

1H 2024 KEY REVENUE ANALYSIS



September 2024

HKEX
香港交易所

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Key updates



Key Updates

Changes in 2024 (1/2)

Derivatives Market:
Increase in weighting of recently launched derivatives products
 and
Enhanced incentive programme to attract volume

Nature

- Increased popularity of recently launched derivatives products (e.g. HS Tech suite, MSCI suite) – these are charged at lower fees compared to HSI Futures and Options, and may result in a lower average fee per contract traded on HKFE.
- In addition, an enhanced active trader incentive program for USD/CNH Futures has been introduced, resulting in a significant increase in the number of contracts traded. Higher trading rebates and cash incentives were offered to active traders to attract volumes.

Implications

- Increased popularity of recently launched products and the introduction of an enhanced incentive programme for USD/ CNH Futures contributed to the record half-yearly derivatives contracts traded on HKFE in 1H 2024.
- Average fee per contract per side dropped from \$4.12 in 1H 2023 to \$3.65 in 1H 2024, due to the change in product mix and the incentive programme.
- Transaction-related expenses increased from \$94 million in 1H 2023 to \$166 million in 1H 2024, attributable to higher cash incentives paid.

LME fee increment

- Effective from January 2024, LME fee structure has been revised as follows:
- | Major fees | Revised fees |
|--|---|
| Standard charge for Trading and Clearing Fees (except below) | ↑ 15% |
| Ring trades, and Short-dated carry trades and Give-ups | No change |
| Medium-dated carry trades | ↑ 13% - 14% |
| Eelectronic Volume Programme (a new incentive program) | Newly introduced |
| Financial OTC Booking Fees | ↑ to the same level as On-Exchange Fees |
- The blended average increase in trading and clearing fees was ~13%⁽¹⁾, before taking into account of liquidity programmes (including the new Electronic Volume Programme). As such, the actual blended fee increase is lower than 13%.

Increase in average fee per contract.



1. Computed based on the proportion of average daily volumes from 1 Oct 2022 to 30 Sept 2023

Key Updates

Changes in 2024 (2/2)

| | Nature | Implications | | | | | | | | | |
|--|---|---|--------|------------|--|------------------------------|--|---|------------------------------|---|--|
| Interest rebate programmes | <p>Two interest rebate programmes were launched during 2024 to lower funding costs of the participants and attract market volumes:</p> <table border="1"> <thead> <tr> <th>Programme</th> <th>Period</th> <th>Incentives</th> </tr> </thead> <tbody> <tr> <td>Open Interest Growth Program (Certain MSCI futures)</td> <td>1 Jan 2024 to 31 Dec 2024</td> <td>Upon reaching the open interest thresholds, participants are entitled to receive additional incentives on USD cash collateral placed</td> </tr> <tr> <td>Interest Rebate Programme (Cross Currency Swaps)</td> <td>1 Jul 2024 to 31 Dec 2024</td> <td>Total interest rebates based on HIBOR O/N minus 50bps</td> </tr> </tbody> </table> | Programme | Period | Incentives | Open Interest Growth Program (Certain MSCI futures) | 1 Jan 2024 to 31 Dec 2024 | Upon reaching the open interest thresholds, participants are entitled to receive additional incentives on USD cash collateral placed | Interest Rebate Programme (Cross Currency Swaps) | 1 Jul 2024 to 31 Dec 2024 | Total interest rebates based on HIBOR O/N minus 50bps | <p>Interest rebates to participants will increase.</p> |
| Programme | Period | Incentives | | | | | | | | | |
| Open Interest Growth Program (Certain MSCI futures) | 1 Jan 2024 to 31 Dec 2024 | Upon reaching the open interest thresholds, participants are entitled to receive additional incentives on USD cash collateral placed | | | | | | | | | |
| Interest Rebate Programme (Cross Currency Swaps) | 1 Jul 2024 to 31 Dec 2024 | Total interest rebates based on HIBOR O/N minus 50bps | | | | | | | | | |
| Financial impact on selected microstructure enhancements | <p>Effective from 23 September 2024, Hong Kong market will remain open during severe weather conditions.</p> | <p>No more revenue loss during Severe Weather Trading (SWT) days.</p> | | | | | | | | | |
| | <p>Swap Connect</p> | <p>Fee waiver extended to 14 May 2025</p> | | | | | | | | | |
| LME Nickel claims | <ul style="list-style-type: none"> On 29 November 2023, the English High Court gave judgment in the LME and LME Clear’s favour on all grounds. One of the claimants has sought and been granted permission to appeal. The appeal was heard by the Court of Appeal in July 2024. Judgement was not delivered at the end of the hearing but was “reserved” by the Court of Appeal, to be issued at a later date. The claimants have made an interim payment of GBP5 million to the LME and LME Clear to cover part of their costs. The final amount with respect to recovery of costs will be assessed by the Court if not agreed with the claimants following the conclusion of the appeal. In light of the judgment of the Court, no provision has been made against the claims. | <ul style="list-style-type: none"> <u>Decrease in legal costs</u> incurred in 2024 vs 2023. The interim payment of <u>GBP5 million</u> has been credited to income statement in Q2 2024. The Group has not recognised any further recovery of costs as the amount is <u>still subject to negotiation</u> with the claimants or assessment by the Court. | | | | | | | | | |



Key Updates

Looking ahead

Higher effective tax rate in 2024

| Nature | |
|---|-------|
| <ul style="list-style-type: none"> As a result of 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 has changed as follows: | |
| 2023: | 23.5% |
| 2024: | 25% |
| <ul style="list-style-type: none"> HK entities: Bank interest income is not taxable in Hong Kong. | |

| Implications |
|--|
| <p>The Group's <u>effective tax rate has increased</u> in 2024 due to:</p> <ul style="list-style-type: none"> Increase of profitability of LME Group and increase in UK tax rate Drop of interest income from reduced HK Margin fund size in 1H 2024 |

OECD Pillar Two model rules⁽¹⁾ to increase effective tax rate starting 2025

- Under the rules, HKEX Group is liable to pay a top-up tax for the difference between their Global Anti-Base Erosion (GloBE) effective tax rate per jurisdiction and the 15 per cent minimum rate.
- Pillar Two legislation became applicable to UK subsidiaries from 1 January 2024. The top-up tax for UK subsidiaries was negligible as they were able to take advantage of the Country-by-Country Reporting Transitional Safe Harbour given that the simplified effective tax rate of the UK subsidiaries was higher than 15 per cent during 1H 2024.
- Pillar Two legislation is expected to become effective from 1 January 2025 in Hong Kong.

- Under the high interest rate environment, the Group's effective interest rate in Hong Kong was below 15% as bank interest income was non-taxable.
- It is expected the effective tax rate in Hong Kong will be increased to ~15%. The amount of additional top-up tax would depend on the level of interest income and other non-taxable income.

Impact on D&A from newly launched systems

- The LME has been building a new trading platform in recent years, and the platform is expected to launch in 2025.
- The Group has announced to build a new proprietary derivatives platform, Orion Derivatives Platform (ODP), in Hong Kong.

- Amortisation of the system will commence when the system is ready for use.
- The amortisation period for the self-developed proprietary systems is generally 10 years.



