

Consultation Paper

Proposed Reduction of Minimum Spreads in the Hong Kong Securities Market

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HOW TO RESPOND TO THIS CONSULTATION PAPER

The Stock Exchange of Hong Kong Limited ("the Exchange"), a wholly-owned subsidiary of Hong Kong Exchanges and Clearing Limited ("HKEX"), invites written comments on the matter discussed in this paper, or comments on related matters that may have an impact upon the matter discussed in this paper, on or before **20 September 2024**.

To submit written comments, please complete the questionnaire that can be accessed via the link and QR code below.

Link: https://surveys.hkex.com.hk/jfe/form/SV_6JpomnEbWykLjYa

QR code:



Our submission enquiry number is (852) 2840 3626.

Respondents are reminded that we will publish responses on a named basis in the intended consultation conclusions. If you do not wish to have your name disclosed to members of the public, please state so when responding to this paper. Our policy on handling personal data is set out in Appendix III.

Submissions received during the consultation period by **20 September 2024** will be taken into account before the Exchange decides upon any appropriate further action and a consultation conclusions paper will be published in due course.

DISCLAIMER

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DEFINITIONS

Term	Definition
“Applicable Securities”	Securities including equities, Real Estate Investment Trusts, and equity warrants traded in the securities market of Hong Kong
“ADT”	Average Daily Turnover
“ASX”	Australian Securities Exchange Ltd
“AUD”	Australian Dollar
“Bid-ask spread”	Difference between the best bid price and the best ask price of a security
“Basis point”	1/100th of 1%, or 0.01%
“Bps”	Basis points
“CCASS”	The Central Clearing and Settlement System
“Exchange”	The Stock Exchange of Hong Kong Limited
“Exchange Participant”	Means a person: (a) who, in accordance with these Rules, may trade on or through the Exchange; and (b) whose name is entered in a list, register or roll kept by the Exchange as a person who may trade on or through the Exchange as an Exchange Participant and “Exchange Participantship” shall be construed accordingly
“Exchange Traded Options” or “ETOs”	Means Options Contracts traded on the Exchange pursuant to the Options Trading Rules
“Exchange’s trading system”	Orion Trading Platform – Securities Market
“ETF”	Exchange Traded Fund
“ETP”	Exchange Traded Product, which include Exchange Traded Funds and Leveraged and Inverse Products
“HKEX”	Hong Kong Exchanges and Clearing Limited
“HKSAR”	Hong Kong Special Administrative Region
“JPX”	Japan Exchange Group
“JPY”	Japanese Yen
“KRX”	Korea Exchange
“LSE”	London Stock Exchange
“Minimum spread”	The smallest allowable price change for a stock traded on an exchange
“NASDAQ”	Nasdaq Stock Market, a stock market in the US that has three

	tiers - Nasdaq Global Select Market, Nasdaq Global Market and NasdaqCX
“NYSE”	New York Stock Exchange
“REIT”	Real Estate Investment Trust
“RMB”	Chinese Yuan / Renminbi
“Rules”	Means the Rules and Regulations of the Exchange and the Options Trading Rules prescribed by the Board as from time to time in effect
“SGX”	Singapore Exchange
“SGD”	Singapore Dollar
“Spread Table”	The spread table stipulated in Part A of the Second Schedule under the Rules of the Exchange
“SSE”	Shanghai Stock Exchange
“Structured Products”	Has the same meaning as in Chapter 15A of the Main Board Listing Rules
“SZSE”	Shenzhen Stock Exchange
“Tick size”	Has the same meaning as “Minimum spread”
“Tick constrained”	A situation when a stock’s trading is constrained by its minimum spread to trade at a narrower bid-ask spread, as evidenced that its bid-ask spread is almost always at or near the minimum spread
“Tick-to-price ratio”	The ratio between the minimum spread and the stock price
“TWSE”	Taiwan Stock Exchange
“US”	The United States of America
“USD”	United States Dollar

EXECUTIVE SUMMARY

1. This Consultation Paper solicits market views on proposed changes to the minimum spreads of stocks in the securities market of Hong Kong, as recommended by the Task Force on Enhancing Stock Market Liquidity set up by the Hong Kong Special Administrative Region (“HKSAR”) Government in August 2023. The proposed change is a market microstructure enhancement, which aims to improve market liquidity and global competitiveness of the Hong Kong market by facilitating bid-ask spread reduction and transaction cost saving.
2. Minimum spread, or tick size, is a fundamental aspect of equity market structure, as it sets the minimum price change for a stock traded on an exchange. Minimum spread determines the tightest bid-ask spread allowed, whereas the bid-ask spread is the difference between the best bid price and the best ask price in the order book, which can be expressed as one or a multiple of minimum spreads. The spread cost as represented by the bid-ask spread is one of the implicit transaction costs, thus minimum spread is considered to impact transaction cost and trading liquidity.
3. The spread cost when trading securities on The Stock Exchange of Hong Kong Limited (the “Exchange”) is relatively higher than the average of international peer markets, and reducing minimum spread is one way to help lower this cost. However, reducing a stock’s minimum spread will at the same time negatively impact its order book depth and displayed liquidity, and in some cases to the extent that investors may be disincentivised to trade the stock and hence lead to a net decrease of trading liquidity despite the apparent reduction of spread cost. Such a phenomenon is known to be more pronounced in the less liquid stocks with thin order book depth. Therefore, spread cost saving via minimum spread reduction should be balanced against other liquidity measures so that overall trading quality and liquidity would not be compromised on a net basis.
4. After undertaking thorough analysis which considered both the benefits of minimum spreads reduction and the liquidity profile of Hong Kong’s equity securities market, a reduction of minimum spreads of securities including equities, Real Estate Investment Trusts (“REITs”), and equity warrants (collectively, “Applicable Securities”) is proposed to be implemented in a phased approach. Phase 1 will cover price bands between \$10 and \$50 and it is proposed to reduce the minimum spreads by 50% - 60%; while in phase 2, the minimum spread of the price band of \$0.5 - \$10 is proposed to be reduced by 50%. Implementation of phase 2 will be considered after careful consideration of market feedback received then and observation of the impact of phase 1 implementation. The review of phase 1’s results will commence six months after its implementation.
5. The details of the proposal and the related consultation questions are set out in Chapter 2. Consultation questions related to the potential impact brought by minimum spread reduction to other aspects of trading, and the implementation plan, are set out in Chapters 3 and 5.

6. We would like to invite public comments on the proposal. Responses to this Consultation Paper should be submitted by **20 September 2024**. A Consultation Conclusions Paper will be issued after the consultation has been completed, tentatively by the end of 2024. It will summarise the main points made by respondents and indicate the way forward, including the implementation plan and timetable, should any of the proposed arrangements are to be implemented.

CHAPTER 1: BACKGROUND AND RATIONALE OF THE PROPOSAL

Background

7. This paper seeks views and comments from all interested parties regarding the proposed changes to the minimum spreads of Applicable Securities including equities, REITs, and equity warrants trading in the securities market of Hong Kong that follow the spread table stipulated in Part A of the Second Schedule under the Rules of the Exchange (the “Spread Table”, also as summarised in Table 1 below). The minimum spreads of debt securities, Exchange Traded Options (“ETOs”) and Exchange Traded Products (“ETPs”) will remain unchanged as their current spread tables are different and stipulated in Part B to Part D of the Second Schedule under the Rules of the Exchange. For Structured Products, while their current spread table is the same as the Spread Table shown in Table 1 below, their current spread table will remain unchanged as the product segment has a different trading ecosystem which would warrant a separate spread table arrangement. Further reasons are set out in Paragraph 28 of this Consultation Paper.

Table 1: Current spread table of the Applicable Securities

Price Band (currency unit) ¹				Minimum spread (currency unit)
From	0.01	to	0.25	0.001
Over	0.25	to	0.50	0.005
Over	0.50	to	10.00	0.010
Over	10.00	to	20.00	0.020
Over	20.00	to	100.00	0.050
Over	100.00	to	200.00	0.100
Over	200.00	to	500.00	0.200
Over	500.00	to	1,000.00	0.500
Over	1,000.00	to	2,000.00	1.000
Over	2,000.00	to	5,000.00	2.000
Over	5,000.00	to	9,995.00	5.000

8. The Exchange last reviewed the Spread Table and reduced the minimum spreads in two phases in 2005 and 2006 respectively after a public consultation, with minimum spreads for price bands above \$2 narrowed for equity securities, ETPs and Structured Products which at the time all shared the same spread table. Details of the changes introduced in the 2005/2006 review are shown in Appendix I.
9. Review of minimum spreads, with the aim to reduce bid-ask spreads for trading stocks and strengthen the competitiveness of the stock market in Hong Kong was identified as a near term enhancement measure by the Task Force on Enhancing Stock Market Liquidity

¹ The Spread Table stipulated in the Rules of the Exchange is applicable to all currency units including Hong Kong dollar.

set up by the HKSAR Government in August 2023, and was first noted in the Hong Kong Chief Executive's 2023 Policy Address² and later in the 2024 - 25 Budget³.

