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## **Key Updates**

### Changes in 2023

# Change in trading fee structure for the Cash Market

#### **Nature**

- As part of our ongoing efforts in enhancing the market microstructure to ensure competitiveness and efficiency to our market, the trading fee charged for Cash Market transaction was amended with effective from 1 January 2023 as follows:
  - Removal of the trading tariff of \$0.50 payable on each transaction:
  - Increase of the ad valorem fee on all trades from 0.005% to 0.00565%; and
  - Trading fee on funds raised for equity products increased from 0.005% to 0.00565% but fee on funds raised for DWs and CBBCs remained at 0.005%<sup>(1)</sup>

#### **Implications**

- The adjustment results in a simpler and more predictable trading fee structure for investors.
- The new fee rate of 0.00565% is slightly lower than the historical average effective rate of approximately 0.00576%<sup>(2)</sup>.

Reduction of trading fees and stamp duty of Northbound Trading

- SSE and SHSE lowered the A-share handling fees (i.e. trading fees) by 30% from 0.00487% to 0.00341% of the consideration of the trades, effective from 28 August 2023
- Trading fees received by HKEX were reduced as follows:

 Total fees prior to 28 Aug 2023
 Total fees effective from 28 Aug 2023

 ADT(NB) x 0.00487% x TDs(NB) x40%
 ADT(NB) x 0.00341% x TDs(NB) x40%

 On the same day, the stamp duty for A shares was lowered from 0.1% to 0.05% of the consideration of the trades

- Reduced by ~ HK\$148 million annually per RMB100 billion of ADT(NB)<sup>(3)</sup> as a result of reduction of trading fees.
- The impact is expected to be offset by the potential increase in Northbound Trading as a result of reduction of stamp duty.

<sup>1.</sup> Funds raised for new products were subject to a trading fee rate of 0.00565% with effective from 1 January 2023, but a special reduction has been granted to funds raised for DWs and CBBCs until further notice.

<sup>2.</sup> Based on trading statistics from 2014 to 2021

<sup>3.</sup> Assuming trading days for Northbound Trading as 232 (Year 2022) and exchange rate at 1.09171 (@ 31 July 2023); For reference, NB ADT for FY2022 was RMB100.4bn

## **Key Updates**

### Changes in 2023

#### **Nature**

#### **Implications**

- Increase in weighting of newly launched
- Increased popularity of newly launched derivatives products (e.g. HS Tech Futures & Options), which are charged at lower fees as compared to HSI Futures and Options, may result in a lower average fee per contract traded on HKFE
- Unit fees for the newly launched derivatives products as compared to other flagship products are set out as follows:

Key Products	Unit fee (as of Jun 2023)
HSI Futures & Options & Futures Options	HK\$10
HSCEI Futures & Options + Mini HSI Futures	HK\$3.5
Mini HSCEI Futures + Mini HSI options	HK\$2
HS Tech Futures & Options & Futures Options(1)	HK\$2.5
RMB Currency Futures – USD/CNH Futures	RMB 8.0
MSCI China A50 Connect (USD) Index Futures <sup>(2)</sup>	US\$0.5
MSCI Taiwan (USD) Index Futures	US\$1

- Increased popularity of recently launched products contributed to the record half-yearly derivatives contracts traded on HKFE in 1H 2023 (ADV up 5% YoY to 1.4m contracts).
- Average fee per contract per side dropped from \$5.14 in 1H 2022 to \$5.09 in 1H 2023 (<1% decrease in average fee).

#### **LME Nickel claims**

derivatives products

- 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
- 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
- No provision has been made against the claims

Legal costs will likely continue to be incurred in 2H 2023 and beyond subject to the development of the JR Proceedings.