1. Pillar Two model rules published by the Organisation for Economic Co-operation and Development (OECD)

1H 2024 Key Revenue Analysis

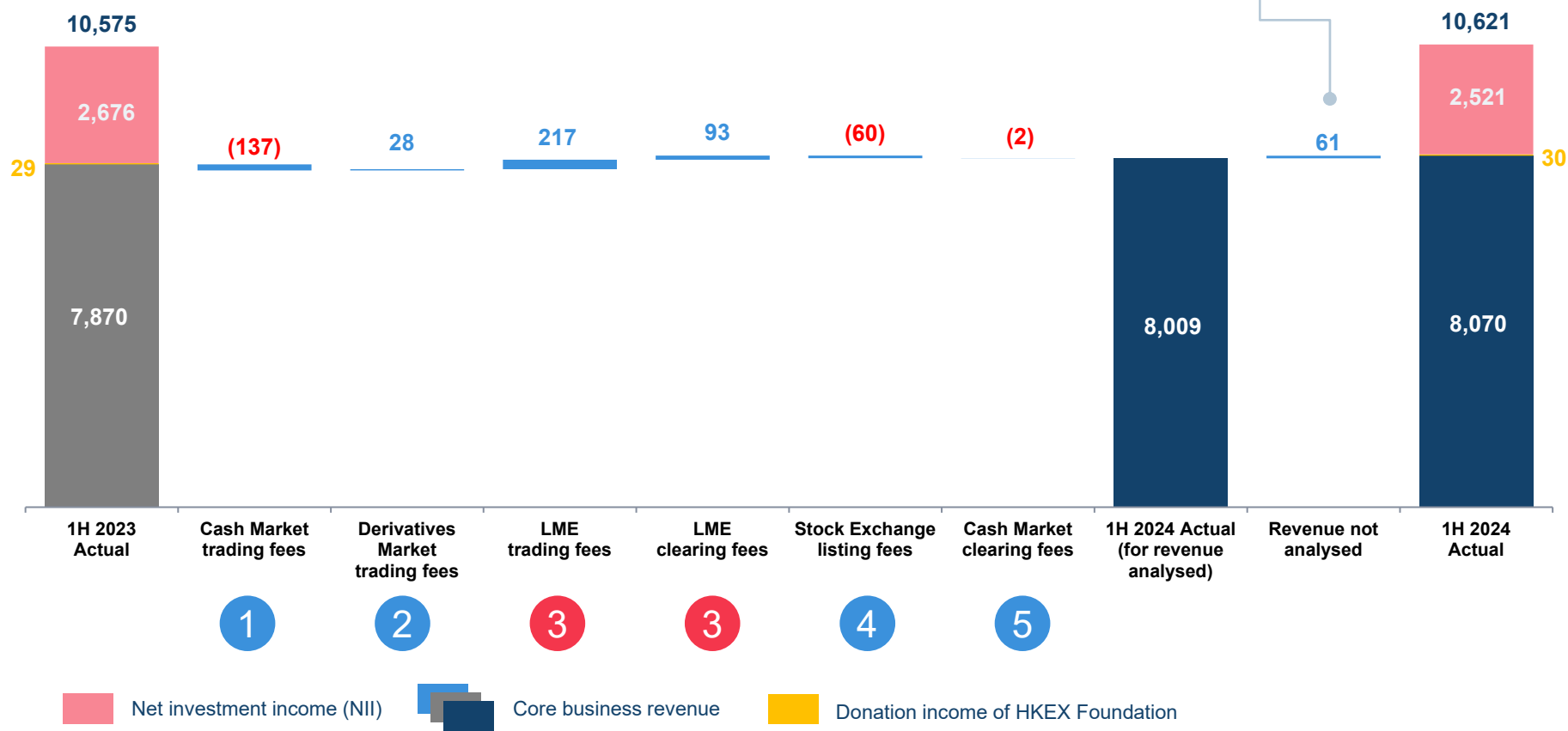


Revenue movements 1H 2024 vs 1H 2023

Total revenue and other income

(\$ million)

Depository fees ↓ \$14m
 Market data fees ↓ \$5m
 Hosting services fees ↑ \$24m
 Network fees ↑ \$15m
 Commodities segment other revenue (including LME financial OTC booking fees and accommodation income) ↑ \$41m



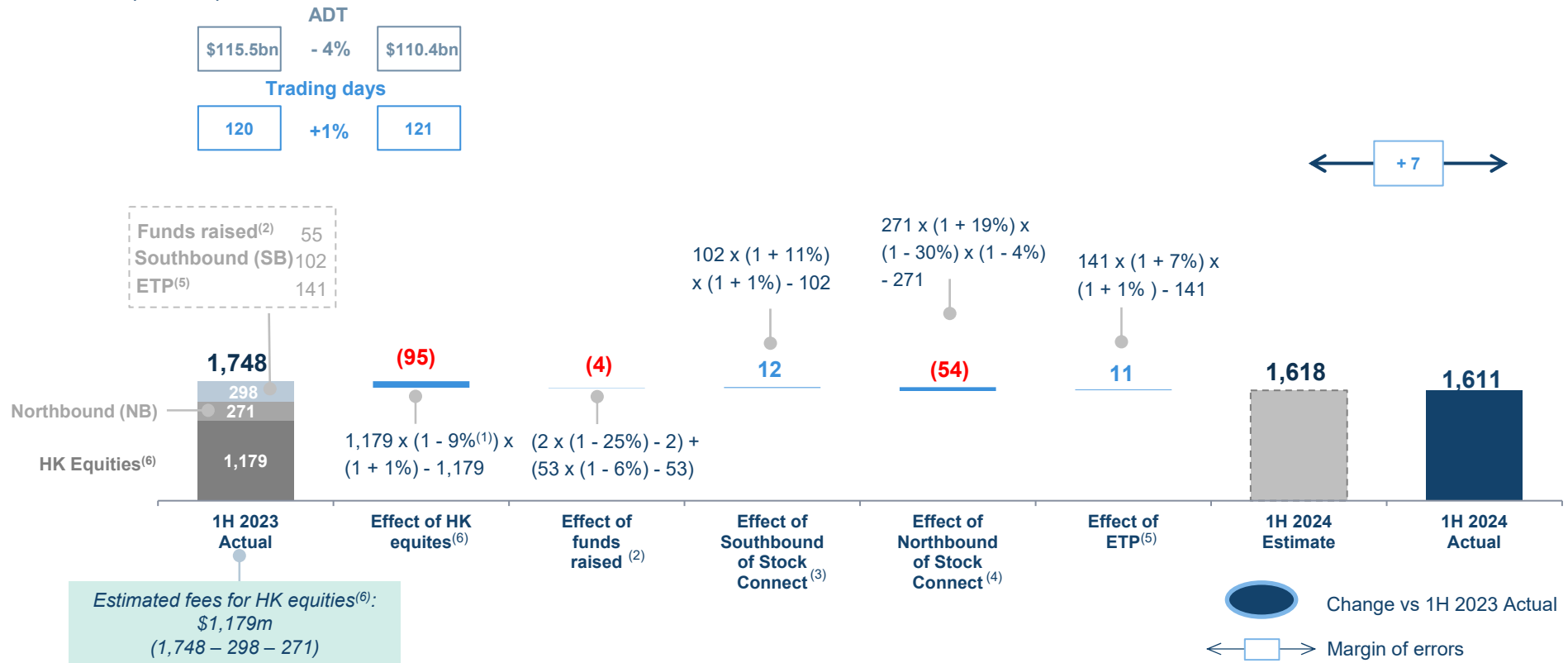
Cash Market trading fees 1

Estimate based on volume and fee rate change

Cash Market trading fees

-137

(\$ million)



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

1. Refers to % change in Headline ADT (ie, Stock Exchange trades (including DWs, CBBCs and warrants)) less SB ADT/2 less ETP ADT – 1H 2024: \$78.0bn; 1H 2023: \$85.8bn; ↓ 9%
 (Headline ADT – 1H 2024: \$110.4bn; 1H 2023: \$115.5bn;
 SB ADT (including ETF of \$1.5bn) – 1H 2024: \$37.5bn; 1H 2023: \$33.8bn;
 ETP ADT (excluding SB) – 1H 2024: \$13.7bn; 1H 2023: \$12.8bn)

2. Fees for equity products = Funds raised x 0.00565% x 2 sides;
 Fees for DWs and CBBCs = Funds raised x 0.005% x 2 sides;
 Funds raised for equity products – 1H 2024: \$13.4bn; 1H 2023: \$17.9bn; ↓ 25%;
 Funds raised for DWs and CBBCs – 1H 2024: \$493.4bn; 1H 2023: \$526.2bn; ↓ 6%