Minimum Spread and Bid-Ask Spread

10. Minimum spread, or 'tick size' as it is commonly referred to, is the smallest allowable price change for a stock traded on an exchange. The bid-ask spread is the difference between the best bid price and the best ask price in the order book, which can be expressed as one or a multiple of minimum spreads. Investors with a buy (sell) order that sits at the top of the order book can seek for immediate execution if they "cross the spread" to accept the best ask (bid) price on the other side, therefore the bid-ask spread is considered as one of the implicit costs for an active buyer or seller to immediately conclude a transaction. For the passive seller or buyer queuing at the other side of the order book, the bid-ask spread net off the explicit transaction cost could be its trading profit after a round-trip trade is concluded, while it bears the slippage risk which becomes higher for wider spread.
11. The bid-ask spread of a stock varies according to demand and supply, price volatility, and other implicit and explicit costs of trading. The minimum spread is a factor in determining the bid-ask spread and impacts the trading liquidity of a stock, for the following reasons:
 - If the minimum spread is too large (as measured by the ratio between the minimum spread and the stock price, also known as the 'tick-to-price' ratio⁴), the bid-ask spread may not accurately reflect investor demand and supply, which may lead to a longer order queue and slower execution efficiency. A stock that is constantly trading at or near the minimum spread is said to be potentially constrained by its minimum spread ("tick constrained"). Reducing the minimum spread may potentially narrow the bid-ask spread of the stock, especially for those tick constrained, and hence reduce the implicit transaction cost.

² Chief Executive's 2023 Policy Address, available at: <https://www.policyaddress.gov.hk/2023/en/p70.html>

³ The 2024 – 25 Budget, available at: <https://www.budget.gov.hk/2024/eng/budget08.html>

⁴ Tick-to-price ratio divides minimum spread by the stock price. This ratio measures the percentage economic cost of moving one tick to outbid another order.

Figure 1: Illustration of a tick constrained stock with an order book

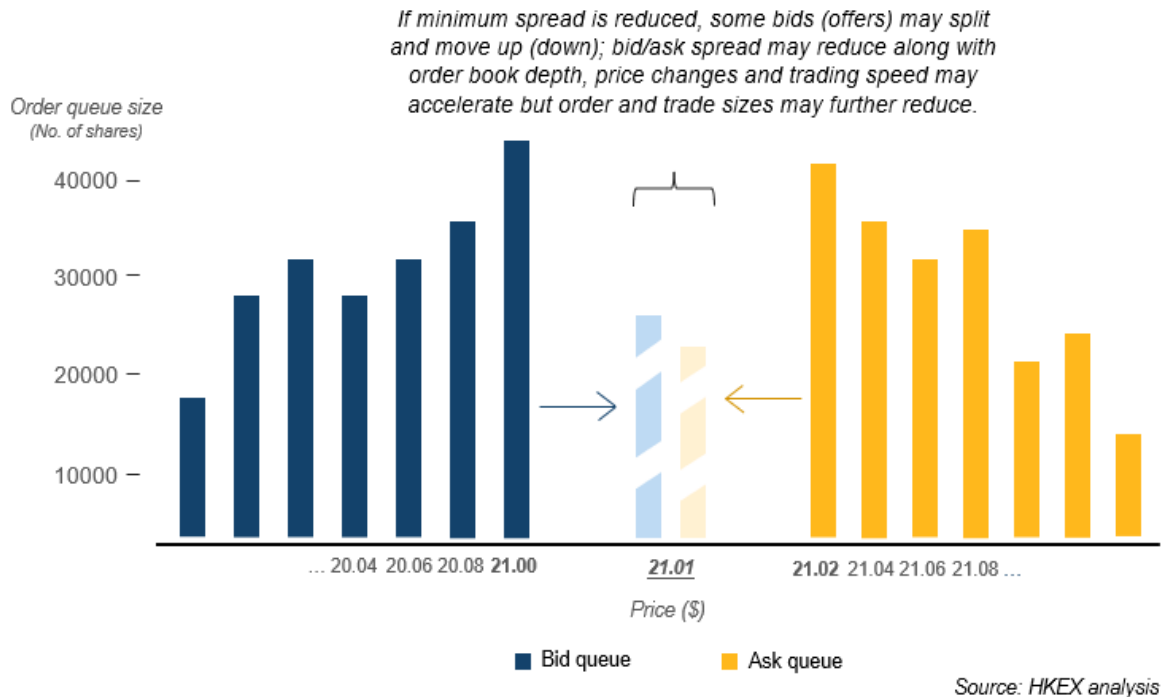


Figure 1: A hypothetical scenario where minimum spread is reduced from \$0.02 to \$0.01. Some orders queuing at the best bid of \$21.00 and best ask of \$21.02 that are originally constrained by the \$0.02 minimum spread may get executed if they are willing to accept the price of \$21.01.

- However, if the minimum spread is too small, an order queuing at a price point may be split across a number of price points, consequently affecting the order book depth and execution efficiency of the stock. The visible liquidity from the best bid or the best ask prices is reduced and hence it may disincentivise investors from trading the stock. Examples of investor groups who may be impacted most are: (i) active traders who may prefer immediate order execution to minimise risk; (ii) block investors who may prefer to execute at fewer price points or with fewer counterparties to minimise slippage cost; or (iii) retail investors who may wish to benefit economically from a wider spread by executing round-trip trades passively.

12. With the above considerations, the Exchange aims to conduct a review of the minimum spread and propose changes in a prudent and measured manner to mitigate possible adverse impact on order book depth and execution efficiency, while maintaining a resilient and efficient market.

13. In preparing this proposal, the Exchange has examined the liquidity profile of the Hong Kong equities market, studied the various practices adopted by other major exchanges and reviewed the recent change of minimum spreads in Hong Kong's ETP market, whilst having solicited initial feedback from market participants to help formulate the proposed model for consultation. Our findings are presented in the following sections of this chapter.

Hong Kong Equities Market Liquidity Profile

Liquidity profile of Hong Kong stocks

14. Average Daily Turnover (“ADT”) as a standard measure of liquidity generally indicates the level of market interest in a stock. As illustrated in Table 2 below, while over 34% of stocks by number have a price at or below \$0.5, the ADT contribution of stocks within these price bands is minimal. As such, stocks below \$0.5 are generally considered less liquid and a reduction in the minimum spreads of these stocks may further compromise the thin order book with low displayed liquidity. Hence, these stocks may not be the primary targets for spread reduction.
15. On the other hand, stocks within the price bands from \$0.5 to \$500 contribute to meaningful ADT as well as decent trading liquidity individually measured by average ADT per stock. These stocks may be further considered as potential targets for spread reduction.

Table 2: Liquidity profile of the Hong Kong equities market (2021 – 2023)⁵

Price Band	Number of stocks	Contribution to equity ADT (%)	Average ADT per stock (HK\$ million)
From 0.01 to 0.25	544 / 20.77%	0.20%	0.39
Over 0.25 to 0.50	364 / 13.90%	0.26%	0.78
Over 0.50 to 10.00	1,345 / 51.36%	23.5%	18.92
0.50 to 1.00	385 / 14.70%	1.18%	3.31
1.00 to 2.00	332 / 12.68%	1.69%	5.50
2.00 to 5.00	398 / 15.20%	10.67%	29.04
5.00 to 10.00	230 / 8.78%	9.96%	46.87
Over 10.00 to 20.00	148 / 5.65%	13.98%	102.30
Over 20.00 to 100.00	181 / 6.91%	30.06%	179.83
20.00 to 50.00	135 / 5.15%	15.10%	121.14
50.00 to 100.00	46 / 1.76%	14.96%	352.09
Over 100.00 to 200.00	26 / 0.99%	16.42%	683.92
Over 200.00 to 500.00	11 / 0.42%	15.58%	1534.25
Over 500.00 to 1,000.00	/	/	/
Over 1,000.00 to 2,000.00	/	/	/
Over 2,000.00 to 5,000.00	/	/	/
Over 5,000.00 to 9,995.00	/	/	/
Total	2,619	100%	41.43 (average)