## **Key Updates**

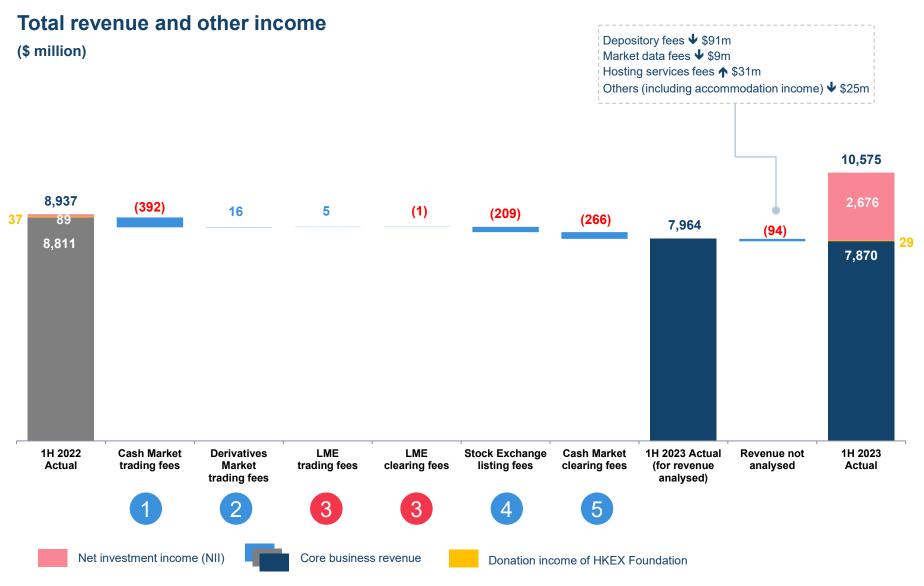
### Changes in 2023

**Implications Nature** Trading and clearing fees ↑ ~\$250 million Expansion of eligible stocks under NB Stock Connect annually per RMB25 billion of ADT(NB)(1) The enhancement adds ~ 10 trading days Financial impact on to NB and SB Connect each year, selective Connect contributing additional trading and clearing enhancements Enhancement of trading calendar of Stock Connect fees of ~\$20 million annually per RMB100 billion of ADT(NB) and HK\$30 billion of ADT (SB)(2) Fee waiver for the first year, from 15 May **Swap Connect** 2023 until 14 May 2024 ■ Due to the increase in the UK statutory tax rate from 19% to 25% with effective from 1 April 2023, the effective statutory tax rate for the UK entities will change as follows: Since bank interest income increased Effective tax rate 19% 2022: significantly in 2023, the Group's effective tax rate has reduced accordingly 2023: 23.5% 2024: 25% HK entities: Bank interest income is not taxable in Hong Kong.





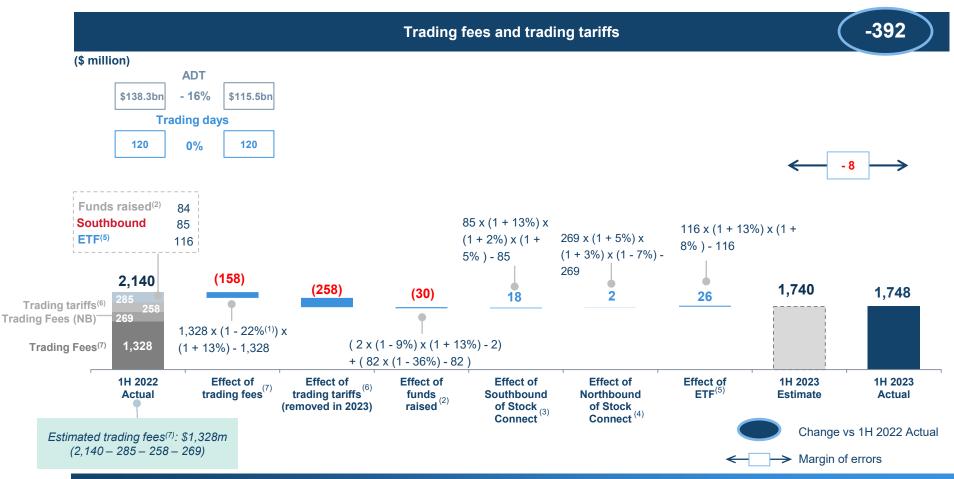
## Revenue movements 1H 2023 vs 1H 2022





## Cash Market trading fees 1

### Estimate based on volume and fee rate change



# Cash Market trading fees move closely with changes in total value of trades, adjusted for fee rate change

- Fees for equity products = Funds raised x 0.00565% (2022: 0.005%) x 2 sides;
   Fees for DWs and CBBCs = Funds raised x 0.005% x 2 sides (no change due to a special reduction program until further notice);

Funds raised for equity products - 1H 2023: \$17.9bn; 1H 2022: \$19.7bn; ♥ 9%; Funds raised for DWs and CBBCs - 1H 2023: \$526.2bn; 1H 2022: \$822.7bn; ♥ 36%

. Southbound (SB) trading fees = ADT of SB x no. of trading days x Fee rate x 50%; Fee rate: 1H 2023: 0.00565%; 1H 2022: 0.005%; ↑ 13%; SB ADT: 1H 2023: \$33.8bn; 1H 2022: \$33.2bn; ↑ 2%; No. of trading days: 1H 2023: 113 days; 1H 2022: 108 days; ↑ 5%

- 4. Northbound (NB) trading fees: ADT of NB x no. of trading days x 0.00487% x 40% (NB ADT: 1H 2023: RMB109.3bn; 1H 2022: RMB103.9bn; ↑ 5%; No. of trading days: 1H 2023: 114 days; 1H 2022: 111 days; ↑ 3%; Exchange rate: 1H 2023: 1.12; 1H 2022: 1.20; ✔ 7%)
- 5. ETF (including L&I Product) trading fees = ADT x Fee rate x 2 sides x no. of trading days x (1 exemption %); Fee rate: 1H 2023: 0.00565%; 1H 2022: 0.005%; ↑ 13%; ADT: 1H 2023: \$12.8bn (excluding SB); 1H 2022: \$11.8bn; ↑ 8%; Exemption % = % of trades carried out by market makers X fee waiver % (exemption % was ~ 50% per 2018 Annual Report); Fee waiver %: 100% prior to 31 May 2021; 37% in 1H 2023; it is referenced to the ETF's ADT over a 12-month period and its relevant investment exposure. 37% was computed with reference to the actual individual ETF's fe