3. Southbound (SB) trading fees = ADT of SB x no. of trading days x 0.00565% x 50%;
 SB ADT – 1H 2024: \$37.5bn; 1H 2023: \$33.8bn; ↑ 11%;
 No. of trading days – 1H 2024: 114 days; 1H 2023: 113 days; ↑ 1%;
 The fee is subject to China VAT

4. Northbound (NB) trading fees = ADT of NB x no. of trading days x Fee rate x 40%;
 NB ADT – 1H 2024: RMB130.2bn; 1H 2023: RMB109.3bn; ↑ 19%;
 Effective 28 Aug 2023, trading fee rate was adjusted from 0.00487% to 0.00341%; ↓ 30%;
 No. of trading days – 1H 2024: 114 days; 1H 2023: 114 days; 0%;
 Exchange rate – 1H 2024: 1.07; 1H 2023: 1.12; ↓ 4%

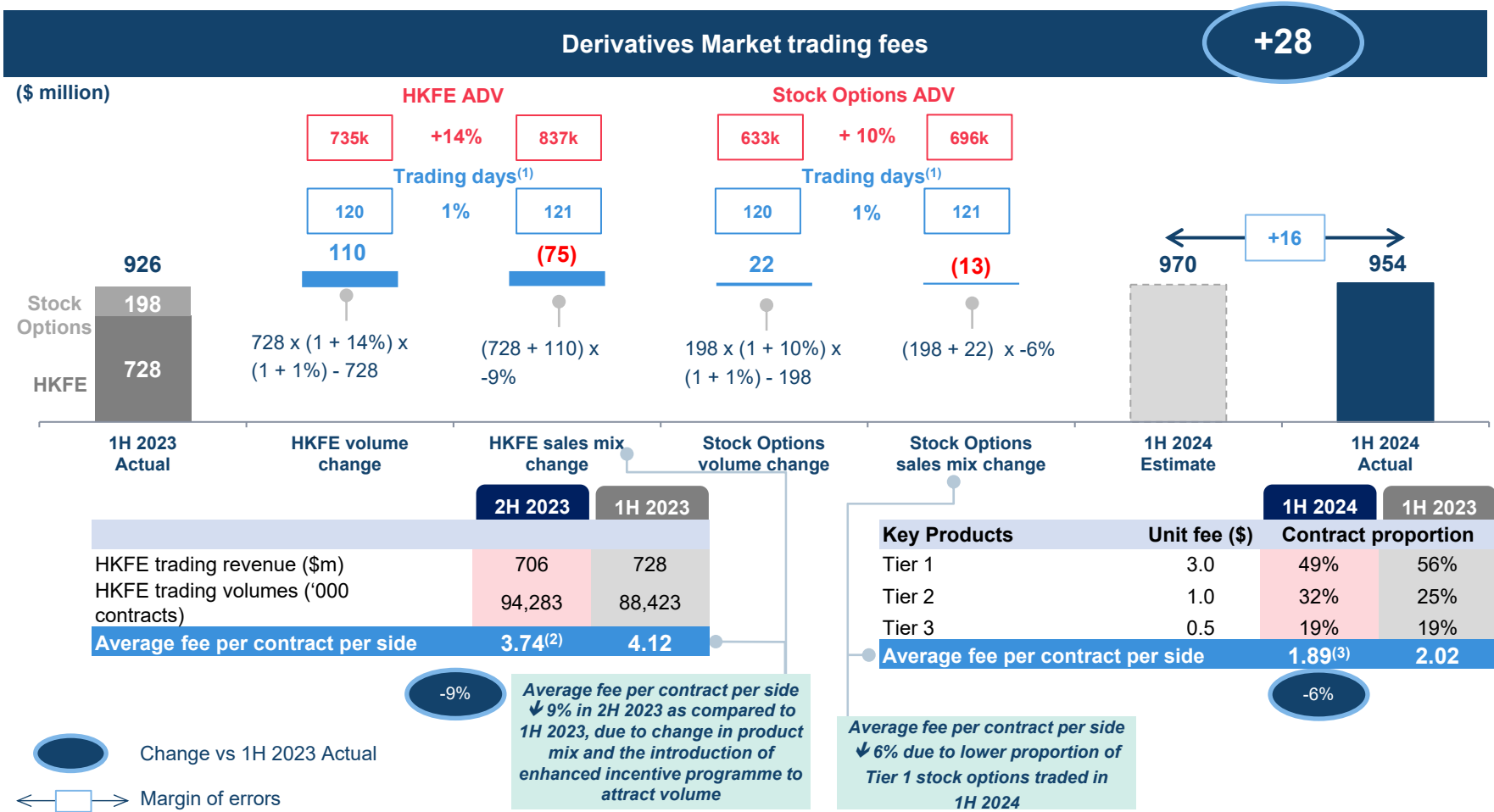
5. ETP trading fees = ADT x 0.00565% x 2 sides x no. of trading days x (1 - exemption %);
 ADT (excluding SB) – 1H 2024: \$13.7bn; 1H 2023: \$12.8bn; ↑ 7%;
 Exemption % = % of trades carried out by market makers (~50% per 2018 Annual Report) X fee waiver %;
 Fee waiver %: the fee waiver is referenced to the ETP's ADT over a 12-month period and its relevant investment exposure (~37% in 1H 2024 and 1H 2023), which was computed with reference to the actual individual ETP's fee waiver % and the individual ETP ADT;
 Thus, exemption % applied for 1H 2024 and 1H 2023 is ~50% x 37% = ~18.5%