Source: Bloomberg and HKEX analysis; data from 2021 – 2023

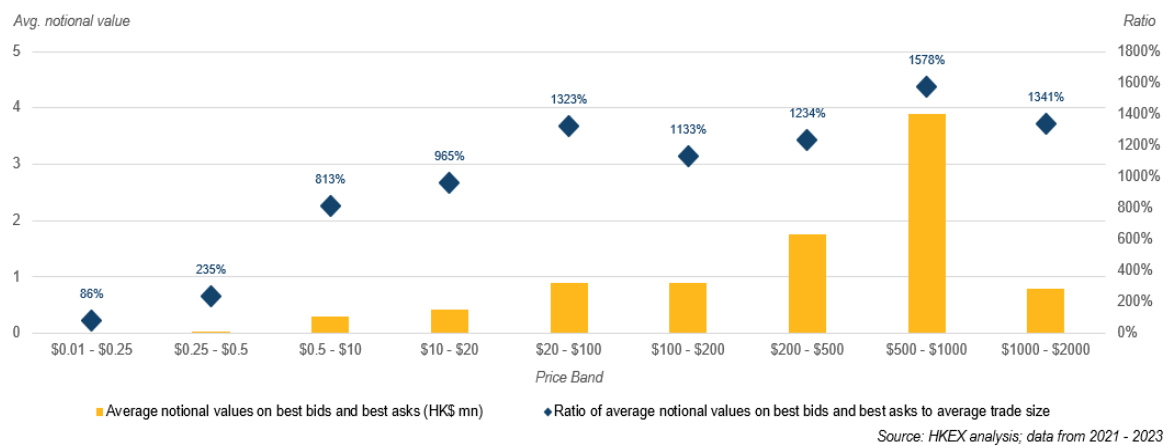
16. As explained in paragraph 11, order book depth may be impacted by spread reduction through dispersion of orders across a larger number of price points. Hence the target for

⁵ The stocks are categorised into different price bands using the average daily closing price of each stock from 2021 – 2023.

spread reduction should be stocks with sufficient order book depth so that trading liquidity on a net basis would not be compromised.

17. Figure 2 shows the top layer order book depth of Hong Kong equities across different price bands, measured by comparing average notional value of the top layer of order book queues, i.e. notional value of best bids and best asks, versus the average trade size of the stocks in that price band. It is evident that the average order book depth is higher for larger priced stocks, and vice versa, in the Hong Kong equities market. Therefore, higher priced stocks which demonstrate deeper order book depth than that of smaller priced stocks are expected to have better capacity to absorb reductions in order book depth due to reduction of minimum spreads. The chart below shows that the higher price bands above \$0.5 may be ideal targets for spread reduction.

Figure 2: Order book depth comparing average notional values on best bids and best asks of Hong Kong equities against average trade size, grouped by price bands (2021 - 2023)



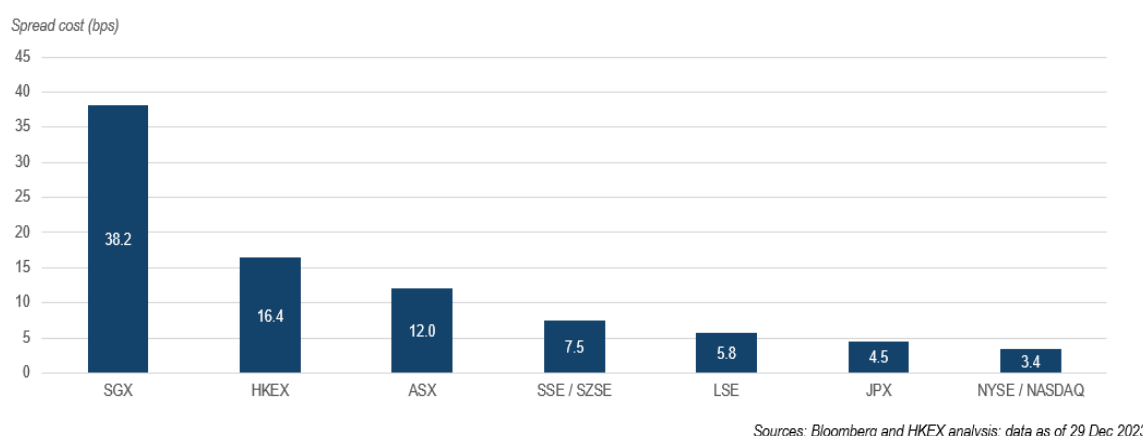
Investor profile

18. The Hong Kong equities market has a balanced ecosystem with a mix of investors, including institutional investors, market makers, and retail investors. These groups of investors exhibit discrete trading behaviour linked to the minimum spread. For example, institutional investors require sufficient order book depth to transact in larger quantities; market makers trade frequently between best bid and ask prices to provide liquidity to the market; retail investors often look for opportunistic bets and are usually less concerned on spread cost but overall trading profit when investing in a particular stock, etc. These market participants have different preferences on minimum spreads as well as varying participation interests in the types of stocks (e.g. low priced and / or illiquid stocks are more dominated by the retail segment), and the Exchange will take these factors into consideration when proposing changes.

Transaction Costs and Minimum Spread Models in Other International Exchanges

19. The bid-ask spread or the spread cost in the Hong Kong market is higher than some other major exchanges such as those in Mainland China, Japan, the United States and the United Kingdom, as shown in Figure 3 below. This may suggest that there is a window of opportunity to reduce transaction costs in Hong Kong's market via minimum spread reduction. However, it is important to note that minimum spread is only one factor and there are many other more dominant factors such as inherent liquidity of the stock affecting spread cost. Additionally, this proposal will only impact spread cost which is one factor of transaction cost, while other components such as stamp duty (currently charged at 10bps in Hong Kong⁶), exchange and regulatory fees and levies, and broker commission all contribute to transaction cost and impact investor trading behaviour.

Figure 3: Spread costs across international exchanges⁷



20. While the ecosystem in each market is unique, there are three common minimum spread arrangements being applied in the major exchanges globally (refer to Appendix II for details):

- i) *Uniform spread at all price levels*: a standardised minimum spread for all stocks, regardless of stock price and liquidity, which is notably adopted by exchanges in Mainland China and the United States⁸. These exchanges have structured the minimum spread set at one cent in local currency and the board lot is standardised across all stocks.
- ii) *Single spread table for all stocks*: a tiered table with minimum spreads that

⁶ Stamp duty on sale or purchase of any Hong Kong stock is charged at 0.1% of the amount of the consideration or of its value on every sold note and every bought note.

⁷ For simplicity, spread cost is calculated based on the average bid ask spread percentage of the top 100 stocks in terms of ADT of each exchange in 2023.

⁸ For the exchanges in the United States, the minimum pricing increment is US\$0.0001 if the order is priced less than US\$1.00 per share. Source: Rule 612 (Minimum Pricing Increment) of Regulation NMS, available at: <https://www.sec.gov/files/rules/final/34-51808.pdf>

increase with corresponding price bands to achieve a relatively consistent tick-to-price ratio. Examples include Asia-Pacific exchanges such as Hong Kong Exchanges and Clearing Limited (“HKEX”), Australian Securities Exchange Ltd (“ASX”), Korea Exchange (“KRX”), Singapore Exchange (“SGX”) and Taiwan Stock Exchange (“TWSE”). It is also worthwhile to note that most of these exchanges use different spread tables for different product types, e.g., ETPs, similar to the current arrangements in Hong Kong.

- iii) *Multiple spread tables for different stocks:* stocks are categorised by a specified liquidity measure, such as trading volume or ADT, and those with higher liquidity or ADT are assigned an applicable spread table to be traded with smaller minimum spreads. Notable examples are London Stock Exchange (“LSE”) and Japan Exchange Group (“JPX”).

21. Many of the exchanges mentioned above have undergone a reduction in minimum spread (such as KRX and TWSE) or a change in minimum spread arrangement (JPX and LSE) in the past two decades. For example, JPX implemented a separate tighter spread table for selected stocks in 2014 and in 2023. Its assessment in 2024⁹ shows that the goal to reduce investor execution cost was achieved after the adoption of a tighter spread table. At the same time, a reduction in the order book depth at each price point due to dispersed orders was also observed.

22. The Exchange has also compared the tick-to-price ratios of the equities markets of several international exchanges such as JPX, LSE, and those in Mainland China and US. It is observed that the tick-to-price ratios of lower priced stocks display great variance among the exchanges, but the ratios are generally higher than those for higher priced stocks. As the stock price increases, the differences of tick-to-price ratios among the exchanges get smaller and the ratio converges to near 10 bps or below, a point which is indicated as “optimal” for Hong Kong securities market from the initial market feedback. Based on the tick-to-price ratios alone, those of the Applicable Securities traded in Hong Kong are largely comparable to those traded on the other exchanges, and there is potential room for reduction at lower price levels, such as for price levels between \$0.5 and \$50.

