.

At 30 June 2023, the notional amount of the outstanding foreign exchange swaps amounted to \$3,462 million (31 December 2022: \$Nil).

**14. Accounts Receivable, Prepayments and Deposits**

	At 30 Jun 2023 \$m	At 31 Dec 2022 \$m
The breakdown of accounts receivable, prepayments and deposits, net of provision for impairment losses, are as follows:		
CNS money obligations receivable (note (a))	9,292	12,793
Settlement Reserve Fund and Settlement Guarantee Fund held by ChinaClear	10,321	10,206
Inter-CCP margin held by SHCH (note (b)):		
- satisfied by resources collected from OTC Clear Clearing Participants	17	-
- satisfied by Corporate Funds	120	-
	137	-
Receivables for investment funds sold before 30 Jun 2023/ 31 Dec 2022	-	248
Other receivables, prepayments and deposits	1,659	2,128
	<b>21,409</b>	<b>25,375</b>

- (a) CNS money obligations receivable mature within two days after the trade date. The balance of Settlement Reserve Fund and Settlement Guarantee Fund with ChinaClear is rebalanced on a monthly basis, and the balance of inter-CCP margin held by SHCH is rebalanced on a daily basis. 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.
- (b) Under Swap Connect, OTC Clear and SHCH are required to provide inter-CCP margin to each other to cover the potential loss arising from the default of the other party. Part of the inter-CCP margin provided by OTC Clear to SHCH is satisfied by resources collected from OTC Clear Clearing Participants and the remaining balance is satisfied by Corporate Funds of OTC Clear (note 15).

**15. Margin Deposits, Mainland Security and Settlement Deposits, and Cash Collateral from Participants**

	At 30 Jun 2023 \$m	At 31 Dec 2022 \$m
Margin deposits, Mainland security and settlement deposits, and cash collateral from Participants comprised:		
HKCC Clearing Participants' margin deposits	67,204	74,847
HKSCC Clearing Participants' margin deposits, Mainland security and settlement deposits, and cash collateral	19,493	17,262
LME Clear Clearing Participants' margin deposits	74,069	105,285
OTC Clear Clearing Participants' margin deposits	14,462	15,630
OTC Clear's inter-CCP margin from SHCH (note 14(b))	123	-
SEOCH Clearing Participants' margin deposits	12,548	14,878
	<b>187,899</b>	<b>227,902</b>

## 16. Accounts Payable, Accruals and Other Liabilities

The Group's accounts payable, accruals and other liabilities mainly represent the Group's CNS money obligations payable, which accounted for 83 per cent (31 December 2022: 81 per cent) of the total accounts payable, accruals and other liabilities. 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.

## 17. Clearing House Funds

	At 30 Jun 2023 \$m	At 31 Dec 2022 \$m
The Clearing House Funds comprised:		
Clearing Participants' cash contributions	23,072	21,205
Contribution to OTC Clear Rates and FX Guarantee Resources	156	156
Clearing House Funds reserves (note 21)	812	671
	<b>24,040</b>	22,032
The Clearing House Funds were invested in the following instruments for managing the obligations of the Funds:		
Cash and cash equivalents (note 12)	20,594	19,021
Financial assets measured at fair value through other comprehensive income (note 12)	3,526	3,031
Less: Other financial liabilities of Clearing House Funds	(80)	(20)
	<b>24,040</b>	22,032
The Clearing House Funds comprised the following Funds:		
HKCC Reserve Fund	3,914	1,483
HKSCC Guarantee Fund	4,343	4,439
LME Clear Default Fund	10,320	11,528
OTC Clear Rates and FX Guarantee Fund	3,936	3,234
OTC Clear Rates and FX Guarantee Resources	178	174
SEOCH Reserve Fund	1,349	1,174
	<b>24,040</b>	22,032

- (a) At 30 June 2023, the Skin-in-the-Game, together with default fund credits granted to HKSCC and HKCC Participants, amounted to \$1,600 million (31 December 2022: \$1,298 million), and were included in Corporate Funds (note 12(b)).

NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (CONT'D)

18. Borrowings

	At 30 Jun 2023 \$m	At 31 Dec 2022 \$m
Written put options to non-controlling interests	495	491
Analysed as:		
Non-current liabilities	63	61
Current liabilities	432	430
	<b>495</b>	<b>491</b>

During the six months ended 30 June 2023, none of the written put options was exercised.

