

CONSULTATION CONCLUSIONS

INTRODUCTION OF A PRICE CONTROL MECHANISM DURING THE CLOSING AUCTION SESSION IN THE SECURITIES MARKET

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香港交易及結算所有限公司

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EXECUTIVE SUMMARY

This document presents the results of a public consultation conducted by Hong Kong Exchanges and Clearing Limited (HKEx) on the proposal to introduce a price control mechanism during the Closing Auction Session (CAS) in the securities market.

A total of 102 sets of market comments were received, including submissions from 34 Exchange Participants, 2 industry associations, 2 asset management firms, 1 bank, 1 law firm, and 62 individual investors.

After analyzing the responses in detail, we consider that many respondents who support maintaining the CAS mechanism and those who favour suspending it share similar concerns about extreme price movements of securities during the session. Against this background, we are of the view that introducing a percentage-based price limit to restrict excessive price movements during the CAS should address the concerns of most respondents. This is in our view preferable to suspending the CAS given the extensive use of the CAS by market participants and that a closing auction is a feature of nearly all mature equity markets globally.

We propose setting the percentage-based price limit at 2 per cent of nominal prices at 4 pm. The limit has been set at a more stringent level than those proposed in the consultation paper in response to concerns about instances of extreme price volatility in the CAS. We believe such limit will not be too restrictive based on the backtesting of trading data from December 2008 which shows that, on average, 95 per cent of the CAS turnover would not have been affected if a 2 per cent price limit had been in place. We will nevertheless conduct a review six months after its implementation and may adjust the percentage if necessary subject to further market consultation.

The introduction of the price control mechanism during the CAS is tentatively scheduled for the second quarter of this year, subject to the approval of the necessary rule amendments by the Securities and Futures Commission (SFC) and market readiness.

PART A: INTRODUCTION

Background

1. On 26 May 2008, a Closing Auction Session (CAS) was introduced to the securities market in Hong Kong for determining closing prices of securities and facilitating trading at market close by using the same auction algorithm applied in the Pre-opening Session (POS). The introduction of the CAS was backed by strong market support after an extensive public consultation conducted in 2007, of which the majority of the respondents (21 out of 23) including 16 Exchange Participants (EPs) and Hong Kong Stockbrokers Association welcomed the introduction of the CAS citing various potential benefits. The consultation conclusions paper published in July 2007 is available at <http://www.hkex.com.hk/consul/conclusion/cac.pdf> for public reference.
2. As mentioned in the CAS consultation conclusions paper, a separate exercise would be conducted with market participants to consider whether any enhancements to the auction trading mechanism might be appropriate after experience was gained with the CAS.
3. Since the launch of the CAS, Hong Kong Exchanges and Clearing Limited (HKEx) has been closely monitoring the trading activities and price movements during the CAS and has observed a number of instances of volatile price movements of certain stocks at the close compared to their nominal prices at 4 pm. Various market participants have drawn these price movements to our attention and the press has covered the matter as well. HKEx has notified the Securities and Futures Commission (SFC) of some of these cases for their consideration of further investigation.

Public Consultation

4. In response to observations of price volatility and expressions of concern from various market participants, HKEx published a consultation paper on “Introduction of a Price Control Mechanism during the Closing Auction Session in the Securities Market” (the Consultation Paper) on 28 November 2008 to invite the market views and comments on the three proposals to restrict price movements during the CAS.
5. The Consultation Paper specifically sought the market’s views on the following approaches for setting a price control limit:
 - (i) a price control limit based on a pre-set percentage from nominal prices at 4 pm¹;
 - (ii) a price control limit based on a pre-set number of trading spreads from nominal prices at 4 pm; and
 - (iii) a price control limit based on the day high and day low prices at 4 pm plus and minus a pre-set number of trading spreads.
6. The Consultation Paper also solicited the market's views on whether HKEx should suspend the CAS and consider re-introducing it when there is a market consensus on the enhancement measures.