Past Minimum Spread Review in ETPs Conducted by the Exchange

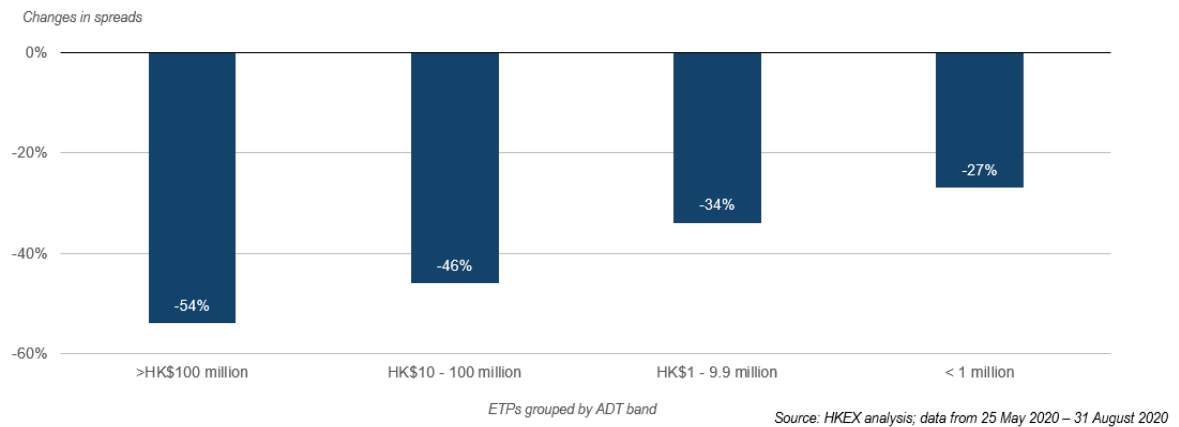
23. On 1 June 2020, the Exchange reduced the minimum spreads of ETPs with an aim to create greater trading flexibility and lower transaction cost for investors. With consideration of market makers’ concerns regarding price stability, and hence quote update frequency and displayed liquidity, the minimum spreads for ETPs were reduced at different price bands by 50% to 90%. After the reduction, over 70% of Hong Kong-listed ETPs have seen bid-ask spreads narrowed by at least 10%. The decrease in bid-ask spread is especially significant amongst the actively traded ETPs. Those with an ADT of above HK\$100 million, as shown in Figure 4, had bid-ask spreads narrowed by 54% on

⁹ JPX Working Paper: Impact of optimisation of the tick size for TOPIX Mid 400 constituents, available at:

https://www.jpex.co.jp/english/corporate/research-study/working-paper/JPXWP_Vol42e.pdf

average¹⁰. However, it is worth noting that ETPs are generally index-linked and behave differently from single stocks. For ETPs, smaller minimum spreads are usually set to facilitate better index tracking, with market makers generally present to fill the liquidity gap. Further, the reduction of minimum spreads in the Hong Kong ETP market was implemented in conjunction with an enhancement of the ETP market making regime, which may also have positively contributed to the decrease in bid-ask spread.

Figure 4: Changes in bid-ask spreads for ETPs grouped by ADT band after the reduction of minimum spreads in 2020



¹⁰ Assessing the Impact of HKEX's ETF Liquidity Enhancements, available at: https://www.hkex.com.hk/-/media/HKEX-Market/Products/Securities/Exchange-Traded-Products/Attachment/HKEX--Assessing-the-impact-of-HKEX_s-ETF-liquidity-enhancements_whitepaper_en.pdf; 201 ETPs were listed and traded on HKEX during the period between 25 May 2020 and 31 August 2020 when the analysis was conducted.

CHAPTER 2: THE PROPOSAL

Overview of the Proposal

24. As noted in Chapter 1, the Exchange has considered the experience gained in the previous review of minimum spread for ETPs, the practices adopted by international exchanges as well as the initial market feedback in determining the scope, magnitude and arrangement of the proposed changes.

25. The proposal entails the following key features:

- a. **Scope:** Applicable Securities as defined in Chapter 1, i.e. equities, REITs and equity warrants will be included in this review. ETPs, debt securities, ETOs and Structured Products are excluded and spread tables applied to these excluded securities will remain unchanged.
- b. **Price bands and magnitude of reduction:** In phase 1, the minimum spreads of the price bands between \$10 and \$20, and between \$20 and \$50 will be reduced by 50% and 60% respectively. In phase 2, the minimum spread of the price band between \$0.5 and \$10 will be reduced by 50%.
- c. **Spread table arrangement:** Single spread table model for Applicable Securities will continue to be adopted.

Table 3: Proposed minimum spreads for the Applicable Securities in phase 1

Price Band	Original minimum spread	Proposed minimum spread	Original tick-to-price ratio (bps)	Proposed tick-to-price ratio (bps)
From 0.01 to 0.25	0.001		40-1000	
Over 0.25 to 0.50	0.005		100-200	
Over 0.50 to 10.00	0.010		10-200	
<div style="display: flex; align-items: center;"> <div style="font-size: 2em; margin-right: 5px;">{</div> <div style="margin-left: 5px;"> 0.50 to 1.00 1.00 to 2.00 2.00 to 5.00 5.00 to 10.00 </div> </div>	0.010		100-200	
	0.010		50-100	
	0.010		20-50	
	0.010		10-20	
Over 10.00 to 20.00	0.020	0.010 (-50%)	10-20	5-10 (-50%)
Over 20.00 to 100.00	0.050	0.020 (-60%) /0.050	5-25	4-10 (-60%) / 5-10
<div style="display: flex; align-items: center;"> <div style="font-size: 2em; margin-right: 5px;">}</div> <div style="margin-left: 5px;"> 20.00 to 50.00 50.00 to 100.00 </div> </div>	0.050	0.020 (-60%)	10-25	4-10 (-60%)
	0.050		5-10	
Over 100.00 to 200.00	0.100		5-10	
Over 200.00 to 500.00	0.200		4-10	
Over 500.00 to 1,000.00	0.500		5-10	
Over 1,000.00 to 2,000.00	1.000		5-10	
Over 2,000.00 to 5,000.00	2.000		4-10	
Over 5,000.00 to 9,995.00	5.000		5-10	

Table 4: Proposed minimum spreads for the Applicable Securities in phase 2

Price Band				Original minimum spread	Proposed minimum spread	Original tick-to-price ratio (bps)	Proposed tick-to-price ratio (bps)
From	0.01	to	0.25	0.001		40-1000	
Over	0.25	to	0.50	0.005		100-200	
Over	0.50	to	10.00	0.010	0.005	10-200	5-100
	0.50	to	1.00	0.010	0.005 (-50%)	100-200	50-100 (-50%)
	1.00	to	2.00	0.010	0.005 (-50%)	50-100	25-50 (-50%)
	2.00	to	5.00	0.010	0.005 (-50%)	20-50	10-25 (-50%)
	5.00	to	10.00	0.010	0.005 (-50%)	10-20	5-10 (-50%)
Over	10.00	to	20.00	0.010		5-10	
Over	20.00	to	50.00	0.020		4-10	
Over	50.00	to	100.00	0.050		5-10	
Over	100.00	to	200.00	0.100		5-10	
Over	200.00	to	500.00	0.200		4-10	
Over	500.00	to	1,000.00	0.500		5-10	
Over	1,000.00	to	2,000.00	1.000		5-10	
Over	2,000.00	to	5,000.00	2.000		4-10	
Over	5,000.00	to	9,995.00	5.000		5-10	

26. Based on the average closing price and turnover recorded between 2021 – 2023, the number of Applicable Securities affected¹¹ under the proposal will be:

- Phase 1: 283 or around 11% of the ~2600 Applicable Securities which accounts for approximately 29% of ADT of the Applicable Securities.
- Phase 2: 1,345 or around 51% of the ~2600 Applicable Securities which accounts for approximately 24% of ADT of the Applicable Securities.

27. Subject to the implementation of the proposed changes in phase 1 and 6 months of observation on phase 1's result after its implementation, the Exchange may implement the proposed changes in phase 2 after careful assessment of the overall impact from narrowing minimum spreads in phase 1 and with input from the market and the regulator.

¹¹ As the number and ADT contribution of equity warrants are considered minimal, the number of Applicable Securities affected and their ADT contributed considered only the equities and REITs.

Rationale of the Proposal

Scope

28. The minimum spread review will only focus on Applicable Securities. As noted in paragraph 23, minimum spreads for ETPs were reviewed in 2020 and efficiently traded, and it is therefore not yet necessary to review their minimum spreads again. As for Structured Products and debt securities, the trading behaviour and product characteristics differ from those of the Applicable Securities (for example, almost all Structured Products are currently priced under \$2). Therefore, the Exchange considers it appropriate to maintain separate spread tables for these products with their minimum spreads unchanged at this stage, and these will not be within the scope of this proposal.

Consultation questions

Q1. It is proposed that only the Applicable Securities, i.e. equities, REITs and equity warrants, will undergo minimum spread reduction. Do you agree? If not, please provide reasons.

Price bands and magnitude of reduction

29. The analysis by the Exchange, supported by initial market feedback, indicates that a target tick-to-price ratio of around 5 to 10 bps would be appropriate for the Applicable Securities with a caveat that a higher tick-to-price ratio may be warranted for low priced (e.g. below \$2) or less liquid stocks, considering the current market ecosystem and the balance of interests from different investor groups as described in paragraph 18.