19. Share Capital and Shares Held for Share Award Scheme

Issued and fully paid – ordinary shares with no par:

	Number of shares '000	Number of shares held for Share Award Scheme '000	Share capital \$m	Shares held for Share Award Scheme \$m	Total \$m
At 1 Jan 2022	1,267,837	(2,371)	31,896	(901)	30,995
Shares purchased for Share Award Scheme (note (a))	-	(1,040)	-	(350)	(350)
Vesting of shares of Share Award Scheme (note (b))	-	1,005	22	333	355
At 31 Dec 2022	1,267,837	(2,406)	31,918	(918)	31,000
At 1 Jan 2023	<b>1,267,837</b>	<b>(2,406)</b>	<b>31,918</b>	<b>(918)</b>	<b>31,000</b>
Shares purchased for Share Award Scheme (note (a))	-	(27)	-	(9)	(9)
Vesting of shares of Share Award Scheme (note (b))	-	159	-	68	68
At 30 Jun 2023	<b>1,267,837</b>	<b>(2,274)</b>	<b>31,918</b>	<b>(859)</b>	<b>31,059</b>

- (a) During the six months ended 30 June 2023, the Share Award Scheme acquired 26,993 HKEX shares (year ended 31 December 2022: 1,040,416 shares) through purchases on the open market. The total amount paid to acquire the shares during the period was \$9 million (year ended 31 December 2022: \$350 million).
- (b) During the six months ended 30 June 2023, a total of 158,625 HKEX shares (year ended 31 December 2022: 1,005,134 shares) were vested, of which 110,446 shares were for the HKEX's Chief Executive Officer (year ended 31 December 2022: 108,024 shares). The total cost of the vested shares was \$68 million (year ended 31 December 2022: \$333 million). During the year ended 31 December 2022, \$22 million was credited to share capital in respect of vesting of certain shares whose fair values were higher than the costs.

## 20. Employee Share-based Arrangements

The Group operates the Share Award Scheme as part of the benefits of its employees. It allows shares to be granted to employees of the Group, including the Executive Director (Employee Share Awards).

Effective 1 January 2023, the scheme rules relating to the vesting of shares have been amended, with any share awards granted on or after 1 January 2023 vesting in accordance with the original vesting schedule, instead of vesting immediately on the date of retirement of the awardees.

The employee share-based compensation expenses in relation to the share awards are charged to the condensed consolidated income statement under staff costs over the relevant vesting periods with a corresponding increase in employee share-based compensation reserve.

During the six months ended 30 June 2023, details of Employee Share Awards awarded are set out below:

Date of award	Number of shares awarded	Average fair value per share \$	Vesting period
27 Feb 2023	1,032,050 <sup>1,2</sup>	328.89	8 Dec 2024 – 8 Dec 2025
9 Mar 2023	274	341.08	8 Dec 2024 – 8 Dec 2025
22 Mar 2023	1,693	332.73	1 Sep 2023 – 1 Sep 2026

1 170,171 shares were awarded by re-granting the forfeited or unallocated shares held by the Share Award Scheme

2 88,041 shares were awarded to HKEX's Chief Executive Officer

## 21. Designated Reserves

Designated reserves are segregated for their respective purposes and comprised the following:

	At 30 Jun 2023 \$m	At 31 Dec 2022 \$m
Clearing House Funds reserves (notes (a) and 17)	812	671
PRC statutory reserve	15	15
	<b>827</b>	<b>686</b>

### (a) Clearing House Funds reserves

	At 30 Jun 2023 \$m	At 31 Dec 2022 \$m
HKCC Reserve Fund reserve	261	251
HKSCC Guarantee Fund reserve	213	175
OTC Clear Rates and FX Guarantee Fund reserve	193	110
OTC Clear Rates and FX Guarantee Resources reserve	22	18
SEOCH Reserve Fund reserve	123	117
	<b>812</b>	<b>671</b>

**22. Notes to the Condensed Consolidated Statement of Cash Flows**

Reconciliation of profit before taxation to net cash inflow from principal operating activities:

	Six months ended 30 Jun 2023 \$m	Six months ended 30 Jun 2022 \$m
Profit before taxation	7,109	5,646
Adjustments for:		
Net interest income	(2,455)	(584)
Net fair value (gains)/losses on financial assets mandatorily measured at fair value through profit or loss	(201)	523
Finance costs	70	73
Depreciation and amortisation	719	717
Employee share-based compensation benefits	175	204
Share of profits less losses of joint ventures	(39)	(42)
Other non-cash adjustments	26	(20)
Net decrease/(increase) in financial assets of Margin Funds	40,080	(45,742)
Net (decrease)/increase in financial liabilities of Margin Funds	(40,003)	45,447
Net increase in Clearing House Fund financial assets	(2,075)	(7,301)
Net increase in Clearing House Fund financial liabilities	1,927	7,299
(Increase)/decrease in cash prepayments and collateral for A-shares	(4,396)	7,372
(Increase)/decrease in cash used for supporting Skin-in-the-Game and default fund credits	(182)	73
Amounts transferred to SHCH as inter-CCP margin	(120)	-
Decrease in accounts receivable, prepayments and deposits	3,986	1,671
Increase/(decrease) in other liabilities	586	(8,634)
Net cash inflow from principal operations	5,207	6,702
Interest received from financial assets measured at amortised cost and cash and cash equivalents	5,225	735
Interest paid to Participants	(3,098)	(210)
Income tax paid	(1,939)	(449)
Net cash inflow from principal operating activities	5,395	6,778

### 23. Capital Expenditures and Commitments

During the six months ended 30 June 2023, the Group incurred capital expenditures of \$501 million (2022: \$478 million).

At 30 June 2023, the Group's commitments in respect of capital expenditure were as follows:

	At 30 Jun 2023 \$m	At 31 Dec 2022 \$m
Contracted but not provided for:		
- fixed assets	37	22
- intangible assets	183	159
Authorised but not contracted for:		
- fixed assets	487	323
- intangible assets	725	520
	<b>1,432</b>	<b>1,024</b>

### 24. Contingent Liabilities

At 30 June 2023, the Group's material contingent liabilities were as follows:

- (a) The Group had a contingent liability in respect of potential calls to be made by the SFC to replenish all or part of compensation less recoveries paid by the Unified Exchange Compensation Fund established under the repealed Securities Ordinance up to an amount not exceeding \$71 million (31 December 2022: \$71 million). Up to 30 June 2023, 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. In the unlikely event that all of its 583 trading Participants (31 December 2022: 598) covered by the indemnity at 30 June 2023 defaulted, the maximum liability of the Group under the indemnity would amount to \$117 million (31 December 2022: \$120 million).
- (c) HKEX had 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.

## 24. Contingent Liabilities (continued)

### (d) Material litigation

At 30 June 2023, the LME and LME Clear have been named as defendants in two judicial review claims filed in the English High Court in 2022 (the JR Proceedings) and three related claims filed in the English High Court in 2023. The total claims amounted to approximately US\$600 million.

On 8 March 2022, the LME, in consultation with LME Clear, suspended trading in all nickel contracts with effect from 08:15 UK time, and cancelled all trades executed on or after 00:00 UK time on 8 March. This decision to suspend trading was taken because the nickel market had become disorderly. Cancellations were made retrospectively to take the market back to the last point in time at which the LME could be confident that the market was operating in an orderly manner. It should be stressed that the LME always acted in the interests of the market as a whole.

The JR Proceedings seek to challenge the LME's decision to cancel the claimants' alleged trades in nickel contracts executed on or after 00:00 UK time on 8 March 2022 (the Decision). The claimants have alleged that this was unlawful on public law grounds and/or constituted a violation of their human rights. The LME management is of the view that the claims are without merit and the LME is contesting them vigorously.

The JR Proceedings are being heard with the issues for determination being split. The first trial – which took place from 20 to 22 June 2023 – is to address the lawfulness of the LME's decision-making process. If the Court finds that the LME acted lawfully, the second trial – to address remedies – will not be necessary. Judgment was not delivered at the end of the June trial but was reserved by the Court, to be issued at a later date. No indication has been given by the Court as to the timing of when it expects to issue the judgment.

A further three claims were issued in the English High Court in March 2023, by claimants seeking damages for losses alleged to have been suffered as a result of the Decision, alleging that this was an unlawful interference with their human rights. Such claims are being case managed by being stayed pending the final determination of the JR Proceedings. The limitation period for similar damages claims under the Human Rights Act has now expired.

Based on the progress of the JR Proceedings, the LME does not currently have sufficient information to estimate the financial effect (if any) of the claims, the timing of the ultimate resolution of the proceedings, or what the eventual outcomes might be. Accordingly, no provision has been made in these condensed consolidated financial statements.