¹ And for half day trading, nominal prices at 12:30 pm

Consultation Process

7. In addition to the news release to the public and circulars to EPs regarding the consultation exercise issued on 28 November 2008, the Consultation Paper was also posted on the HKEx's website.
8. The consultation period closed on 31 December 2008. A total of 102 responses including 4 late submissions were received. Out of these 102 respondents, 78 of them (including 22 EPs, 2 asset management firms, 1 bank and 53 individual investors) requested to stay anonymous.
9. To ensure the validity and integrity of the responses, we have followed up with all 102 respondents to verify their identities.
10. So far, 86 of the 102 respondents were successfully contacted with their identities verified. The remaining 16 respondents (all individual investors) either did not provide any valid contact details in their responses or were not contactable.
11. This document summarizes the main comments received during the consultation process and the rationale for HKEx's conclusion on the way forward for the CAS in light of the market comments. Overall market feedback and specific comments raised by respondents are discussed in Part B and Part C of this document. The operational issues and implementation plan are set out in Part D.
12. This document should be read in conjunction with the Consultation Paper (at http://www.hkex.com.hk/consul/paper/cp200811_e.pdf).
13. We would like to take this opportunity to thank all those who have shared with us their views and suggestions during the consultation process.

PART B: OVERALL MARKET FEEDBACK

The Respondents

14. In total, 102 sets of submissions were received from a wide spectrum of respondents. A breakdown of the categories of the respondents is shown as follows:

| Category | Number of Respondents |
|-------------------------------|-----------------------|
| EPs | 34 |
| ▪ Retail-based | 21 |
| ▪ Institutional-based | 13 |
| Industry associations | 2 |
| Asset management firms | 2 |
| Banks | 1 |
| Law firms | 1 |
| Individual investors | 62 |
| ▪ Verified Identities | 46 |
| ▪ Unverified Identities | 16 |
| Total | 102 |

15. A list of the respondents is provided in Appendix I. Copies of their submissions are available at <http://www.hkex.com.hk/consul/response/closing.htm> on the HKEx website for public reference.

Overall Market Feedback

16. The following table summarizes the options chosen by the 102 respondents:

| | EP (% of total market share) | | Industry Association | Asset Management Firm | Bank | Law Firm | Investor | Total |
|--------------------------------|------------------------------|------------------------|----------------------|-----------------------|----------------|----------|-----------------------|------------|
| | Retail-based | Institutional-based | | | | | | |
| Price Control Mechanism | | | | | | | | |
| ▪ Approach 1 - Percentage | 2 (3.1%) | 6 (22.2%) | | | | | 4 | 12 |
| ▪ Approach 2 - Spreads | 4 (1.4%) | 1 (2.8%) | | | | | 3 | 8 |
| ▪ Approach 3 - Day High/Low | 1 (0.0%) | | | 1 | | | 4 | 6 |
| Others | | | | | | | | |
| ▪ Existing/Enhanced CAS | 1 (0.1%) | 6 ² (18.8%) | | | 1 ³ | | 5 | 13 |
| ▪ No indication | | | | | | 1 | | 1 |
| Suspension of the CAS | 13 (4.7%) | | 2 | 1 | | | 46 | 62 |
| Total | 21 (9.3%) | 13 (43.8%) | 2 | 2 | 1 | 1 | 62⁴ | 102 |

17. Further analyses by category of respondents are shown in paragraphs 18 to 26 below.

² Of these 6 EPs which did not pick any one of the four proposed options as their preferred choice, 3 of them chose Approach 1 and 1 of them chose Approach 3 as an alternative.

³ The bank picked Approach 2 as an alternative.

⁴ Of these 62 investors, 16 of them either did not provide any valid contact details in their responses or were not contactable and among them, 1 opted for Approach 1, 3 opted for Approach 3 and 12 opted for suspension.