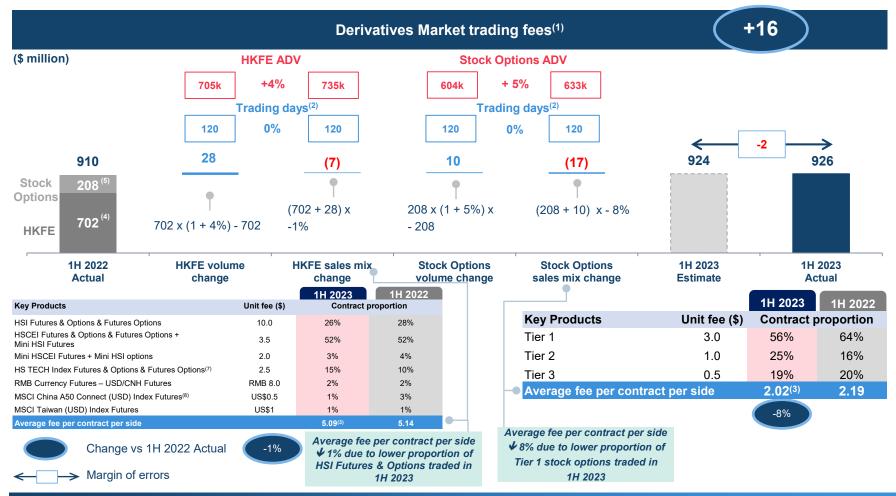
Fee waiver %: 100% prior to 31 May 2021; 37% in 1H 2023; it is referenced to the ETF's ADT over a 12-month period and its relevant investment exposure. 37% was computed with reference to the actual individual ETF's fee waiver % and the individual ETF ADT for 1H 2023; Thus, exemption % applied for 1H 2022 and 1H 2023 is ~ 50% x 37% = ~18.5%

- 6. Trading tariffs of \$258 million disclosed in "Key Revenue Drivers" deck (September 2022 version). Such fee has been removed since 1 Jan 2023.
- Excluding trading fees arising from funds raised, Stock Connect and ETFs (including L&I Products)

## **Derivatives Market trading fees** 2



## Estimate based on volume and sales mix change



### Derivatives Market trading fees generally move with the total number of contracts traded and average fee per contract

- 1. Includes trading fees allocated to the Post Trade segment for 2022. From 2023 onwards, all futures and options trading fees are included in the Equity and Financial Derivatives segment
- 2. There were 9 holiday trading days in 1H 2023 (1H 2022: 2) for certain futures contracts. As the ADV is calculated as sum of individual contracts, and majority of the contracts are only traded on non-holidays, only the number of non-holiday trading day of
- 3. Average fee per contract per side is calculated based on % of total contracts of key products as listed in the table above, and the % is rounded to 1 decimal place for the purpose of this calculation.
- Trading fees of HKFE products = Fees included under Equity and Financial Derivatives segment (\$531m, disclosed in 2022 Interim Report) + Fees allocated to Post Trade segment (estimated by ADV (705k) x no. of trading days (120) x fee per contract (\$2 per note 6 below) = \$170m), and round to \$702m.
- 5. Trading tariffs of stock options = Fees included under Equity and Financial Derivatives segment (\$160m, disclosed in the 2022 Interim Report) + Fees allocated to Post Trade segment (estimated by ADV (604k) x no. of trading days (120) x tariff per contract (\$0.66 per note 6 below) = \$48m), and round to \$208m.
- 6. Fee/tariff per contract is calculated based on information disclosed in 2022 Annual Report: Trading fees of HKFE products allocated to the Post Trade segment (\$352m) / (ADV (715k) / no. of trading days (246)) = \$2 per contract. Trading tariffs of stock options allocated to the Post Trade segment (\$95m) / (ADV (588k) / no. of trading days (246)) = \$0.66
- 7. Hang Seng TECH Index Futures and Options and Futures Options were subject to an unit fee of HK\$5. Since launch, a marketwide 50% trading fee discount has been granted.
- 8. MSCI China A50 Connect (USD) Index Futures were subject to an unit fee of US\$1. From 1 Jul 2022, a 50% trading fee discount has been granted.