30. The price bands of \$0.01 - \$0.25 and \$0.25 - \$0.5 are not included in this proposal. Over 900 stocks out of the ~2600 Applicable Securities within these price bands only contribute to around 0.5% of equity ADT and the positive impact from minimum spread reduction is expected to be minimal. Besides, trading of these stocks in Hong Kong are often dominated by retail investors who usually prefer a larger day trade profit, which is made possible due to a comparatively large minimum spread. It is therefore proposed to maintain the existing minimum spread to retain the existing visible liquidity, which is already thin, as detailed in paragraph 17.

31. The price bands of above \$50 are also not included in this proposal. While the stocks within these price bands contribute decent ADT (47% of equity ADT as shown in Table 2), their current tick-to-price ratios are within a range of 4 to 10 bps which are already in line with the initial market feedback and international practices, hence we propose to keep the minimum spreads within this range as-is. A change may be considered at a later stage if the benefits of minimum spread reduction in the Hong Kong market is tested and proven.

32. This paper proposes a 50% and 60% reduction in the minimum spreads for stocks priced between \$10 and \$20 and between \$20 and \$50 respectively in phase 1. Minimum

spreads will be reduced from \$0.02 to \$0.01, and from \$0.05 to \$0.02 for the two price bands respectively.

33. The price bands between \$10 and \$50 are selected for a change as they have:

- Relatively high tick-to-price ratios: the ratios of these two price bands range from 10 to 25 bps, indicating some room for minimum spread reduction to the optimal 5 to 10 bps.
- Reasonable level of order book depth: the average order book depth is at least 9 times the average trade size of the stocks within this range during 2021-2023 as illustrated in paragraph 17, which provides a better buffer against any potential shock to the displayed liquidity brought by reducing the minimum spread.
- Significant level of ADT: the expected number of stocks impacted is 283, equivalent to around 11% of the total number of Applicable Securities, they contribute 29% of the overall ADT of the Applicable Securities in 2021-2023, with an average ADT per stock 2 – 3 times higher than that of all securities. This provides a controlled and meaningful set of securities for minimum spread reduction.

34. The price band of \$0.5 and \$10 being selected in phase 2 as they have:

- High tick-to-price ratios: ranging from 10 to 200 bps, and largely deviating from the optimal range of 5 to 10 bps. As mentioned in Chapter 1, a minimum spread that is too large may lead to a longer order queue and slower execution efficiency which does not favour trading liquidity. This is something that has been observed in some of the actively traded stocks in the banking sector within this price range.
- Reasonable level of order book depth: the average order book depth is around 8 times the average trade size of the stocks within this range during 2021-2023 as illustrated in paragraph 17, which provides a better buffer against any potential shock to the displayed liquidity brought by reducing the minimum spread.

35. However, considering the liquidity profile of the Hong Kong equities market, a large number of stocks in the lower price bands (e.g. below \$2) are considered less liquid and a drastic reduction in minimum spread will likely impact the already thin order book depth of these less liquid stocks. Therefore, the Exchange proposes to reduce the minimum spread of this price band by 50% in phase 2, such that the tick-to-price ratios maintain at the 25 to 100 bps level for stocks between \$0.5 and \$2 after the review, to alleviate the potential shock on book depth and displayed liquidity. The Exchange also proposes to implement the minimum spread review for the smaller-priced stocks in phase 2 such that the results of the phase 1 changes can be leveraged to adjust the direction of phase 2 implementation, if necessary, along with the market feedback.

Table 5: Liquidity profile of the Hong Kong equities market's stock under \$10 (2021 – 2023)¹²

Price Band	Number of stocks	Contribution to equity ADT (%)	Average ADT per stock (HK\$ million)
From 0.01 to 0.25	544 / 20.77%	0.20%	0.39
Over 0.25 to 0.50	364 / 13.90%	0.26%	0.78
Over 0.50 to 1.00	385 / 14.70%	1.18%	3.31
Over 1.00 to 2.00	332 / 12.68%	1.69%	5.50
Over 2.00 to 5.00	398 / 15.20%	10.67%	29.04
Over 5.00 to 10.00	230 / 8.78%	9.96%	46.87
Total	2,253 / 86.03%	23.96%	11.51

Source: Bloomberg and HKEX analysis; data from 2021 – 2023

36. The resulting profile of the tick-to-price ratios after the proposed changes will be as follows:

- For price bands between \$0.01 and \$0.5, the tick-to-price ratios will remain unchanged as 40 – 1000 bps as per current setting;
- For the price band of \$0.5 - \$10, the tick-to-price ratios will be between 5 and 100 bps.
 - Diving deeper, the tick-to-price ratios for the sub-price band of \$5 to \$10 where the majority of liquidity will be at 5 to 10 bps i.e. the optimal range will be achieved.
 - A relatively higher tick-to-price ratios from 10 to 25 bps will be allowed for stocks with prices between \$2 and \$5, and from 25 bps to 100 bps with prices between \$0.5 and \$2. These will represent a meaningful 50% cut of their minimum spread today, while mitigating the likely negative impact to the visible liquidity for these less liquid stocks more dominated by retail investors. The proposal is consistent with the market feedback that drastic changes to minimum spread of the smaller priced stocks is not advisable as it may cause an unintended consequence of reducing visible liquidity and hence net trading liquidity of such stocks further.
- For price bands between \$10 and \$50, the tick-to-price ratios will be reduced approximately by 50% to 60% to 4 to 10 bps, achieving the optimal range that we target for.
- For price bands above \$50, no change will be introduced as they are already at the optimal range of 4 to 10 bps.

¹² The stocks are categorised into different price bands using the average daily closing price of each stock from 2021 – 2023.

Consultation questions

Q2. Do you agree with the Exchange's proposal to keep the minimum spreads of price bands below \$0.5 and above \$50 unchanged? If not, please provide reasons.

Q3. Do you agree with the proposed selection of the price bands and/ or the proposed magnitude of reduction of minimum spreads for phase 1 (i.e. 50% to 60% reduction to stocks priced between \$10 and \$50 to achieve 4 to 10 bps for tick-to-price ratios)? If not, please provide reasons.

Q4. Do you agree with the proposed selection of the price band and/ or the proposed magnitude of reduction of minimum spreads for phase 2 (i.e. 50% reduction to stocks priced between \$0.5 and \$10 to achieve 5 to 100 bps for tick-to-price ratios)? If not, please provide reasons.

Spread table arrangement

37. In Hong Kong, a single spread table is currently used for all securities, i.e. minimum spreads that increase with the price bands regardless of their liquidity, even though separate spread tables are already available for other product segments such as ETPs. The single spread table approach for equities allows for a consistent tick-to-price ratio across price bands and is conducive to execution strategy deployment within a product segment.
38. The fundamental aspect of the single spread table is that the same minimum spread is applied to all stocks within a price band regardless of their liquidity profile. In other words, liquid stocks with a large minimum spread may become tick constrained while less liquid stocks may have orders dispersed across many price levels affecting visible liquidity which discourages price discovery.
39. A multiple spread table model differentiates the minimum spread for liquid and less liquid stocks, such that the minimum spreads can be set according to both the stocks' price and liquidity to reduce the impact of dispersed liquidity mentioned above for less liquid stocks. This is a more complex model that requires ongoing review for grouping maintenance as stock liquidity does change over time, and hence it would need more active involvement from market participants in incorporating the relevant data into their trading systems and performing additional back testing for deployment of algorithmic trading strategies. In the initial market feedback, many market participants advocated for a single spread table to maintain a simple, consistent and low-cost market structure for the Hong Kong equities market.
40. The Exchange proposes to continue adopting the single spread table model for Applicable Securities to align with its principle of implementing the review with prudence, and to allow the market to gradually adapt to fundamental market structure changes which often require

further optimisation of trading strategies and infrastructure setup. The potential benefits and possibility of adopting a multiple spread table model will be considered again subject to market feedback and readiness in the future.

Consultation questions

Q5. Continued use of a single spread table model with increasing minimum spreads along with price bands is proposed. Do you agree? If not, please provide reasons.

Q6. Are you supportive of a multiple spread table model for the same type of securities? If so, what eligibility criteria would you suggest? If not, what challenges would you foresee in the implementation of a multiple spread table model? Please elaborate.

Potential Impact of the Proposal

41. Reducing minimum spread may offer the benefits of tightened bid-ask spreads and hence reduced transaction cost in terms of spread cost. The benefit of transaction cost saving will be especially prominent for investors who trade frequently, which in turn encourages more transactions and price discovery efficiency. However, it is also important to recognise the potential negative impact of minimum spread reduction which needs to be carefully assessed. Although the tightened bid-ask spreads may provide flexibility for orders to split across different price points to optimise execution price, there is a potential trade-off in decreasing displayed liquidity.
42. Furthermore, the Spread Table for the Applicable Securities has not been changed for almost two decades, a certain level of infrastructure setup changes and recalibration of trading strategies of various market participants, such as algorithmic traders and market makers in different equity linked products, may be needed. Order modification and cancellation may also become more frequent, potentially increasing the system capacity requirements for some market participants.
43. To assess the overall impact of the minimum spread reduction after phase 1 implementation, the Exchange will measure market quality by evaluating liquidity, transaction effectiveness and system performance. Indicators such as bid-ask spreads, order book depth, execution speed and quality, as well as message traffic may be examined.