Views from EPs responding to the Consultation Paper were mixed

18. There were 34 EPs responding to the Consultation Paper, of which 21 were retail-based and 13 were institutional-based.
19. Out of the 34 EPs, 21 of them (62 per cent of all responding EPs, with 48.4 per cent of market share) favoured maintaining the CAS mechanism and among them, 8 were retail-based (4.6 per cent of market share) and 13 were institutional-based (43.8 per cent of market share). The remaining 13 EPs (38 per cent of all responding EPs, with 4.7 per cent of market share) preferred suspending the CAS. All these 13 EPs which supported suspending the CAS were retail-based. The following table summarizes the responses from EPs:

| | Maintaining the CAS Mechanism | | Suspending the CAS | |
|-------------------------|-------------------------------|-------------------|--------------------|-------------------|
| | No of EPs | % of Market Share | No of EPs | % of Market Share |
| Retail-based EPs | 8 | 4.6% | 13 | 4.7% |
| Institutional-based EPs | 13 | 43.8% | 0 | 0% |
| Total | 21 | 48.4% | 13 | 4.7% |

20. Among the three price control mechanisms, the percentage-based price control (ie Approach 1) earned the most support by 8 EPs (25.3 per cent of market share) and many of them preferred a less restrictive price limit at or above 10 per cent.

Two industry associations supported suspending the CAS

21. Two industry associations, namely Hong Kong Stockbrokers Association and Hong Kong Securities & Futures Industry Staff Union, favoured suspending the CAS.

Asset management firms had diverse views to the proposals

22. There were 2 asset management firms responding to the Consultation Paper, with 1 favouring Approach 3 and the other preferring suspending the CAS.

A major bank supported maintaining the CAS

23. A major bank which provides a full range of brokerage and personal financial services to a large number of retail investors in Hong Kong supported maintaining the existing CAS mechanism and also opted for Approach 2 as an alternative.

A law firm did not indicate its preference

24. A law firm responded to the Consultation Paper and did not indicate its preference in the response.

A majority of individual investors were in favour of suspending the CAS

25. There were 62 individual investors responding to the Consultation Paper, including 30 staff or clients from 6 EP firms, as identified by EPs' name indicated on the responses and follow-up telephone confirmations.

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26. Out of the 62 investors, 46 (74 per cent) of them including those 22 staff or clients from EP firms favoured suspending the CAS, while the remaining 16 (26 per cent) preferred a certain form of price control mechanisms (18 per cent) or the existing CAS mechanism (8 per cent).

Conclusions and Way Forward

27. After analyzing the responses in detail, many respondents who support maintaining the CAS mechanism and those who favour suspending it share similar concerns about extreme price movements of securities during the session. Although none of the options proposed by HKEx received majority support, we believe the CAS should be maintained if an effective solution can be derived to address the major concerns raised by market participants.
28. The CAS is an international best practice and is adopted by nearly all major developed and developing markets including the New York Stock Exchange, NASDAQ, the London Stock Exchange, the Deutsche Börse, the Tokyo Stock Exchange, the Australian Stock Exchange, the Singapore Stock Exchange, the Taiwan Stock Exchange and the Shenzhen Stock Exchange to name a few.
29. As pointed out by a number of consultation responses, the CAS is an effective mechanism to facilitate trades to be executed at the closing price and allows market participants to complete outstanding orders. Based on the trading data in December 2008, total turnover in the CAS contributed to around 5% of the full-day market turnover, and on average 328 out of the total of 449 EPs participated in the CAS on a daily basis. Participation in the CAS came from both retail-based and institutional-based EPs.
30. Given that the CAS is a continuation of the Continuous Trading Session, during which price discovery is continuously taking place and price control limits such as the Quotation Rules⁵ are already in place, we consider that it is reasonable to implement some form of price control limit during the CAS to curb excessive price movements while at the same time allow closing prices to be fine-tuned riding on the price formation already taken place during the Continuous Trading Session.
31. We therefore propose introducing a price control mechanism during the CAS. The percentage-based price limit is to be set at 2 per cent of nominal prices at 4 pm. The limit has been set at a more stringent level than those proposed in the Consultation Paper in response to concerns about instances of extreme price volatility in the CAS.
32. Appendix II illustrates the potential impact on the CAS turnover after introducing the price limit. Based on the backtesting of trading data from December 2008, a 2 per cent limit should not be overly restrictive as on average 95 per cent of the CAS turnover would not have been affected. The instances of complaints of extreme price volatility in the CAS would be resolved under a 2 per cent limit. We will nevertheless conduct a review six months after its implementation and may adjust the percentage subject to further market consultation.
33. The implementation of a price control mechanism is tentatively scheduled for the second quarter of this year. Details of the implementation plan are described in Part D of this document.