## LME trading and clearing fees



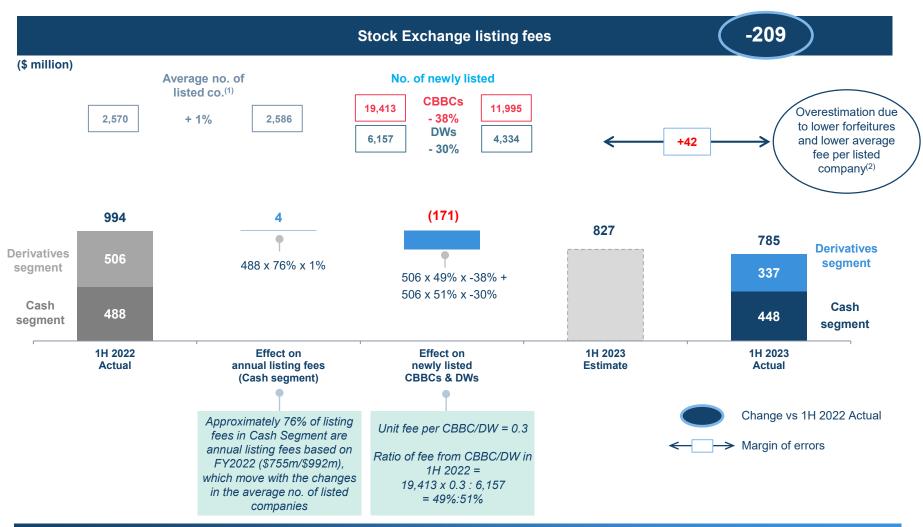


LME and LMEC fees generally move with total number of contracts traded and average fee per contract

<sup>1.</sup> Chargeable ADV excludes Admin Trades (which are chargeable at a lower trading fee rate of US\$0.04 per contract and a lower clearing fee rate of US\$0.02 per contract) and other non-chargeable trades.

## Stock Exchange listing fees 4

### Estimate based on no. of listed companies and newly listed DWs/CBBCs



Stock Exchange listing fees move closely with changes in no. of listed companies and newly listed DWs/CBBCs, but are also impacted by number of forfeitures and withdrawn IPO applications and average fee per listed company.

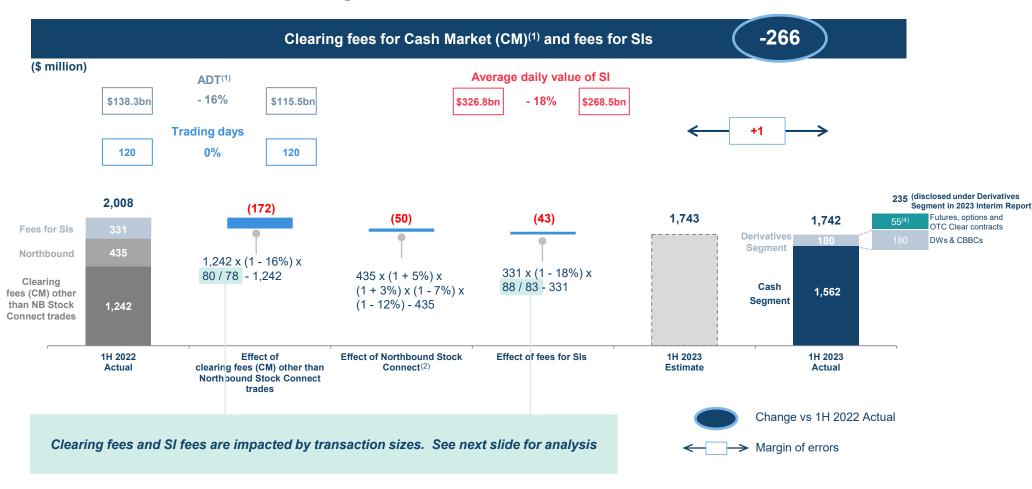


<sup>1.</sup> Average number of listed companies represents the average number of listed companies at month end.

<sup>2.</sup> Annual listing fees are charged based on nominal value of the listed company, which may sometimes decrease due to a combination of factors including consolidation of shares, decrease in par value and RMB depreciation.

## Cash Market clearing fees 5

### Estimate based on volume change



Clearing fees and SI fees move with total value of trades and total value of SIs but are also impacted by transaction sizes of the trades/SIs.

- 1. For all Cash Market trades (including DWs, CBBCs and warrants)
- 2. Northbound (NB) ADT 1H 2023: RMB109.3bn; 1H 2022: RMB103.9bn; ↑ 5%; No. of trading days: 1H 2023: 114 days; 1H 2022: 111 days; ↑ 3%; Exchange rate: 1H 2023: 1.12; 1H 2022: 1.20; ↓ 7%;

Average fee rate: 1H 2023: 0.0025%; 1H 2022: 0.00283% (0.003% from 1 January to 28 April (73 TDs) & 0.0025% from 29 April to 30 June (38 TDs); 

✓ 12%; Effective from 29 Apr 2022, ChinaClear lowered the A-share transfer fees. Clearing fee rate was reduced from 0.003% to 0.0025%.