6. Excluding trading fees arising from funds raised, Stock Connect and ETPs (including L&I Products)



Derivatives Market trading fees 2

Estimate based on volume and average fee per contract



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

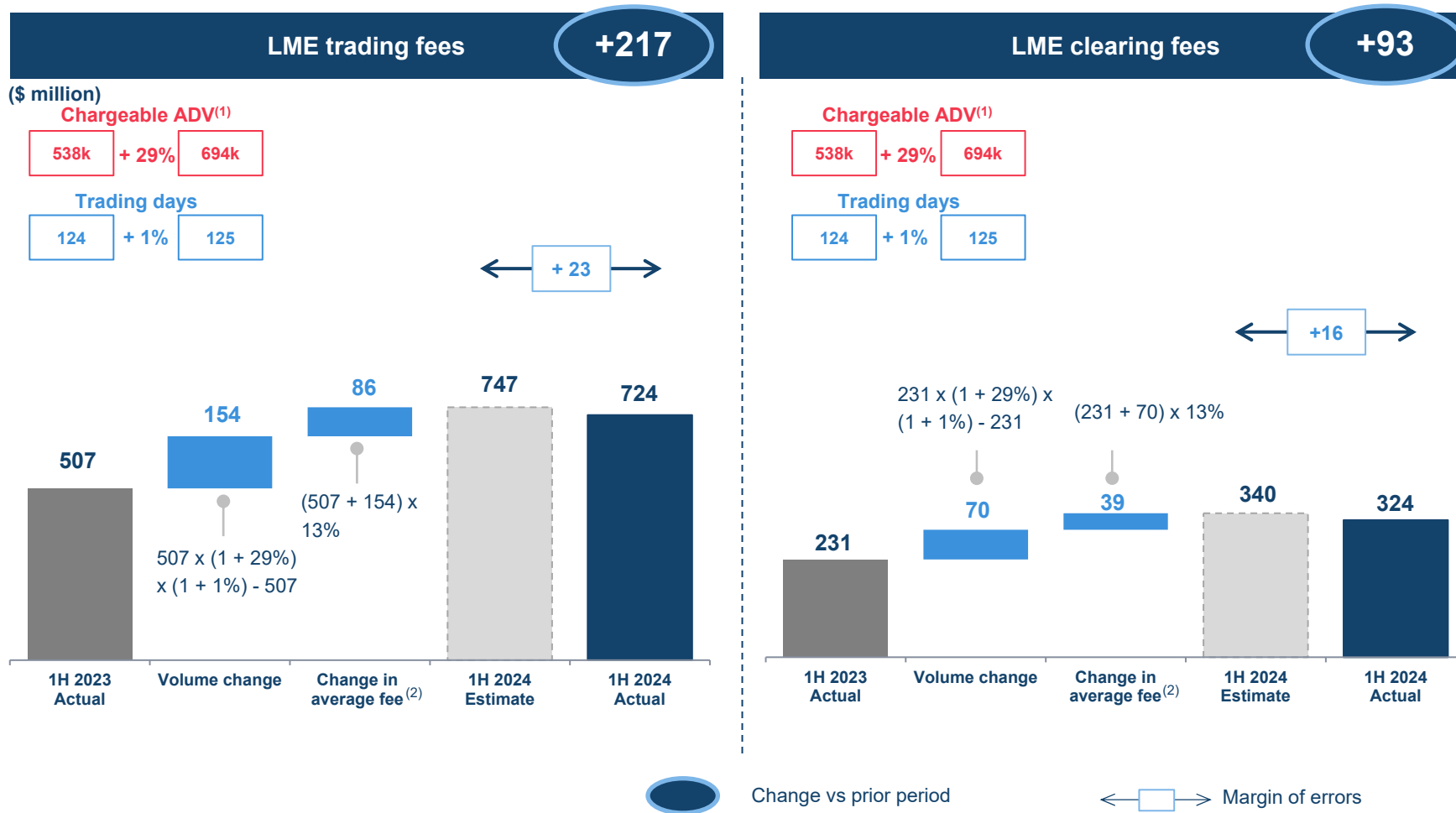


1. There were 8 holiday trading days in 1H 2024 (1H 2023: 9) for certain derivatives contracts. As the ADV is calculated as the sum of individual contracts, and majority of the contracts are traded during non-holidays, the number of non-holiday trading day is used for the calculation.
 2. Average fee per HKFE contract per side for 1H 2024 was assumed to be the same as the actual fee per HKFE contract per side for 2H 2023.
 3. Average fee per contract per side for stock options is calculated based on % of total contracts of key products as listed in the table above.

LME trading and clearing fees

3

Estimate based on volume change and change in fee per contract

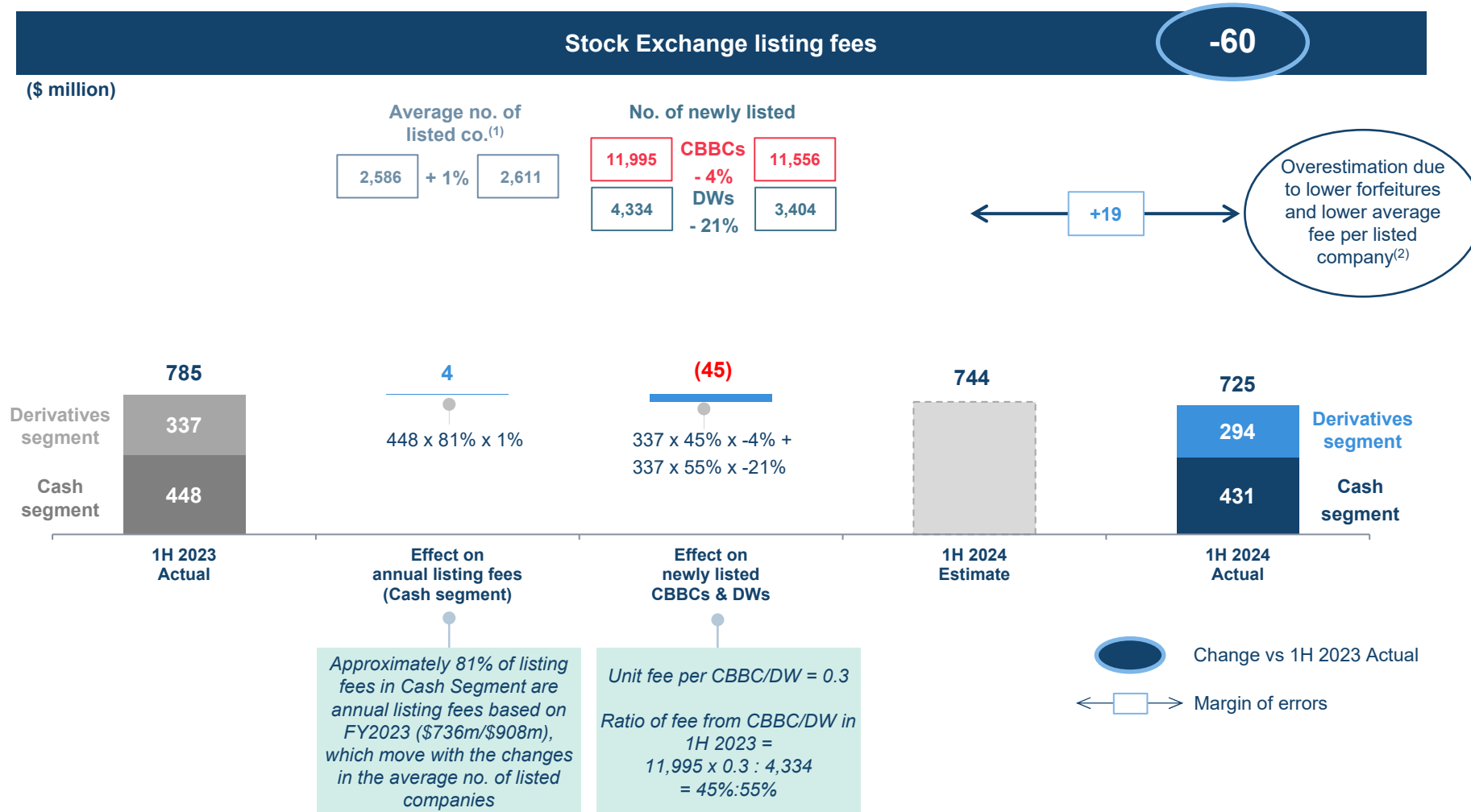


LME and LMEC fees generally move with total number of contracts traded and average fee per contract. Actual increase was lower than the blended average increase of 13% due to other factors such as change in proportion of products (e.g. short-dated carries and medium-dated carries) and launch of the new incentive programme

1. 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.
 2. Effective 1 January 2024, a revised fee schedule has been introduced. The blended average increase in trading and clearing fees is ~13%, before taking into account of liquidity programmes (including the new Electronic Volume Programme). As such, the actual blended fee increase is lower than 13%.
 For information: Average fee per contract (calculated at LME trading and clearing fees / Chargeable ADV / no. of trading days / 2 sides) for Q1 2024 and Q1 2023 was \$6.06 and \$5.58 respectively (i.e. up 9%).