CHAPTER 3: OTHER CONSIDERATIONS FOR MARKET FEEDBACK

44. The proposed reduction of minimum spreads will tighten the allowable price limits for order input of the Applicable Securities, as governed by the quotation rules in terms of number of minimum spreads. In view of this, there is a need to also review the quotation rules in conjunction with the minimum spread review. The market will be given sufficient time to prepare for the system and regulatory changes. The following section provides the details of the proposed changes.

Quotation Rules

45. Order input prices during the Continuous Trading Session are governed by the relevant quotation rules under the Rules of the Exchange. The quotation rules are designed to ensure that only orders priced within a certain range are entered into the Exchange's trading system for smooth price discovery as well as trading system capacity management.

46. The allowable price limits for order input of the Applicable Securities are linked to a fixed number of spreads of the securities (currently within ± 24 spreads). With a reduction of the size of the minimum spreads, their allowable price limits will be narrowed. Assuming the proposal set out in Chapter 2 is implemented, the allowable price limits of the impacted stocks would be reduced by 50% to 60%. The trading efficiency of market participants may therefore be affected. In light of this, the mechanism of the quotation rules in Applicable Securities should also be adjusted accordingly to reduce the unintended impact of the proposed changes.

47. A percentage-based approach for setting order input price limits is commonly seen at other exchanges, such as the SSE, SZSE and the KRX. Since March 2023, the ETPs listed on the Exchange have also adopted a similar arrangement, i.e. using percentage-based quotation limits on top of a fixed number of spreads, whichever is greater in percentage terms. This dual structure approach is to ensure that the price limits of both the lower and higher price levels are not too stringent.

48. Therefore, the Exchange proposes that the price limits for all securities should make reference to a percentage requirement on top of the existing spread requirements. For operational efficiency and consistency, the same set of quotation rules as the ETPs is proposed to be adopted for Applicable Securities, i.e. either ± 24 spreads or 3.5% from the reference price, whichever is greater in percentage terms. The requirement of 3.5% was previously determined during the review of ETPs' price limit and referenced to the order price quoted by the market makers. The Exchange considers that the percentage requirement as an additional order price validation against the reference price appropriate, while maintaining the spread requirement minimises market impact as participants are accustomed to a spread based requirement. This amendment will address the issue of narrowing price limits as well as streamlining and facilitating trading activities by aligning

the current quotation rules for all securities. It is a consistent approach to facilitate easier adoption and simpler technical implementation by market participants.

49. For consistency, it is also proposed that the relevant rules for opening quotations and transactions concluded outside of the Exchange's trading system would incorporate a reference to a percentage from the reference price.

Consultation questions

Q7. Do you agree to the inclusion of percentage-based requirement on top of the existing spread based requirements (i.e. either ± 24 spreads or 3.5% from the reference price, whichever is greater in percentage terms) in the quotation rules, including the relevant rules applicable in different trading sessions and transactions concluded on and outside of the Exchange's trading system? If not, please provide reasons.

Market System Adaptability

50. If the Exchange further expands the minimum spread reduction to the price bands below \$10, the minimum spread for the \$0.5 - \$10 price band would be reduced to \$0.005. Initial feedback from some market participants indicate that certain systems may need to be enhanced to handle more than 2 decimal places, e.g. for ETOs trades, and hence a longer implementation lead time may be required.

Consultation questions

Q8. Are you aware of any infrastructure impact which may arise from the proposed minimum spread reduction, including but not limited to a 3 decimal place system set up for ETOs trades? Please elaborate and explain the potential impact, including the possible lead time required for the additional infrastructure changes, if any.

CHAPTER 4: OTHER KEY CONSIDERATIONS AND OUR RESPONSES

51. During initial discussions with market participants such as Exchange Participants, institutional investors, market makers and system vendors, a number of additional questions were frequently raised. The answers below reflect the Exchange's rationale and offer some further details for consideration.

52. Question: Has the Exchange considered adopting a uniform spread model, as implemented in other markets like the Mainland and the US, i.e. \$0.01 for all Applicable Securities regardless of their prices?

A key benefit of a single spread table model with a tiered structure of multiple price bands is that it allows for more consistency in tick-to-price ratios across price bands. This is not possible when using a uniform spread model as the minimum spread in proportion to the stock reduces as stock price increases. Furthermore, a single spread table model with a tiered structure of multiple price bands has been adopted in the Hong Kong market for over 30 years, which means shifting to a uniform spread model will involve a change in the minimum spreads for all stocks, some of which will become much wider and some much narrower. It may potentially lead to significant adverse market impact and high infrastructure cost borne by many market participants.

The Exchange recognises the merit of simplicity of a uniform spread but it would potentially bring about unintended consequences to trading and the market ecosystem in Hong Kong. Therefore, the uniform spread model is not proposed in this minimum spread consultation.

53. Question: Has the Exchange considered conducting the minimum spread reduction for the \$0.5 - \$50 price bands affected in a big bang approach, rather than the proposed two phased approach?

The minimum spreads of the Applicable Securities have not been reviewed for almost two decades. The Exchange considers that the current phased proposal is a measured approach to ensure smooth implementation. Phase 1 would contain a smaller set of securities by number with meaningful ADT contribution, better liquidity individually and will most likely benefit from minimum spread reduction. Phase 2 would contain a larger universe of securities by number with a greater overall ADT contribution, though these stocks are lower priced and individually less liquid than the stocks in phase 1 and hence the risk of adverse trading impact due to drastic change to minimum spreads would be higher. The planned review of phase 1 implementation would mitigate such risk as any lesson learnt from phase 1 could be incorporated into the phase 2 implementation to ensure a subsequent successful rollout.

- 54. Question: Has the Exchange considered adopting an even lower spread with a tick-to-price ratio below 4 basis points like some other exchanges? What about adopting the existing spread table for ETPs for simplicity and narrower spreads for some price bands?**

The ecosystem in each market is unique and factors including stock liquidity profile, investor profile and overall transaction cost need to be considered when setting the minimum spreads and the associated tick-to-price ratios. Reducing the minimum spreads aggressively in one go may adversely impact the displayed liquidity and hence trading efficiency, especially for the less liquid stocks. It would also introduce a drastic change in the ecosystem within a short period of time which may drive away some existing traders.

The characteristics of ETPs are different as they are generally index or portfolio-based securities with a well-developed market making programme. Internationally, ETPs normally have narrower minimum spreads than their linked equities as observed in majority of the exchanges worldwide. Hence adopting the same spread table for ETPs to Applicable Securities may not be optimal.

- 55. Question: Has the Exchange considered updating the market maker obligations on stock options provided that a reduction of minimum spreads may impact the obligation requirements effectively?**

The current market makers of single stock options are obligated to provide continuous quotes and/or to respond to quote requests as prescribed under the Options Trading Rules, and/or in accordance with the terms and conditions of the relevant appointment letters. These obligations often make reference to the best bid/offer spread of the underlying securities, and thus the reduction of minimum spread of the Applicable Securities could affect the actual market making practices. The Exchange is continuing to review what changes to stock option market maker obligations, if any, are appropriate to support a liquid, competitive stock options market after the minimum spread reduction.

- 56. Question: Has the Exchange considered revising the triggering threshold of the trading system's price warning?**

The Exchange's trading system performs various price validations before an order is accepted into the order book and provides warning messages to alert the Exchange Participants if the order price input is significantly away from the market price. Currently, any order input with a price at 21 minimum spreads or more from the prevailing nominal price will trigger a warning message that requires a further verification of the order details to prevent erroneous order price input. It is an optional feature to support the Exchange Participants' own pre-trade risk management facilities and can be switched on and off by themselves.

With the proposed reduction in minimum spreads, the triggering threshold of the price warning will become lower for the stocks within the affected price bands, hence making

it more easily triggered. However, we note the resultant triggering threshold measured in percentage terms (which is effectively 21 times of the tick-to-price ratios), are still within the triggering threshold range of other price bands. Therefore, the execution efficiency is not expected to be substantially affected and hence the change to the existing price warning system is not considered necessary.

57. Question: Has the Exchange considered changing the maximum number of matchable price queues for enhanced limit order and special limit order?