## 25. Material Related Party Transactions

### (a) Key management personnel compensation

	Six months ended 30 Jun 2023 \$m	Six months ended 30 Jun 2022 \$m
Salaries and other short-term employee benefits	78	77
Employee share-based compensation benefits	60	89
Retirement benefit costs	5	4
	<b>143</b>	<b>170</b>

### (b) Post-retirement benefit plans

The Group has sponsored an ORSO Plan and the LME Pension Scheme as its post-retirement benefit plans (note 7(a)).

## 26. Pledges of Assets

LME Clear receives securities and gold bullion as non-cash collateral for margins posted by its Clearing Participants. The total fair value of this non-cash collateral was US\$3,459 million (HK\$27,107 million) at 30 June 2023 (31 December 2022: US\$619 million (HK\$4,831 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 is permitted to sell or pledge such collateral in the event of the default of a Clearing Participant. Any non-cash collateral lodged at central securities depositories or custodians is subject to a lien or pledge for the services they provide in respect of the collateral held.

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\$10,301 million (HK\$80,725 million) at 30 June 2023 (31 December 2022: US\$14,982 million (HK\$116,934 million)). Such non-cash collateral, together with certain financial assets amounting to US\$1,039 million (HK\$8,146 million) at 30 June 2023 (31 December 2022: US\$923 million (HK\$7,206 million)), have been pledged to LME Clear's investment agents and custodian banks under security arrangements for the settlement and depository services they provide in respect of the collateral and investments held.

Non-cash collateral is not recorded on the condensed consolidated statement of financial position of the Group.

## 27. Capital Management

At 30 June 2023, the Group had set aside \$4,000 million (31 December 2022: \$4,000 million) of shareholders' funds for the purpose of supporting the risk management regime of the clearing houses in their roles as central counterparties, of which \$2,160 million (31 December 2022: \$2,160 million) had been injected into HKSCC, SEOCH and HKCC as share capital.

**28. Fair Value of Financial Assets and Financial Liabilities**

(a) Financial assets and financial liabilities carried at fair value

The following tables present the carrying values of financial assets and financial liabilities measured at fair value according to the levels of the fair value hierarchy defined in HKFRS 13: Fair Value Measurement, with the fair value of each financial asset and financial liability categorised based on the lowest level of input that is significant to that fair value measurement. The levels are defined as follows:

- Level 1: fair values measured using quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: fair values measured using valuation techniques in which all significant inputs other than quoted prices included within Level 1 are directly or indirectly based on observable market data.
- Level 3: fair values measured using valuation techniques in which any significant input is not based on observable market data.

Recurring fair value measurements:	At 30 Jun 2023				At 31 Dec 2022			
	Level 1 \$m	Level 2 \$m	Level 3 \$m	Total \$m	Level 1 \$m	Level 2 \$m	Level 3 \$m	Total \$m
<b>Financial assets</b>								
Financial assets measured at fair value through profit or loss:								
- investment funds	839	5,748	-	6,587	662	5,648	-	6,310
- equity securities	-	-	634	634	-	-	654	654
Financial assets measured at fair value through other comprehensive income:								
- debt securities	15,986	2,931	-	18,917	12,045	2,917	-	14,962
Derivative financial instruments:								
- base and ferrous metals futures and options contracts cleared through LME Clear	-	69,039	-	69,039	-	80,705	-	80,705
- forward foreign exchange contracts	-	32	-	32	-	13	-	13
- foreign exchange swaps	-	2	-	2	-	-	-	-
	<b>16,825</b>	<b>77,752</b>	<b>634</b>	<b>95,211</b>	<b>12,707</b>	<b>89,283</b>	<b>654</b>	<b>102,644</b>
<b>Financial liabilities</b>								
Derivative financial instruments:								
- base and ferrous metals futures and options contracts cleared through LME Clear	-	69,039	-	69,039	-	80,705	-	80,705
- foreign exchange swaps	-	2	-	2	-	-	-	-
	<b>-</b>	<b>69,041</b>	<b>-</b>	<b>69,041</b>	<b>-</b>	<b>80,705</b>	<b>-</b>	<b>80,705</b>

**28. Fair Value of Financial Assets and Financial Liabilities (continued)**

(a) Financial assets and financial liabilities carried at fair value (continued)

During the six months ended 30 June 2023 and 30 June 2022, there were no transfers of instruments between Level 1 and Level 2 or transfer into or out of Level 3.

Level 2 fair values of investment funds, debt securities, base and ferrous metals futures and options contracts and foreign exchange derivative contracts 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, market foreign exchange rates, net asset values and latest redemption prices or transaction prices of the respective investment funds.

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.