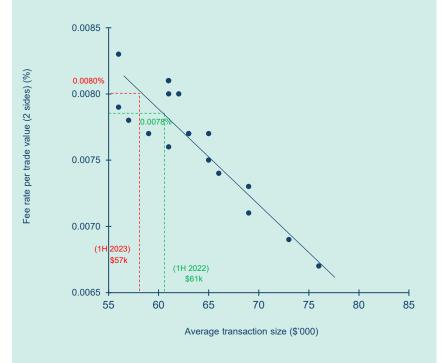
- . The impact of Southbound fees is immaterial and therefore not included in the analysis.
- Clearing fees for futures, options and OTC Clear contracts were not separately disclosed in 2023 Interim Report, but were disclosed in 2022 Annual Report (FY2022: \$110 million). Assume such fees do not change materially for the purpose of this analysis and amounted to \$55m in 1H 2023.

## Cash Market clearing fees 5

## Impact of transaction sizes of the trades / SIs

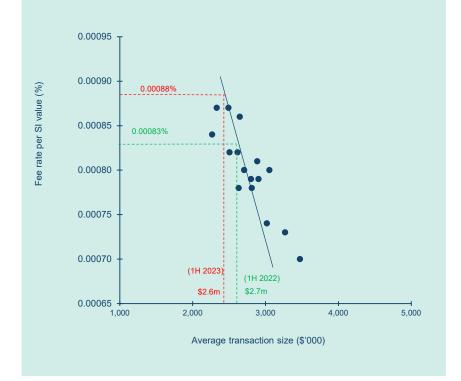
#### **Clearing fees for Cash Market (CM)**

Clearing fees are subject to maximum and minimum fees per trade. The decrease in average transaction size (1H 2023: \$57k; 1H 2022: \$61k) resulted in a higher proportion of Cash Market trades being subject to the minimum fee of \$2. The fee rate per trade value of various average transaction sizes based on actual fee rates calculated from historical quarterly results from Q1 2018 to Q1 2023 are set out as follows:



#### **Fees for SIs**

Fees for SIs are subject to maximum and minimum fees per trade. The decrease in average transaction size (1H 2023: \$2.6m; 1H 2022: \$2.7m) resulted in a lower proportion of SI transactions being subject to the maximum fee of \$100. The fee rate per SI value of various average transaction sizes based on actual fee rates calculated from historical quarterly results from Q1 2018 to Q1 2023 are set out as follows:

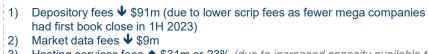


In general, if the average transaction size decreases, it will have a positive impact on the clearing fees and vice versa

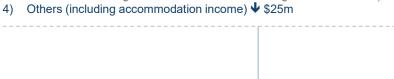


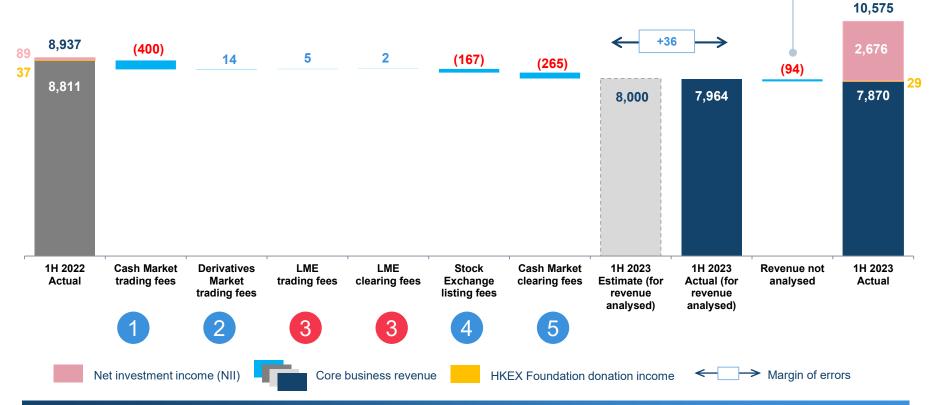
## Estimate of 1H 2023 revenue

Total revenue and other income (\$ million)



3) Hosting services fees ↑ \$31m or 23% (due to increased capacity available to customers following the launch of the new Hosting Service data hall)