⁵ For details of the Quotation Rules, please refer to Rule 503 to Rule 516A of the Rules of the Exchange at http://www.hkex.com.hk/rule/exrule/chap-5_eng.pdf.

PART C: RESPONSES TO SPECIFIC COMMENTS

34. We set out below our responses to some specific suggestions and comments raised by the respondents in their submissions. A summary list of the comments and the frequency that they appeared in the responses are shown in Appendix III.

Synchronization of the Market Closing Time of the Securities and Derivatives Markets

35. Comments received: Certain respondents commented that the market closing time of the securities and derivatives markets should be synchronized.
36. HKEx's response: It is an international practice for derivatives markets to open for some time both before and after securities market trading. Before the introduction of the CAS, there was a 15-minute time window between the closing time for securities trading and that for stock index futures/options (SIFO)⁶. During the CAS consultation conducted in the first half of 2007, we specifically consulted the market about this time window and general market feedback supported maintaining the same time window after the introduction of the CAS. Hence the closing time of SIFO trading has been extended alongside the securities market accordingly. The time window allows investors to place orders in SIFO based on securities closing prices, and is important to market participants who need to unwind or adjust their hedging positions. Since this practice is in line with many major international markets and serves the genuine needs of market participants, we do not propose making any adjustments at the moment.

Enhancements to the Current CAS Mechanism

37. Comments received: Some market participants suggested possible enhancements to the current CAS mechanism including:
- (i) introduction of a random closing alternative (RCA);
 - (ii) permission of short selling; and
 - (iii) introduction of measures to enhance the auction trading mechanism during the CAS.
38. HKEx's response: HKEx appreciates the respondents' effort in providing alternate solutions to reduce price movements during the CAS and other ideas to further enhance the auction trading mechanism. The proposed suggestions have been carefully considered as follows:

Suggestion on the introduction of RCA

Under the current auction trading mechanism, order cancellations and amendments by EPs are not allowed during the Pre-order Matching Period. These features serve as safeguards against significant changes in the Indicative Equilibrium Price (IEP) due to sudden withdrawal or modification of orders immediately before the close of auction sessions.

⁶ Except on the last trading day for expiring spot month contracts

RCA might also deter market participants from gaming approaching the end of auction session, although gaming might still occur before the random closing period begins.

As evident from previous events (eg on major index rebalancing dates such as 30 May 2008), aggressively priced orders in the first one to two minutes of the CAS and order imbalances of particular securities were the key reasons for the significant price movements during the CAS instead of last minute order cancellations and amendments. Neither RCA nor the existing auction trading mechanism affects this trading behaviour.

Suggestion on the permission of short selling

HKEx agrees with this suggestion. However, in view of the current global financial market situation, the current environment does not appear to be conducive to introducing any changes of this nature to the existing short selling regime. This matter will be kept in view. HKEx, together with the SFC, will monitor closely the developments of the global markets and continue to work together on this proposal at an appropriate time.

Suggestion on the introduction of measures to enhance the auction trading mechanism during the CAS

Regarding other suggestions, it has always been HKEx's objective to review and enhance the existing trading mechanisms to suit market needs. However, complex enhancements would entail high costs to the market participants and it is clear that this would not be welcome under the current market conditions. Since the primary objective of this consultation is to introduce a relatively simple measure to reduce price movements during the CAS, other enhancement opportunities to the CAS or to the trading mechanism will only be considered at some future time. If such needs arise, HKEx will consult the market through another consultation paper.