Fair value measurements using significant unobservable inputs (Level 3)

	2023 \$m	2022 \$m
At 1 Jan	654	694
Losses recognised in income statement under net investment income	(11)	(21)
Losses recognised in other comprehensive income	(9)	(19)
At 30 Jun 2023 / 31 Dec 2022	634	654
Total losses recognised for the period / year in the condensed consolidated income statement for assets held at 30 Jun 2023 / 31 Dec 2022	(11)	(21)

Level 3 valuations are prepared on bi-annually basis, at each interim and annual reporting date. The assumptions and inputs to the valuation model, the valuation techniques and the valuation results are reviewed and approved by management.

**28. Fair Value of Financial Assets and Financial Liabilities (continued)**

(a) Financial assets and financial liabilities carried at fair value (continued)

The following table summarises the basis of valuation used in level 3 fair value measurements:

Description	Fair value		Valuation technique	Unobservable inputs	Range
	At 30 Jun 2023 \$m	At 31 Dec 2022 \$m			
Minority stake in Fusion Bank Limited	200	200	Market approach <sup>1</sup>	N/A	N/A
Minority stake in Huakong TsingJiao Information Science (Beijing) Limited	208	217	Market approach <sup>1</sup>	N/A	N/A
Minority stake in Guangzhou Futures Exchange	226	237	Market approach <sup>1</sup>	N/A	N/A
<b>Total</b>	<b>634</b>	<b>654</b>			

1 The fair value is estimated based on the analysis of the investment's financial position and results, prospects and other factors and by reference to market transactions.

Fusion Bank Limited has a virtual banking license granted by the Hong Kong Monetary Authority. The company offers a variety of banking services including savings, time deposits, loans, local fund transfers and foreign exchange. The investment is not traded in an active market.

Huakong TsingJiao Information Science (Beijing) Limited is a data technology company, which specialises in the research and development of multi-party computation technologies, allowing collaborative data analysis without revealing private data during the computation and analysis process. The investment is not traded in an active market.

Guangzhou Futures Exchange is an exchange in the Greater Bay Area focusing on serving the real economy and green development initiatives. The exchange has successfully launched its first two products, industrial silicon and lithium carbonate futures and options, and will continue to develop more products related to green development in the future. The investment is not traded in an active market.

**28. Fair Value of Financial Assets and Financial Liabilities (continued)**

(b) 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 long-term financial assets and financial liabilities not presented in the condensed consolidated statement of financial position at their fair values, except for lease liabilities where disclosure of fair values is not required. These assets and liabilities were classified under Level 2 in the fair value hierarchy.

	At 30 Jun 2023		At 31 Dec 2022	
	Carrying amount in condensed consolidated statement of financial position \$m	Fair value \$m	Carrying amount in condensed consolidated statement of financial position \$m	Fair value \$m
<b>Assets</b>				
Financial assets measured at amortised cost:				
- debt securities maturing over one year <sup>1</sup>	1,409	1,410	113	113
- other financial assets maturing over one year <sup>2</sup>	98	75	96	70
<b>Liabilities</b>				
Borrowings:				
- written put options to non-controlling interests <sup>3</sup>	495	500	491	490
Financial guarantee to the Collector of Stamp Revenue <sup>4</sup>	20	28	20	29

1 The fair values are provided by a reputable independent financial institution.

2 The fair values are based on cash flows discounted using Hong Kong Government bond rates of a tenor similar to the contractual maturity of the respective assets, adjusted by an estimated credit spread. The discount rates used ranged from 4.25 per cent to 4.99 per cent at 30 June 2023 (31 December 2022: 4.79 per cent to 5.32 per cent).

3 The fair values are based on cash flows discounted using the prevailing market interest rates for loans with similar credit rating and similar tenor of the respective loans. The discount rate used ranged from 4.98 per cent to 5.82 per cent at 30 June 2023 (31 December 2022: 4.88 per cent to 5.74 per cent).

4 The fair values are based on the fees charged by financial institutions for granting such guarantees discounted to perpetuity using a ten-year Hong Kong Government bond rate, adjusted by an estimated credit spread, but capped at the maximum exposure of the financial guarantee. The discount rate used was 5.16 per cent at 30 June 2023 (31 December 2022: 5.19 per cent).

The carrying amounts of short-term financial assets and receivables (e.g. accounts receivable, financial assets measured at amortised cost and cash and cash equivalents) and short-term payables (e.g. accounts payable and other liabilities) approximated their fair values, and accordingly no disclosure of the fair values of these items is presented.