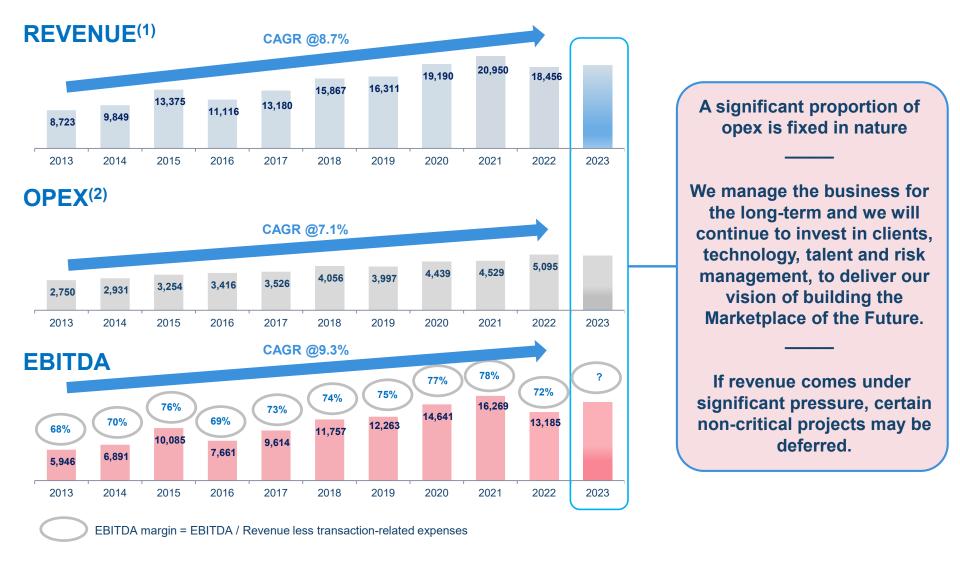
Margin of errors for revenue estimates (excluding NII, donation income and revenue not analysed) was \$36m or 0.45%



## **EBITDA** margin

## Revenue and EBITDA has grown faster due to effective OPEX control

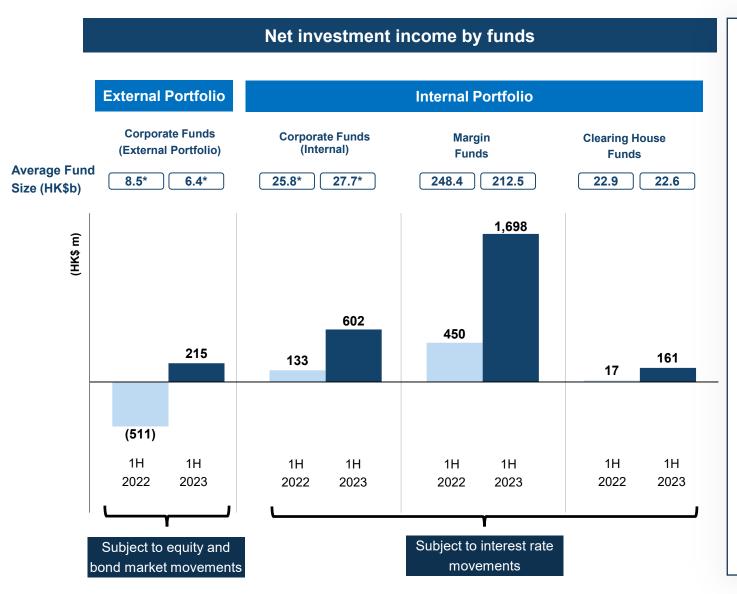
(\$ million)



<sup>1.</sup> Represents gross revenue and other income before deducting transaction-related expenses

## **Net Investment Income Overview**

### NII benefited from higher interest rates and External Portfolio gains



#### Key drivers at a glance

#### **Fund Size**

#### Corporate Funds

- Retained earnings of the Group
- Fair value changes of External Portfolio

#### Margin Funds

- Open interest
- Prices and volatility of underlying products
- Margin requirements

#### Clearing House Funds

- Number of Clearing Participants
- Contribution requirement according to risk exposures
- Volatility of corresponding markets

#### Yields (more details in following slides)

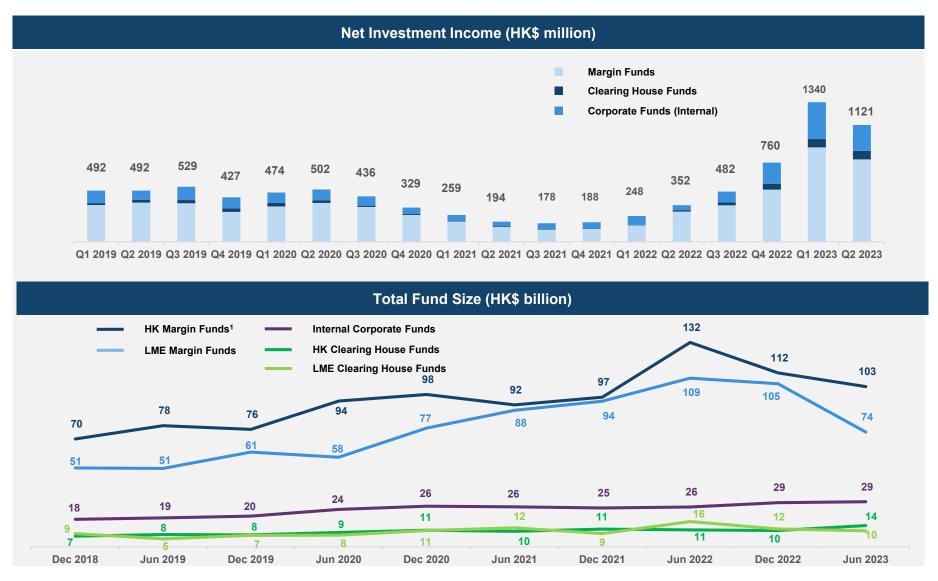
- Internal Portfolio is sensitive to interest rate
  - Under current interest rate cycle, this has now become a dominant driver for total NII
  - Margin fund net returns also depend on spreads with 1M HIBOR (rebates, see later slides)
- External Portfolio performance is driven by global equity and bond market performance