PART D: OPERATIONAL ISSUES AND IMPLEMENTATION PLAN

Operational Issues

39. A price limit of 2 per cent will be set against nominal prices at 4 pm for all at-auction limit orders input or amended⁷ during the CAS. This price limit will be applied to all securities. Any at-auction limit orders with prices outside this price limit will be rejected by the Exchange's trading system.
40. Particular attention should be paid to securities (other than debt securities) with prices from \$0.01 to \$0.049 and debt securities with prices from \$0.50 to \$2.45, of which one spread movement will result in over 2 per cent change in prices. In light of this, securities within these price ranges will not be permitted to have at-auction limit orders input with prices other than the nominal price at 4 pm, ie literally no price movement will be allowed for these securities during the CAS. Appendix IV shows the possible price movements for securities at different price ranges after the introduction of a percentage-based price control mechanism.
41. This price control mechanism will not be imposed on:
- (i) all outstanding orders⁸ carried over to the CAS from the Continuous Trading Session;
 - (ii) at-auction orders (ie orders without specified prices) input during the CAS;
 - (iii) securities without nominal price at 4 pm⁹ (eg as a result of absence of trading activity since listing, after corporate actions, etc); and
 - (iv) the POS.
42. It should be noted that:
- (i) In the absence of the final IEP, same as today, the determination of closing prices will be based on the median price of the five snapshot nominal prices taken at 15-second intervals in the last minute of the Continuous Trading Session and thus will not be affected by the price control mechanism; and
 - (ii) In some cases, the closing price of a security might still be outside the price limit when compared with the nominal price at 4 pm even after the implementation of the price control mechanism. This is a result of the existing different nominal price determination methodologies adopted in the auction trading sessions and the Continuous Trading Session¹⁰. However, it is envisaged that the occurrence might be restricted to some illiquid securities only. Appendix V shows an example of such cases.

⁷ Any limit orders which are amended during the CAS with a price change or an increase in quantity will be subject to the price limit.

⁸ If such orders are amended during the CAS, the price limit will still be applied to those orders with change in order price or increase in order quantity.

⁹ That is, nominal price = N/A (Not Available)

¹⁰ For determination of nominal prices, please refer to Appendix II of the Consultation Paper at http://www.hkex.com.hk/consul/paper/cp200811_e.pdf.

Dissemination of Nominal Prices at 4 pm

43. HKEx will discuss with EPs and information vendors on possible means with the least system changes on their part to capture the nominal price of each security at 4 pm during the CAS and will inform the market separately.

Rule Amendments

44. Necessary rule amendments pertaining to the introduction of a price control mechanism during the CAS will be finalized and submitted to the SFC for approval in due course and will then be announced to the public. The approved rule amendments will become effective on the date the price control mechanism during the CAS is implemented.

Implementation Plan

45. HKEx recognizes the need to set a realistic timeframe for all market participants to plan ahead and prepare for the change. It is scheduled that the implementation of the price control mechanism during the CAS will tentatively take place in the second quarter of this year.
46. For a smooth transition and implementation, HKEx will arrange end-to-end testing, market rehearsals and post release test with EPs. The detailed implementation plan and schedule will be announced to the public separately.

APPENDIX I: LIST OF RESPONDENTS

Exchange Participants

- 1 Chow Sang Sang Securities Limited
- 2 Christfund Securities Limited
- 3 DBS Vickers Hong Kong Limited
- 4 DL Brokerage Limited
- 5 Emperor Securities Limited
- 6 GLS Securities Limited
- 7 Hani Securities (HK) Limited
- 8 I-Access Investors Limited
- 9 J.P. Morgan Broking (Hong Kong) Limited
- 10 OSK Securities Hong Kong Limited
- 11 Pacific Foundation Securities Limited
- 12 Selina & Co. Limited
- 13-34 22 EPs requested anonymity

Industry Associations

- 35 Hong Kong Securities and Futures Industry Staff Union
- 36 Hong Kong Stockbrokers Association