Stock Exchange listing fees 4

Estimate based on number of listed companies and newly listed DWs/CBBCs



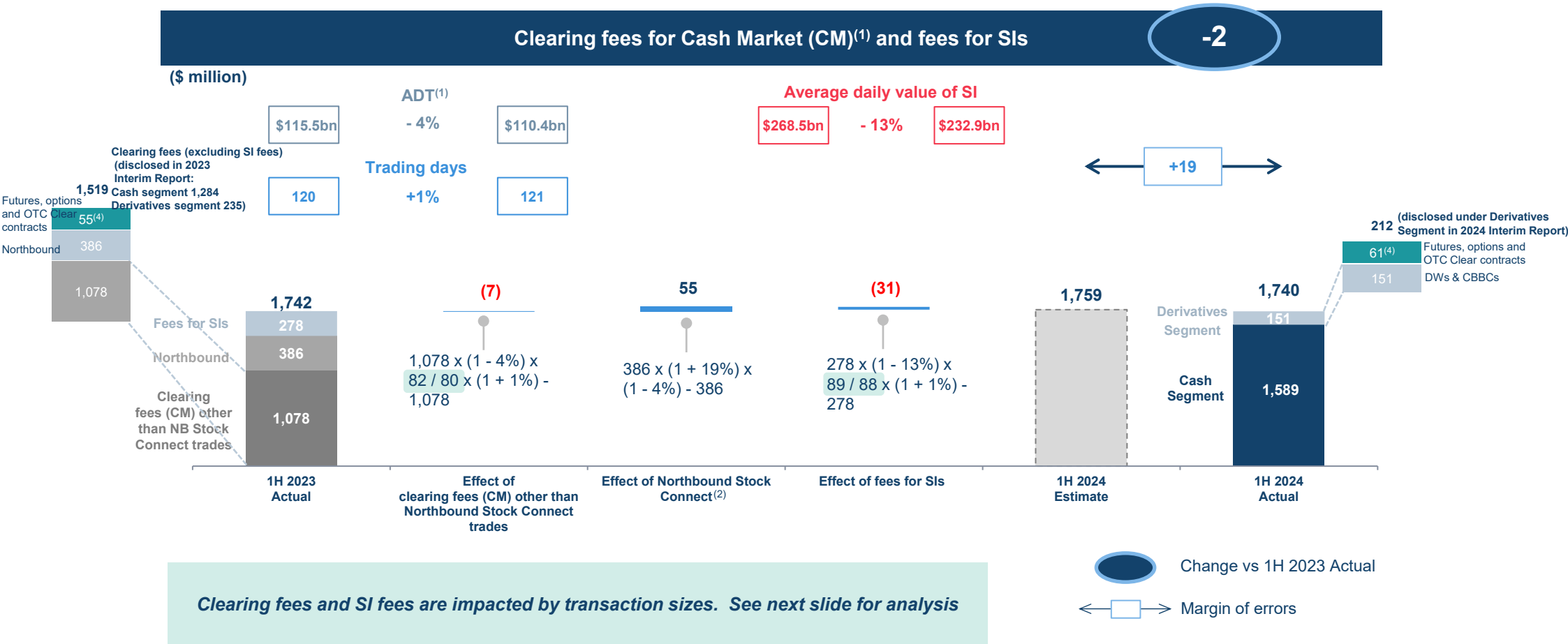
Stock Exchange listing fees move closely with changes in no. of listed companies and newly listed DWs/CBBCs, but are also impacted by number of forfeitures and withdrawn IPO applications and average fee per listed company.



1. Average number of listed companies represents the average number of listed companies at month end.
2. 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



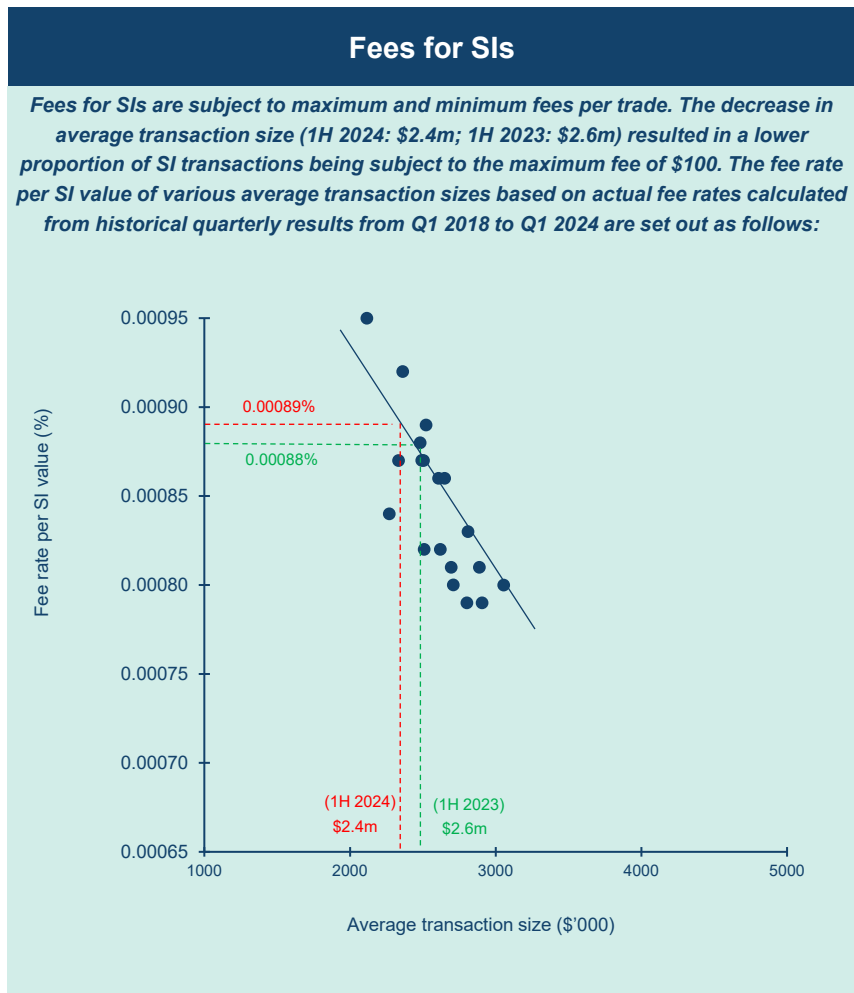
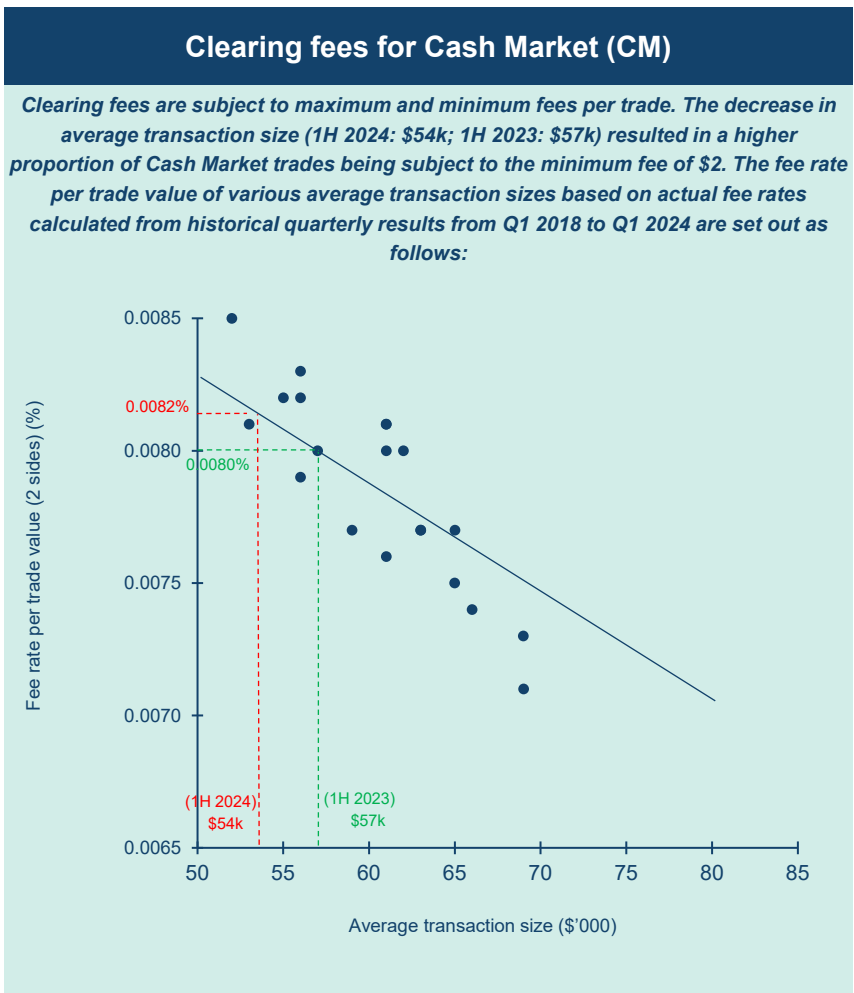
Clearing fees and SI fees move with total value of trades and total value of SIs but are also impacted by transaction sizes of the trades/SIs.