Currently, an enhanced limit order and a special limit order in the Exchange's trading system will allow matching of up to 10 price queues (i.e. the best price queue and up to the 10th queue at 9 spreads away) at a time provided that the traded price is not worse than the input price. If the minimum spreads are reduced as proposed, the price ranges represented by the matchable queues will also be narrowed. Given that the depth at the best bid and best ask prices are already sufficient overall to cover an average size transaction as shown in Figure 2, the Exchange considers that the existing setting on matchable price queues will not materially impact investors' trading behaviour and execution efficiency if the proposed minimum spread reduction is implemented. Therefore, the Exchange proposes to keep the maximum number of matchable queues of enhanced limit orders and special limit orders unchanged.

58. Question: Has the Exchange considered any other scheme to be implemented along with the reduction of minimum spreads to lower the overall transaction cost?

A stock settlement fee for exchange trades is charged to The Central Clearing and Settlement System ("CCASS") participants for services relating to novation, guarantee of settlement, risk management, as well as netting and settlement.

Initial feedback on the proposal indicates that reducing minimum spreads may reduce trade size which could increase transaction cost due to the structure of the settlement fee.

In recognition of this feedback, the Exchange would assess the structure of the stock settlement fee for exchange trades with a view to replacing the current structure with an appropriate ad valorem rate. Use of an ad valorem rate(s) with no minimum or maximum will ensure that the cost of this fee is consistent across all trade sizes, and will mitigate the potential for transaction cost to increase if trade sizes reduce because of changes to the minimum spreads.

Careful consideration will be given to selecting an ad valorem rate(s) that is cost neutral to the market.

59. Question: Will derivatives products be affected by the minimum spread reduction of the Applicable Securities?

The potential change on single stock options' market making obligations has been discussed in paragraph 55.

If the phase 2 spread reduction is implemented, some underlying securities of stock options and stock futures will have a closing price changed from 2 decimal places to 3 decimal places. There is no intention to change the minimum spread of the stock futures and options contracts currently. Participants should carefully consider whether this change will impact the systems they use for settlement, exercise and assignment of stock options and stock futures contracts.

CHAPTER 5: IMPLEMENTATION TIMELINE

60. The consultation period for this paper is 12 weeks and will close on **20 September 2024**. The Exchange will review and summarise the comments received and if applicable, set out the final model for minimum spread reduction in the Consultation Conclusions which will tentatively be published by the end of 2024.
61. To allow adequate time for market preparation including system enhancements and recalibration of trading strategies, as well as the Exchange's rule amendments including the quotation rule changes as proposed in Chapter 3, we propose a lead time of at least six months before the new Spread Table for the Applicable Securities proposed for phase 1 comes into effect. The review of phase 1's results will commence six months after its implementation, and the implementation of phase 2 will be subject to market readiness and the feedback received from Q10 below.

Consultation questions

Q9. Do you agree with the proposed six-month lead time before effecting the new Spread Table for the Applicable Securities under phase 1? If not, what would be a reasonable length and why?

Q10. If the Exchange decides to implement phase 2 proposed after the review of phase 1, how much lead time would you need?

- (i) Under 3 months;**
- (ii) 4-6 months;**
- (iii) 7-12 months;**
- (iv) Others, please specify and give reasons for your view**

APPENDIX I: SEHK MINIMUM SPREADS REDUCTION (2005 – 2006)

Phase 1 of the Minimum Spreads Reduction (2005):

Price Band (\$)				Original Minimum Spread (\$)	Revised Minimum Spread (\$)
From	0.01	to	0.25	0.001	No Change
Over	0.25	to	0.50	0.005	No Change
Over	0.50	to	2.00	0.010	No Change
Over	2.00	to	5.00	0.025	No Change
Over	5.00	to	30.00	0.050	No Change
Over	30.00	to	50.00	0.100	0.050
Over	50.00	to	100.00	0.250	0.050
Over	100.00	to	200.00	0.500	0.100
Over	200.00	to	500.00	1.000	0.200
Over	500.00	to	1,000.00	1.000	0.500
Over	1,000.00	to	2,000.00	2.500	1.000
Over	2,000.00	to	5,000.00	2.500	2.000
Over	5,000.00	to	9,995.00	2.500	5.000

Phase 2A of the Minimum Spreads Reduction (2006):

Price Band (\$)				Original Minimum Spread (\$)	Revised Minimum Spread
From	0.01	to	0.25	0.001	No Change
Over	0.25	to	0.50	0.005	No Change
Over	0.50	to	2.00	0.010	No Change
Over	2.00	to	5.00	0.025	0.010
Over	5.00	to	10.00	0.050	0.010
Over	10.00	to	20.00	0.050	0.020
Over	20.00	to	50.00	0.050	No Change
Over	50.00	to	100.00	0.050	No Change
Over	100.00	to	200.00	0.100	No Change
Over	200.00	to	500.00	0.200	No Change
Over	500.00	to	1,000.00	0.500	No Change
Over	1,000.00	to	2,000.00	1.000	No Change
Over	2,000.00	to	5,000.00	2.000	No Change
Over	5,000.00	to	9,995.00	5.000	No Change

The Board of the Exchange decided not to proceed with phase 2B reduction of minimum spreads, which applies to securities trading between \$0.25 and \$2. The HKEX Board's decision was made after reviewing trading and market data for the first six months following phase 2A implementation in July 2006 and taking into account the market comments received.

APPENDIX II: MINIMUM SPREAD TABLES OF MAJOR STOCK EXCHANGES (CASH EQUITIES ONLY)

Price band (local currency)	ASX	SSE / SZSE	JPX (TOPIX 500)	JPX (Others)	SGX	NYSE/ NASDAQ
Up to 0.1	0.001	0.01	0.0001	0.001	0.001	0.0001
Up to 0.2	0.005					
Up to 1					0.005	
Up to 2	0.01		0.0005	0.01	0.01	0.01
Up to 3						
Up to 5						
Up to 10			0.005	0.01		
Up to 20						
Up to 30			0.01	0.05		
Up to 50						
Up to 100			0.05	0.1		
Up to 200						
Up to 300			0.1	0.5		
Up to 500						
Up to 1,000			0.5	1		
Up to 2,000						
Up to 3,000	1	5				
Up to 5,000						
Up to 10,000	5	10				
Up to 30,000						
Up to 50,000	10	50				
Over 50,000			100			

Note: ASX (in AUD); SSE/SZSE (in RMB); JPX (in JPY, indicated by 1/1,000); SGX (in SGD); NYSE / NASDAQ (in USD).

APPENDIX III: PRIVACY NOTICE

Privacy Notice

Hong Kong Exchanges and Clearing Limited and its affiliated companies (together "HKEX", "we", "our" or "us") are committed to protecting all Personal Data under our custody, control, or possession. "Personal Data" is any information that relates to an identifiable individual or can be used to identify an individual – sometimes the individual is referred to as a "Data Subject" or consumer.

This privacy notice ("Notice") applies to the Personal Data we collect and further process from Data Subjects who respond to our public consultation papers.

If the correct Personal Data is not submitted to HKEX then we may not be able to ensure the correct details are published or contact respondents if we have queries about their comments and/or, we may be unable to process requests relating to their rights as Data Subjects under the applicable data protection laws.

What Personal Data do we collect and how do we collect it?

Information directly submitted by or collected from you:

- Identity data such as name and position in a company;
- Contact data such as phone number and email address;
- Opinion data such as your response to the consultation paper; and
- Communications data such as subsequent correspondence with you to clarify your comments or to confirm your identity data.

For Data Subjects in Mainland China:

- to verify your identity, we may process your name, position, phone number, and email address;
- to communicate with you, we may process your name, position, phone number, and email address;
- to register your response in our records or change your response upon your request, we may process your name, position, answers and reasons for those answers; and
- to prepare our publication material, we may process and publish your name and position (where your consent has been provided), and your answers and reasons for those answers.

For Data Subjects who are California residents:

To the extent the California Privacy Rights Act applies, the types of Personal Data we collect (and have collected in the past 12 months) includes the categories listed below, as defined by California state law:

Category	Source	Purpose of Processing
Personal identifiers such as your name and email address	Collected directly from you	For verification of identity, clarification of comments, record keeping and/or publication
Information About You including your name, position, and telephone number		

Why do we use the Personal Data and how do we use it?

The “**Legal Basis**” is what data protection laws set out as the lawful reasons for processing Personal Data, such as a legitimate interest to operate our business so long as it does not materially and adversely impact your interests, rights, and freedoms.

Legal Basis	Purpose
Legitimate Interests	<ul style="list-style-type: none"> Opinion data as part of the consultation process to understand the market/public response to the proposal(s) set out in the consultation; Identity and contact data to verify and clarify responses; Identity data where consent has been provided for external publication;
Public Interest	<ul style="list-style-type: none"> We may also process your personal data on the basis that it is necessary for the performance by HKEX of a task in the public interest.
Consent	<p><u>Separate consent</u></p> <ul style="list-style-type: none"> Required if you are a Data Subject in Mainland China and we need to share your Personal Data with a third party, publicly disclose it, or transfer it outside Mainland China.
Legal or Regulatory Obligations	<ul style="list-style-type: none"> Discharge the functions of HKEX and any company of which HKEX is the recognised exchange controller; Comply with a court order, subpoena or other legal process; Comply with a request by a government authority, law enforcement agency or similar body; and Comply with laws applicable to us including domestic data protection laws.