Asset Management Firms

- 37-38 2 asset management firms requested anonymity

Banks

- 39 A bank requested anonymity

Law Firms

- 40 Clifford Chance

Individual Investors (see Note)

- 41 Chan Choi Hung
- 42 Mr Cheung
- 43 Tony Chiu
- 44 Andes Lau
- 45 C Ng
- 46 Dr Stephen Wong
- 47 Wong Kwok Lai
- 48 Yu Chuan Hong
- 49 Yuen Yui Chi Peter
- 50-102 53 individual investors requested anonymity

Note: The identity of 16 investors cannot be verified because they did not provide any valid contact details in their responses or were not contactable.

APPENDIX II: POTENTIAL IMPACT OF PRICE CONTROL ON THE TURNOVER OF THE CLOSING AUCTION SESSION

Based on backtesting of trading data for the period from 1 to 31 December 2008, HKEx has simulated the effect of imposing a price limit at the levels of 2 per cent, 5 per cent and 10 per cent on the CAS turnover. The percentages shown represent the retained CAS turnover as against the turnover without a price control:

| | Retained CAS turnover at different price limit | | |
|-------------------------|--|---------------|---------------|
| | 2% | 5% | 10% |
| 1 Dec 08 | 93.35% | 99.98% | 100.00% |
| 2 Dec 08 | 98.20% | 99.97% | 100.00% |
| 3 Dec 08 | 95.10% | 99.99% | 100.00% |
| 4 Dec 08 | 97.80% | 99.96% | 99.98% |
| 5 Dec 08 | 98.07% | 99.97% | 99.99% |
| 8 Dec 08 | 93.57% | 99.98% | 100.00% |
| 9 Dec 08 | 98.90% | 99.93% | 99.98% |
| 10 Dec 08 | 97.28% | 99.57% | 100.00% |
| 11 Dec 08 | 98.57% | 99.99% | 100.00% |
| 12 Dec 08 | 93.80% | 99.99% | 100.00% |
| 15 Dec 08 | 97.49% | 99.95% | 99.98% |
| 16 Dec 08 | 99.54% | 99.96% | 99.99% |
| 17 Dec 08 | 96.77% | 99.92% | 100.00% |
| 18 Dec 08 | 98.48% | 99.94% | 99.95% |
| 19 Dec 08 | 85.19% | 99.85% | 99.94% |
| 22 Dec 08 | 99.49% | 99.99% | 100.00% |
| 23 Dec 08 | 96.97% | 99.87% | 99.96% |
| 24 Dec 08 | 99.51% | 99.99% | 100.00% |
| 29 Dec 08 | 97.58% | 99.96% | 100.00% |
| 30 Dec 08 | 95.16% | 99.90% | 99.91% |
| 31 Dec 08 | 85.78% | 99.73% | 99.98% |
| Weighted Average | 95.08% | 99.91% | 99.98% |

APPENDIX III: SPECIFIC COMMENTS RAISED IN THE RESPONSES

| Comments on Trading Hours and Operational Issues | Number of Responses |
|--|----------------------------|
| ▪ Synchronization of the market closing time of the securities and derivatives markets | 2 |
| ▪ Price movements during the CAS | 20 |

| Enhancements to the Current CAS Mechanism | Number of Responses |
|---|----------------------------|
| ▪ Introduction of a random closing alternative | 3 |
| ▪ Permission of short selling | 13 |
| ▪ Introduction of measures to enhance the auction trading mechanism during the CAS | 16 |
| (a) Introduction of measures such as extended trading hours and circuit breakers for reducing price fluctuation | 3 |
| (b) Enhancement of IEP determination mechanism for maximizing at-auction orders match rates | 4 |
| (c) Enhancement of order types, matching priorities and trading periods | 7 |
| (d) Enhancement of information dissemination and market depth | 2 |