1. For all Cash Market trades (including DWs, CBBCs and warrants)
 2. Northbound (NB) ADT - 1H 2024: RMB130.2bn; 1H 2023: RMB109.3bn; ↑ 19%;
 No. of trading days: 1H 2024: 114 days; 1H 2023: 114 days; 0%;
 Exchange rate: 1H 2024: 1.07; 1H 2023: 1.12; ↓ 4%;
 3. The impact of Southbound fees is immaterial and therefore not included in the analysis.
 4. Clearing fees for futures, options and OTC Clear contracts were not separately disclosed in Interim Report, but were disclosed in Annual Report (FY2023: \$122 million; FY2022: \$110 million). Assume such fees do not change materially for the purpose of this analysis and amounted to \$61 million in 1H 2024 (1H 2023: \$55m).



Cash Market clearing fees 5

Impact of transaction sizes of the trades / SIs



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

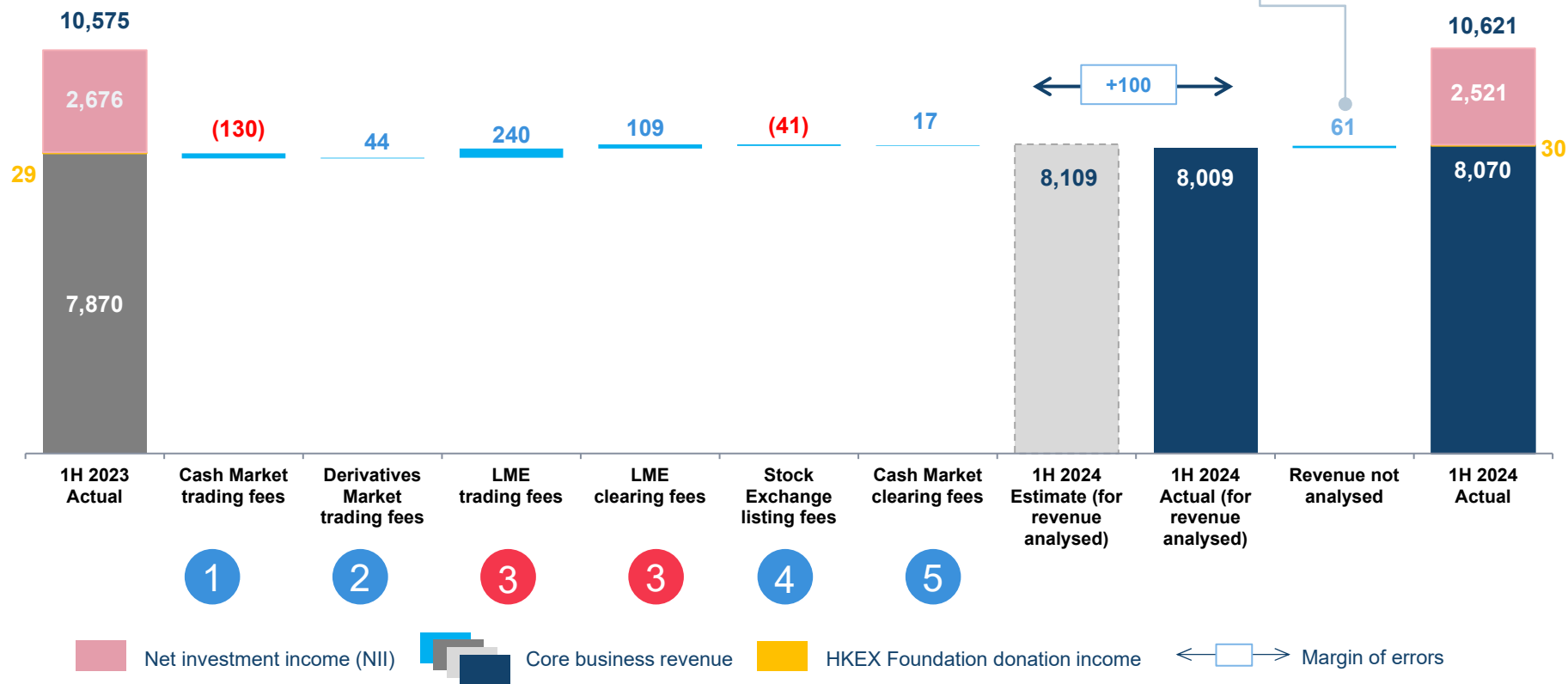


Estimate of 1H 2024 revenue

Total revenue and other income

(\$ million)

Depository fees ↓ \$14m
 Market data fees ↓ \$5m
 Hosting services fees ↑ \$24m
 Network fees ↑ \$15m
 Commodities segment other revenue (including LME fund OTC booking fees and accommodation income) ↑ \$41m



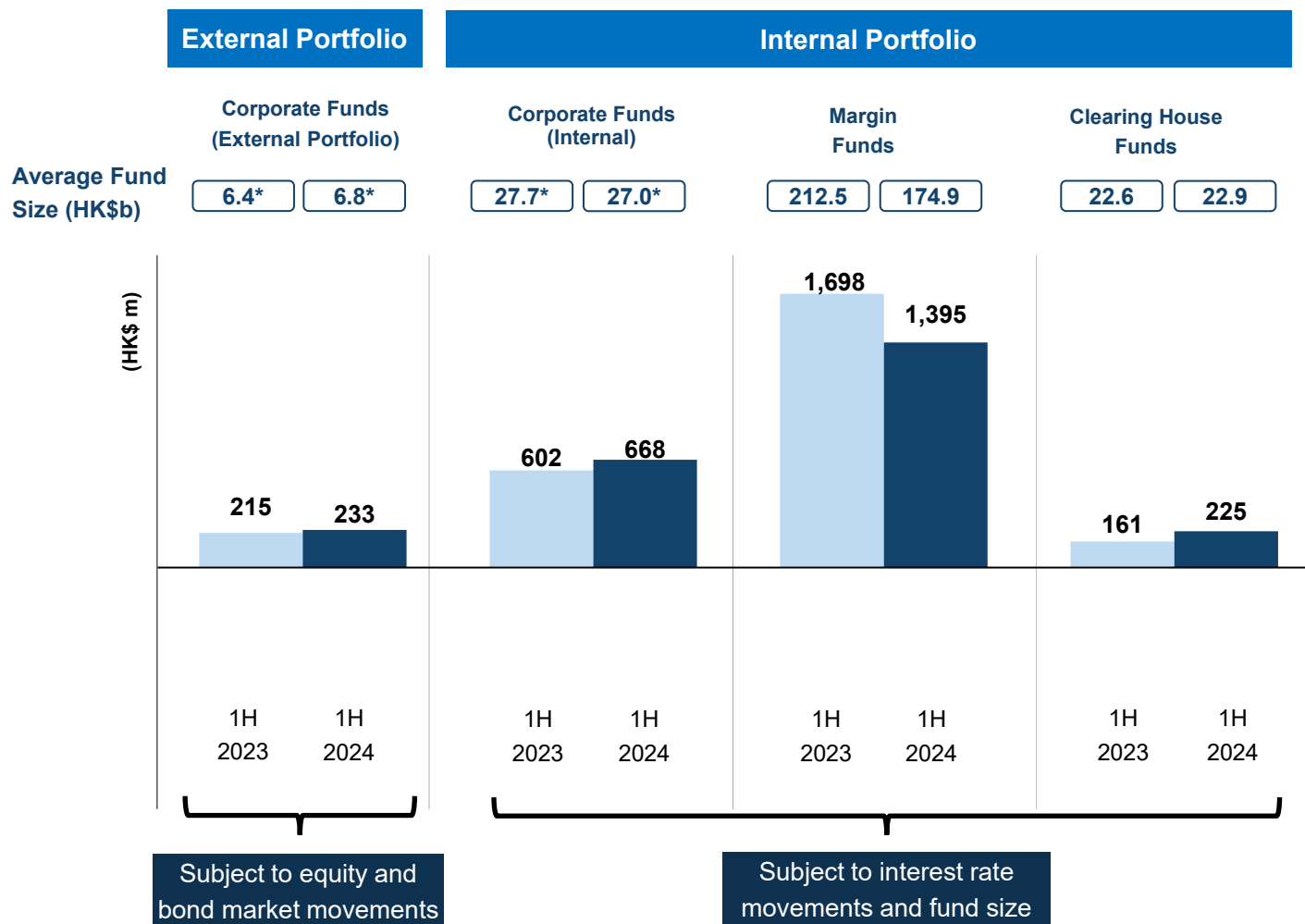
Margin of errors for revenue estimates (excluding NII, donation income and revenue not analysed) was ~ 1%