\*External Portfolio's average fund size is estimated by the average of fund size at the beginning and end of the period.
Corporate Funds (Internal) is estimated by deducting External Portfolio's estimated average fund size from the total Corporate Fund average fund size for the period.

## **Internal Portfolio**

### Net investment income is mainly driven by fund size and interest rates





<sup>.</sup> Excludes Settlement Reserve Fund and Settlement Guarantee Fund paid to ChinaClear, inter-central counterparties margin paid to Shanghai Clearing House and margin receivable from Clearing Participants

## **Internal Portfolio**

## Base case modelling for Q2 2023 NII using publicly available data

	Corp Funds (Internal)	Margin Funds (HK)		Clearing House Funds (HK)	LMEC <sup>1</sup>			
Q1 2023 Average Fund Size (HK\$)	\$28.4bn <sup>2</sup>	\$121.7bn		\$10.5bn	\$115.5bn			
Base case assumptions	Time Deposit (100%)	Overnight (30%)	Time Deposit (70%)	Interest Rebate	Overnight (100%)	Overnight (100%)	Interest Rebate	
Proportion size (HK\$)	\$28.4bn	\$36.5bn	\$85.2bn	\$121.7bn	\$10.5bn	\$115.5bn		
Reference Rate	6 months' rolling average of 6M- HIBOR	Overnight HIBOR	6 months' rolling average of 6M HIBOR	1M HIBOR x 0.5 -25bps	Overnight HIBOR	USD OBFR	USD OBFR – 24bps	
Annualised yield based on reference rate for Q2 2023	4.55%	3.40%	4.55%	-1.74%	3.4%	4.98%	-4.74%	
Estimated NII for Q2 2023 <sup>3</sup>	\$323m	\$749m			\$89m	\$69m		
Estimated total NII for Q2 2023		\$1,230m						
Actual NII for Q2 2023	\$1,121m							

Actual -8.9% from est.

<sup>3.</sup> Estimated by fund size x annualised yield / 4



<sup>1.</sup> Included Margin Funds and Clearing House Funds of LMEC

<sup>2.</sup> Estimated by deducting External Portfolio's estimated fund size from the total Corporate Fund average fund size. External Portfolio's average fund size is estimated by the average of fund size at the beginning and end of the quarter.

## Internal Portfolio – Base case modelling and actual NII variances

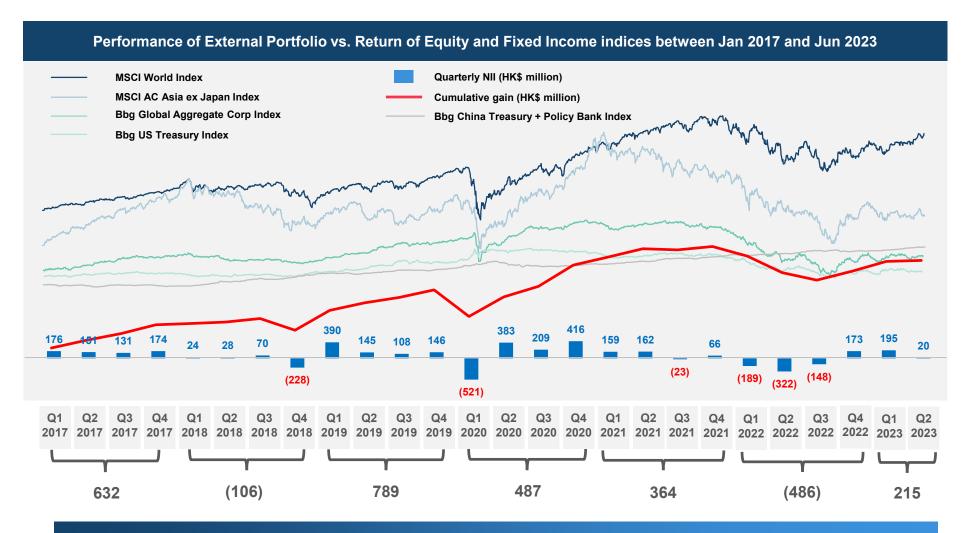
## **Key factors that are not predictable**