Do we disclose Personal Data to third parties or transfer it to another jurisdiction?

HKEX discloses Personal Data to one or more third party organisations that enable us to process public consultation papers and these include:

- Affiliates of Hong Kong Exchanges and Clearing;

- Our contractors or vendors who provide telecommunications, IT security, or other technical assistance;
- Our vendors who facilitate the availability of online forms;
- Our vendors who provide strategy or other consultancy services in respect of our businesses; and
- Our agents, contractors or vendors who provide administrative support to us.

To fulfil our legal obligations, we may also share your Personal Data with courts, regulatory authorities, government and law enforcement agencies, and other public authorities.

Further details about these third parties may be provided upon request to the address in the “Contact Us” section below. We shall endeavour to provide such information to the extent we are required to do so under applicable data protection laws.

Where required under applicable data protection laws, HKEX will only disclose Personal Data to third parties with your prior consent. In certain jurisdictions, HKEX may also be required to take additional measures prior to giving effect to such transfers (e.g. carrying out privacy impact assessments prior to the transfer).

HKEX may process Personal Data outside of the Data Subject’s home jurisdiction, including sharing the Personal Data with third parties. HKEX shall use reasonable endeavours to ensure that the laws and regulations of the destination jurisdiction shall offer the same or comparable level of protection for Personal Data. Where this is not the case, we shall ensure appropriate safeguards are in place at the time of the transfer by implementing standard contractual clauses or other data transfer mechanism approved by the authorities of the relevant jurisdiction. Where required under applicable data protection laws, we shall also carry out additional measures for the offshore transfer such as carrying out a privacy impact assessment.

The regions where the Personal Data may be hosted or transferred to will vary from time to time, but typically include Hong Kong, the UK, US, EU, Switzerland, Singapore, Japan, India, and Mainland China.

Further details on the processing locations and our measures for safeguarding international transfers (including adequacy decisions) may be obtained upon request to the address in the “Contact Us” section below.

How long do we keep the Personal Data?

Personal Data is retained in accordance with our internal policies, including our Group Record Retention Policy, and applicable law.

Your Personal Data will be retained by us for as long as is necessary to fulfil the purposes required for the processing. HKEX will also refer to the following factors when determining or confirming the appropriate retention period of Personal Data:

- the original purpose of collection;

- the termination of any contract involving the Data Subject's Personal Data;
- the limitation period as defined in the applicable law;
- the existence of any legal or regulatory investigations or legal proceedings;
- specific laws or regulations setting out HKEX's functions, obligations, and responsibilities;
- retention period set out in non-statutory guidelines issued by our regulators or international bodies; and
- the sensitivity of the Personal Data and the degree of risk from the associated processing activity.

For Data Subjects in Mainland China, we usually retain the Personal Data for not more than 3 years from the last activity or interaction with us. Further details of our Personal Data retention period may be obtained upon request to the address in the "Contact Us" section below.

Where any Personal Data is no longer necessary for the purposes for which it is collected, we shall cease the processing of that Personal Data as soon as reasonably practicable (although copies may be retained as necessary for archival purposes, for use in any actual or potential dispute, or for compliance with applicable laws), and take reasonable measures to destroy the relevant Personal Data.

How do we keep your Personal Data secure?

We will take all practicable and reasonable steps to promote the security of the Personal Data we process in a manner consistent with applicable data protection laws and established international security standards. This includes physical, technical and administrative safeguards, to help prevent unauthorised access, collection, use, disclosure, copying, modification, disposal or similar risks, and the loss of any storage medium or device on which the Personal Data is stored, and to maintain the general security of the data.

Rights over the Personal Data

As a summary, the following Data Subject rights may be exercised to the extent provided under applicable data protection laws:

- confirm whether we hold the Data Subject's Personal Data and the type of Personal Data held by us;
- access a copy of the Personal Data held by us;
- delete your Personal Data held by us;
- correct or supplement your Personal Data where it is found to be inaccurate;
- restrict the processing performed on your Personal Data;
- withdraw consent to the processing of your Personal Data in certain situations (e.g. processing carried out on the basis of our legitimate interests); and
- transfer the Personal Data to another party in a machine readable format.

In certain jurisdictions, Data Subjects may also be provided with additional rights.

California	<ul style="list-style-type: none"> Request that we disclose the categories of third parties with whom we have shared the information and the categories of Personal Data that we have shared with third parties for a business purpose.
Mainland China	<ul style="list-style-type: none"> Explanation on the rules of processing the Personal Data; Extension of the Data Subject rights to a surviving next-of-kin where the applicable laws permit; and Transfer of your Personal Data to your designated party, where the applicable laws permit.
United Kingdom and Europe	<ul style="list-style-type: none"> Right to object to processing. You have the right to object to processing to the extent we process your Personal Data because the processing is in our legitimate interests.
Singapore	<ul style="list-style-type: none"> In certain circumstances, receive information about the ways in which the Personal Data has been or may have been used or disclosed by us in the year before the date of the request.

Where these rights apply, we shall use reasonable endeavours to fulfil the request or provide an explanation. Please note that under applicable data protection law, we are only obligated to respond to Personal Data requests from the same Data Subject up to two times in a 12-month period, and we may be limited in what Personal Data we can disclose which is also for the protection of your Personal Data.

We will endeavour to respond to you as soon as possible and, in any event, within the timeframe stipulated under the applicable data protection law. In the event of a potential delay, we will provide an explanation and the expected timeframe for delivery. Under applicable data protection law, we may also be required to charge a reasonable fee for the cost of processing the request.

Please note that we may need to seek confirmation of identity or clarification in order to fulfil the request. If you as the Data Subject would like to appoint an authorised agent to make a request on your behalf, we may require you to verify your identity with us directly before we provide any requested information to your authorised agent unless your authorised agent has power of attorney or acts as a conservator. Information collected for purposes of verifying your request will only be used for verification. For deletion requests, you will be required to submit a verifiable request for deletion and then confirm separately that you want Personal Data about you deleted.

If you would like to exercise your data subject rights, please contact the HKEX Group Data Protection Office via one of the channels below.

Contact Us

If you have any questions or comments relating to the content of this Notice, report any concerns about our Personal Data processing, or if you would like to exercise your Data Subject Rights, please contact us through the channels below:

Group Data Protection Officer
GDPO Office
Hong Kong Exchanges and Clearing Limited
8/F., Two Exchange Square 8 Connaught Place
Central
Hong Kong
DataPrivacy@hkex.com.hk

UK Representative:
10 Finsbury Square, London, EC2A 1AJ, United Kingdom

EU Representative:
De Cuserstraat 91, 1081 CN Amsterdam, Postbus/PO Box 7902, 1008 AC Amsterdam, Netherlands
hkex.eurep@eversheds-sutherland.com

Please include the following details in any request to exercise your Data Subject Rights:

Identity of Data Subject

- Full Name
- Company Name
- Email Address
- Address of principal residence
- Identity particulars if acting on behalf of a Data Subject
- Contact *details held on file or Document(s) to verify identity*

Nature of the Request

- Product or Service to which the Data Subject has subscribed
- Specific Right
 - Purpose of the Request
 - Preferred communication channel and address for receiving the results of the request
 - Document(s) to support the rights request

Any Data Subject who has contacted us to express concerns about the way we manage their Personal Data and is of the view that we have not addressed the matter satisfactorily, may also contact the relevant privacy regulator to resolve the matter or seek assistance.

The privacy regulator in the United Kingdom is the Information Commissioner, who may be contacted at <https://ico.org.uk/make-a-complaint/> or by post to: Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF, United Kingdom.

If you live outside of the UK, you may contact the relevant data privacy regulator in your country of residence.

Last updated: 7 June 2024

Annex

This Notice relates to privacy practices of the following HKEX group entities. For the contact details of the following entities, please refer to the “Contact Us” section.

- The Hong Kong Stock Exchange of Hong Kong Limited
- Hong Kong Futures Exchange Limited
- Hong Kong Securities Clearing Company Limited
- HKFE Clearing Corporation Limited
- The SEHK Options Clearing House Limited
- OTC Clearing Hong Kong Limited
- HKEX Information Services Limited
- HKEX Information Services (China) Limited
- HKEX (China) Limited, HKEX Investment (China) Limited
- HKEX Investment (Hong Kong) Limited
- Qianhai Mercantile Exchange Co. Ltd.
- Hong Kong Futures Exchange Limited Singapore Branch
- The Stock Exchange Of Hong Kong Limited Singapore Branch
- HKEX (U.S.) LLC

Hong Kong Exchanges and Clearing Limited

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