Net Investment Income Overview

NII benefited from higher interest rates and External Portfolio gains but offset by lower margin fund size

Net investment income by funds



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

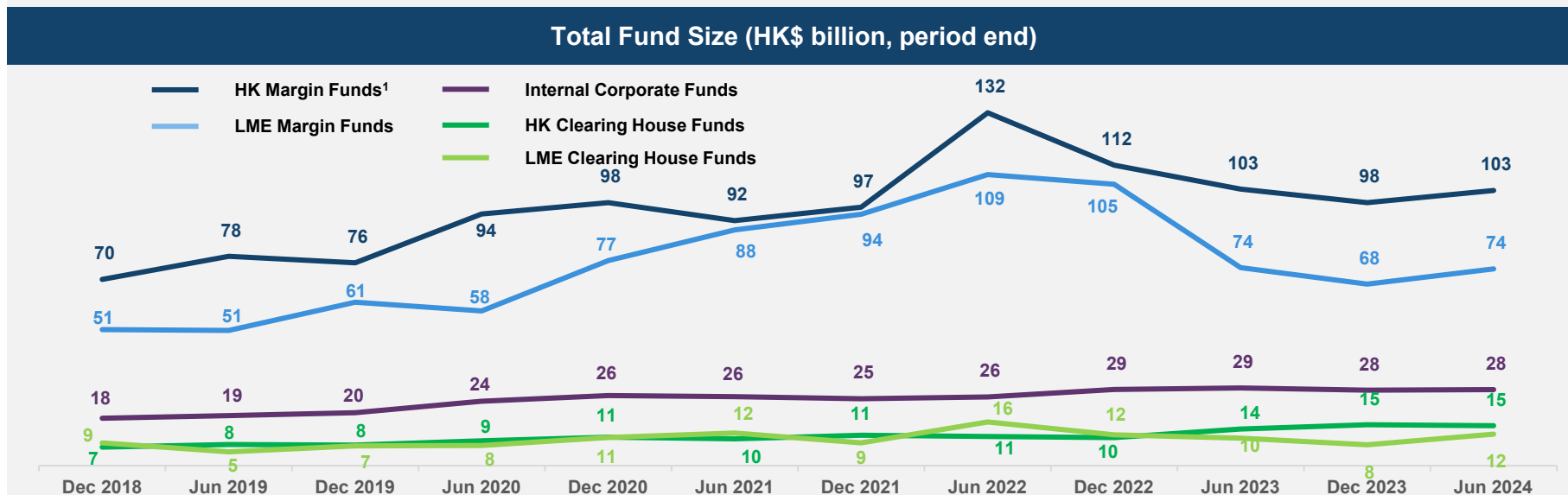
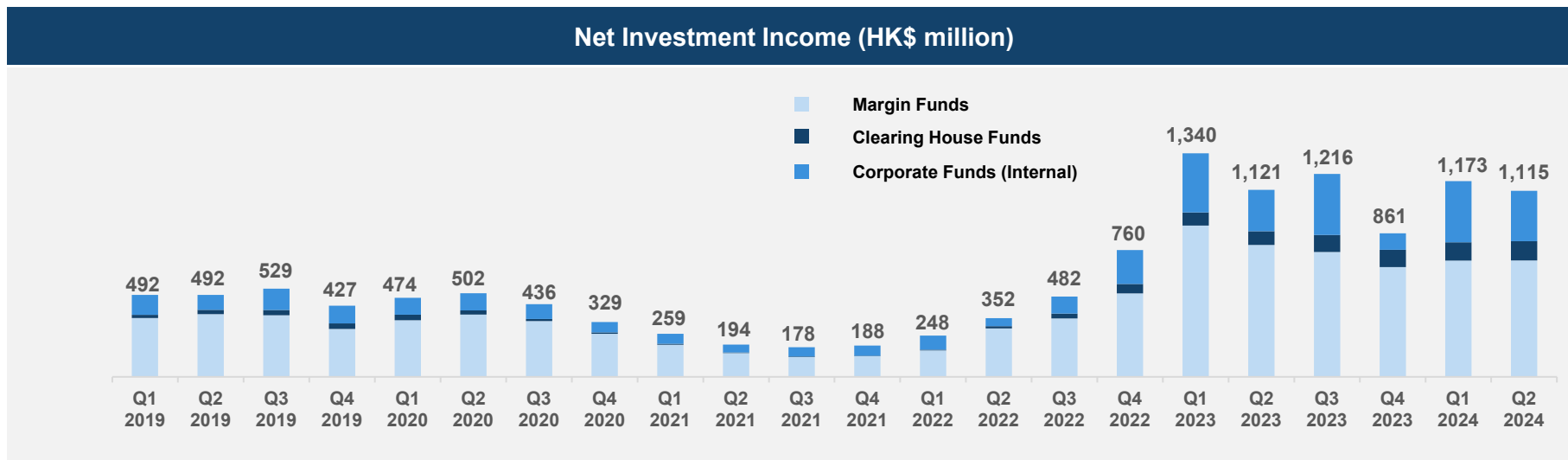


*External Portfolio's average fund size is estimated by the average of fund size at the beginning and end of the period.

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



1. 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 Portfolios

Base case modelling average variance to actuals at <6% in past four quarters

| | Corp Funds (Internal) | Margin Funds (HK) | | | Clearing House Funds (HK) | LMEC ¹ | |
|--|---------------------------------------|-------------------|---------------------------------------|-----------------------|---------------------------|-------------------|------------------|
| Q1 2024 Average Fund Size (HK\$) | \$28.0bn ² | \$99.1bn | | | \$14.6bn | \$70.9bn | |
| Base case assumptions | Time Deposit (100%) | Overnight (30%) | Time Deposit (70%) | Interest Rebate | Overnight (100%) | Overnight (100%) | Interest Rebate |
| Proportion size (HK\$) | \$28.1bn | \$29.7bn | \$69.4bn | \$99.1bn | \$14.6bn | \$70.9bn | |
| 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 2024 | 4.90% | 3.95% | 4.90% | -1.95% | 3.95% | 5.32% | -5.08% |
| Estimated NII for Q2 2024 ³ | \$344m | \$662m | | | \$144m | \$43m | |
| Estimated total NII for Q2 2024 | \$1,191m | | | | | | |
| Actual NII for Q2 2024 | \$1,115m | | | | | | |

Actual
-6.4%
from est.