APPENDIX IV: POSSIBLE PRICE MOVEMENTS FOR SECURITIES AT DIFFERENT PRICE RANGES

The following table shows the possible price movements in terms of absolute value and number of trading spreads for all securities at different price ranges after the introduction of a price control limit at 2 per cent of the nominal price at 4 pm:

| Price range (\$) | 1 spread (\$) | Price control limit set at 2% of the nominal price at 4 pm | |
|--|---------------|--|-------------------------------|
| | | In terms of value (\$) | In terms of spreads (spreads) |
| For all securities (except debt securities) | | | |
| 0.01 - 0.25 | 0.001 | 0 - 0.005 | 0 - 5 |
| 0.25 - 0.5 | 0.005 | 0.005 - 0.01 | 1 - 2 |
| 0.5 - 10 | 0.01 | 0.01 - 0.2 | 1 - 20 |
| 10 - 20 | 0.02 | 0.2 - 0.4 | 10 - 20 |
| 20 - 100 | 0.05 | 0.4 - 2 | 8 - 40 |
| 100 - 200 | 0.1 | 2 - 4 | 20 - 40 |
| 200 - 500 | 0.2 | 4 - 10 | 20 - 50 |
| 500 - 1000 | 0.5 | 10 - 20 | 20 - 40 |
| 1000 - 2000 | 1 | 20 - 40 | 20 - 40 |
| 2000 - 5000 | 2 | 40 - 100 | 20 - 50 |
| 5000 - 9995 | 5 | 100 - 195 | 20 - 39 |
| For debt securities | | | |
| 0.50 - 9999.95 | 0.05 | 0 - 199.95 | 0 - 3999 |

* A uniform spread of \$0.05 is applied to all debt securities with prices ranging from \$0.50 to \$9,999.95.

APPENDIX V: AN EXAMPLE SHOWING CASES WHERE THE FINAL INDICATIVE EQUILIBRIUM PRICE WILL BE OUTSIDE THE PRICE LIMIT

Below is an example showing the order book of the stock XYZ (with the previous closing price at \$100) during the POS, the Continuous Trading Session and the CAS:

Order Book during the POS

Assuming that there is an at-auction bid order input during the POS as follows:

| Bid | | | | Ask | | | |
|----------|------------|----------|-------|-------|----------|------------|--------|
| Broker | Input Time | Quantity | Price | Price | Quantity | Input Time | Broker |
| Broker A | 9:35 am | 10,000 | \$105 | | | | |

- No IEP can be derived as the order book is not crossed. This outstanding bid order is carried forward to the Continuous Trading Session.
- Nominal Price = \$100 (ie the previous closing price in the absence of IEP)

Order Book during the Continuous Trading Session

Assuming that no new order is input during the Continuous Trading Session, the order book remains as follows:

| Bid | | | | Ask | | | |
|----------|------------|----------|-------|-------|----------|------------|--------|
| Broker | Input Time | Quantity | Price | Price | Quantity | Input Time | Broker |
| Broker A | 9:35 am | 10,000 | \$105 | | | | |

- Nominal Price = \$100 (still showing the previous closing price)

Order Book during the CAS

- Nominal Price at 4 pm = \$100 (still showing the previous closing price)
- Permissible price range for at-auction limit orders: \$98 - \$102 ($\pm 2\%$ of the nominal price at 4 pm)

Assuming that there is an at-auction limit ask order input at \$102 during the CAS, the order book becomes as follows:

| Bid | | | | Ask | | | |
|----------|------------|----------|-------|-------|----------|------------|----------|
| Broker | Input Time | Quantity | Price | Price | Quantity | Input Time | Broker |
| Broker A | 9:35 am | 10,000 | \$105 | \$102 | 5,000 | 4:03 pm | Broker B |

At the end of the CAS, an auction trade of 5,000 shares of stock XYZ at the final IEP at \$105¹¹ is concluded. As a result, the closing price of stock XYZ at \$105 is outside the permissible price range of \$98 - \$102.

¹¹ The IEP is set at \$105 instead of \$102 based on the IEP determination methodology. For illustrative examples of the IEP calculation, please refer to <http://www.hkex.com.hk/consul/conclusion/iep.pdf>.