	Base Case Assumptions	Actual variances from base case
Fund size	Same as previous quarter	Fluctuate daily, in particular for Margin Funds which are dependent on open interests and margin requirements
Currency mix	100% HKD     No FX gain/loss	Actual currency mix can be in HKD, EUR, JPY, RMB and/or USD which have different yield curves and rebate formula     Actual FX gain/loss
Allocation of overnight and weighted maturity of time deposits	<ul> <li>Corporate Funds (Internal) – 100% time deposits (average 6-month maturity)</li> <li>Margin Funds (HK) – 30% overnight / 70% time deposits (average 6-month maturity)</li> <li>Clearing House Funds &amp; LMEC Funds – 100% overnight</li> </ul>	Proactively managed to maximise return from interest rate outlook while ensuring all liquidity requirements are prudently met
Yield	HK: O/N HIBOR for HKD overnight deposit for time deposit less rebate linked to 1M HIBOR  LMEC OBFR less rebate	Actual deposit rates are different from HIBOR / OBFR     Actual time deposit portfolio is a mixture of various tenors rather than just 6M
Timing of locking in longer tenor time deposits	Evenly distributed over the quarter	Proactively managed to maximise return from interest rate outlook



## **External Portfolio**

### The return of the portfolio is affected by broader markets and fund size



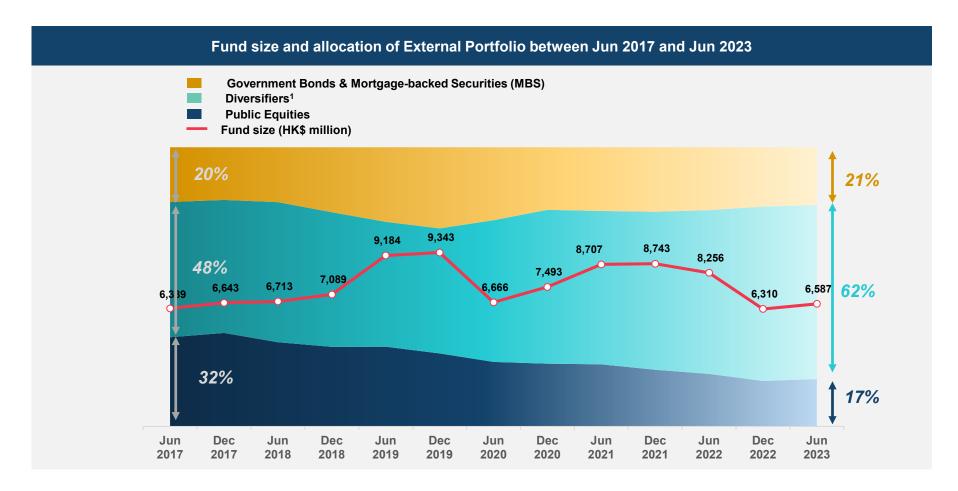
Cumulative performance of the Portfolio has been largely in line with broader equity and fixed income markets.

Volatility of the Portfolio's return has been reduced after redemption of ~HK\$2bn in 2H 2022



## **External Portfolio**

### Fund size and asset class allocation varies over time to mitigate portfolio volatility



- Highly diversified portfolio, over 30 fund managers across 3 strategies<sup>2</sup> / 4 asset classes
- Public equities mainly invested in developed markets and Asian markets
- Diversifiers are in a broad range of strategies with lower correlation to broader equity markets
- Government Bonds and MBS to provide downside protection and liquidity needs



- Diversifiers comprise Absolute Return and Multi-Sector Fixed Income asset classes
- 2. The strategies are mainly invested in developed markets and Asian markets, and the allocation between the three strategies vary over time.

## **External Portfolio**

### Historical quarterly performance against equity and fixed income market indices

Main Components in Portfolio	Market Indices	Parameters in Regression Analysis		
Public Equities	MSCI World Index & MSCI AC Asia ex Japan Index	Quarterly Change of X  X = average of the quarterly change in MSCI  World Index and MSCI AC Asia ex Japan Index		
Fixed Income	Bloomberg Global Aggregate Corporate Index	Quarterly Change of Y  Y = average of the quarterly change in  Bloomberg Global Aggregate Corporate Index		
Government Bonds	Bloomberg US Treasury Index & Bloomberg China Treasury + Policy Bank Bond Index	Quarterly Change of Z  Z = average of the quarterly change in Bloomberg US Treasury Index and Bloomberg China Treasury + Policy Bank Index		
Based on regression analysis, Quarterly Portfolio Return <sup>1</sup> (%) $= 0.275X + 0.058Y - 0.012Z + 0.677\%$				

Actual performances will be different to our regression model estimation due to:

- 1. Changes in capital allocation to different asset classes (eg. equities, diversifiers, macroeconomic hedges etc.)
- 2. Performance of individual fund managers against broader markets

The regression model estimated a gain of HK\$81m for Q2 2023, HK\$61m higher than actual of HK\$20m