1. Included Margin Funds and Clearing House Funds of LMEC
2. 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.
3. Estimated by fund size x annualised yield / 4

Internal Portfolio – Base case modelling and actual NII variances

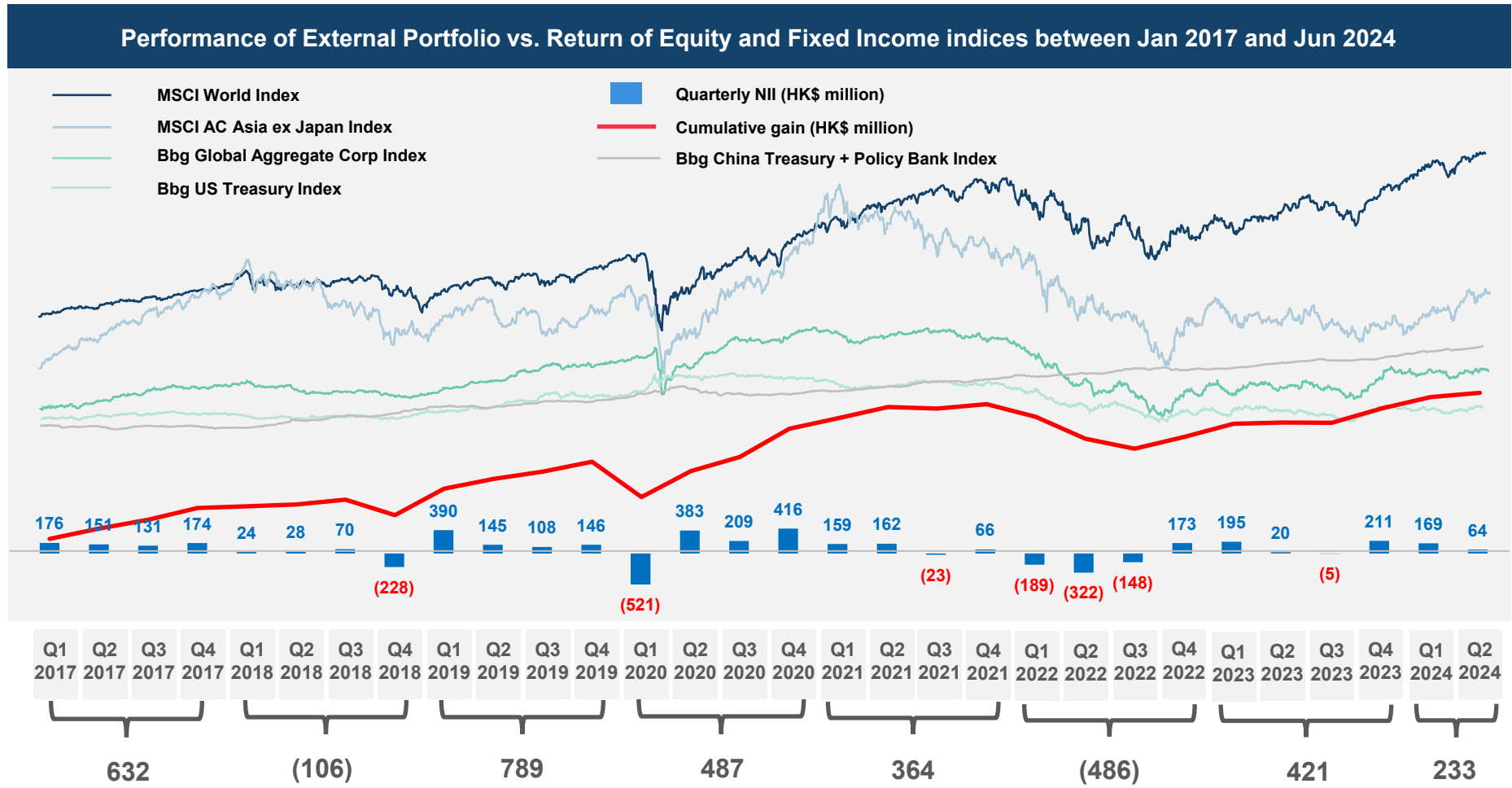
Key factors that are not predictable

| | 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 | <ul style="list-style-type: none"> • 100% HKD • No FX gain/loss | <ul style="list-style-type: none"> • 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 style="list-style-type: none"> • Corporate Funds (Internal) – 100% time deposits (average 6-month maturity) • Margin Funds (HK) – 30% overnight / 70% time deposits (average 6-month maturity) • Clearing House Funds & LMEC Funds – 100% overnight | Proactively managed to maximise return from interest rate outlook while ensuring all liquidity requirements are prudently met |
| Yield | <ul style="list-style-type: none"> • HK: <ul style="list-style-type: none"> - O/N HIBOR for HKD overnight deposit - 6 months' rolling average of 6M HIBOR for time deposits - less rebate linked to 1M HIBOR • LMEC <ul style="list-style-type: none"> - OBFR less rebate | <ul style="list-style-type: none"> • 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

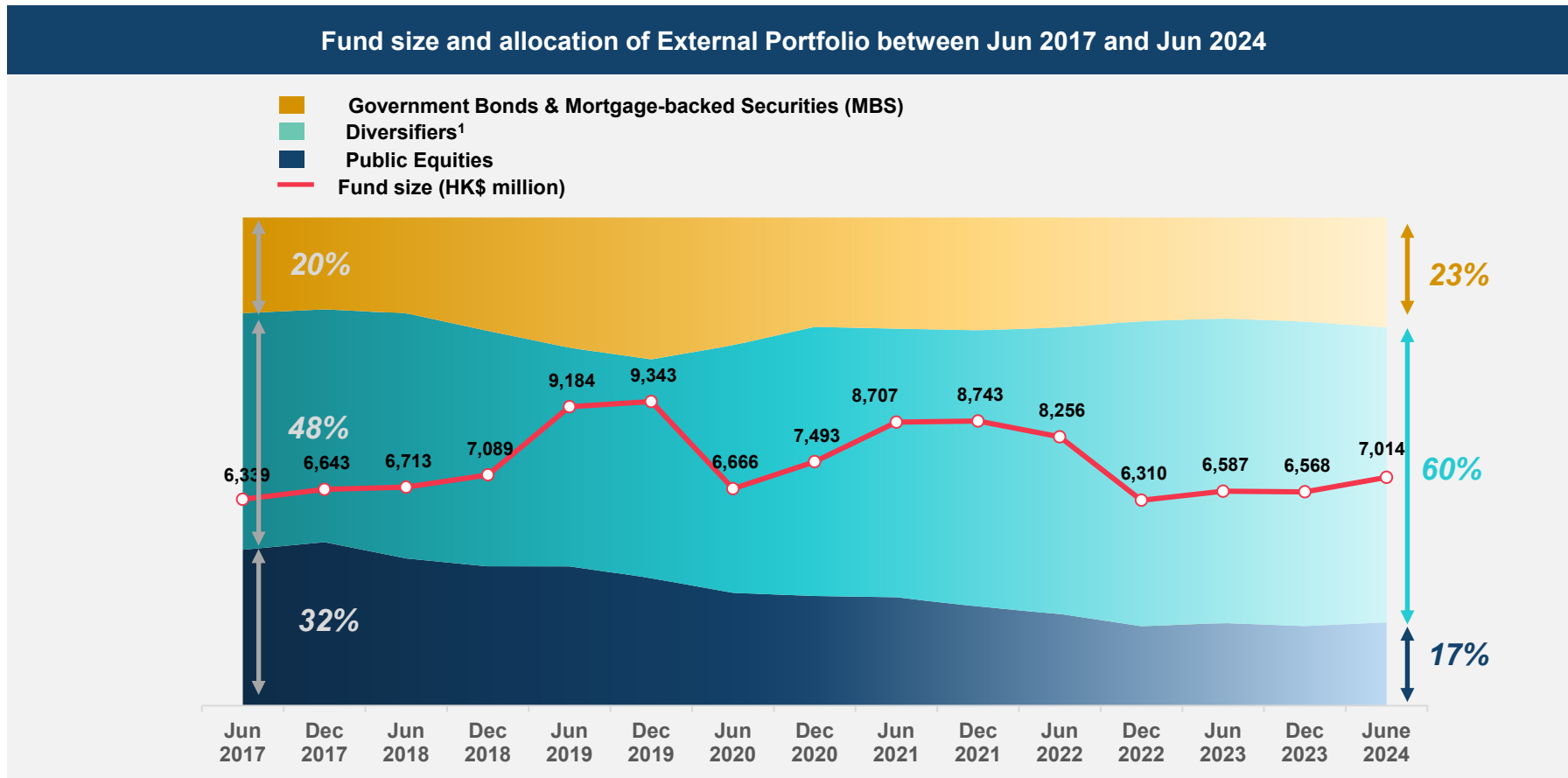


Cumulative performance of the Portfolio has been largely in line with broader equity and fixed income markets. Volatility of the Portfolio's return has been reduced after redemption of ~HK\$2bn in 2H 2022



External Portfolio

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



- Highly diversified portfolio, over 30 fund managers across 3 strategies² / 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



1. 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.



Thank you