

Questions and Answers (Q&A) on HKEx's Volatility Control Mechanism and Closing Auction Session

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Background

Hong Kong Exchanges and Clearing Limited (HKEx) issued a consultation paper on the proposed introduction of a Volatility Control Mechanism (VCM) in its securities and derivatives markets and a Closing Auction Session (CAS) in its securities market on 16 January 2015. The consultation closed on 10 April 2015. On 3 July 2015, HKEx announced that it would implement a VCM and a CAS based on broad market support. Some frequently asked questions (FAQ) relating to these two initiatives and HKEx's answers are set out below.

Further information is available in the [consultation paper](#) and [consultation conclusions](#).

Questions and Answers

1. Why is HKEx implementing these two market structure changes? What does HKEx want to achieve through these reforms?

The two proposals represent the major microstructure upgrades for the securities and derivatives markets in the short to medium term to enhance HKEx's overall competitiveness.

The proposed VCM is based on the regulatory guidance of the Group of Twenty (G20) and International Organization of Securities Commissions (IOSCO), and is designed to safeguard market integrity from extreme price volatility arising from automated trading ("Flash Crash", bad algorithms, etc), and to contain systemic risks caused by the inter-connectedness of Hong Kong's securities and derivatives markets, particularly with respect to benchmark index products. Almost all major markets around the world have put in place some sort of volatility control mechanisms to control extreme price volatility. The VCM to be implemented by HKEx is based on a simple and light-touch dynamic price limit model. It is not designed to limit the ups and downs of stock prices and does not work the same way as the daily price limit model which sets a specific daily price range for securities trading as seen in some markets.

The new CAS is designed to meet the diverse trading needs of investors by enabling trade execution at the securities' closing prices, which is a key investment mandate of some funds such as index trackers. Internationally, all developed markets except Hong Kong and most developing markets except Egypt, India and Shanghai have a closing auction¹.

¹ The market classification is based on MSCI classification.

2. How comprehensive was the feedback from the market consultation? How did you analyse the comments received?

The feedback received is comprehensive and represents a good cross-section of users from different segments of the securities and derivatives markets:

- 41 HKEx EPs which contribute an aggregate market share of 65 per cent and 74 per cent of trading in the securities and derivatives markets respectively;
- 15 asset management companies with aggregate global assets under management (AUM) of over US\$15 trillion. They are major international and local institutional investors such as Mandatory Provident Funds (MPFs) serving millions of investors in Hong Kong and managers of Exchange Traded Funds (ETFs) listed in Hong Kong;
- 10 industry associations and key market representatives which broadly represent both retail and institutional segments in Hong Kong including brokers, investors and other market participants;
- 2 major index providers, 2 trading firms and a bank with presence in Hong Kong; and
- 310 individuals, mostly local retail investors / HKEx Exchange Participant staff.

The review of the responses incorporates a qualitative assessment with market comments as well as the rationale behind them reviewed in great detail. HKEx has also taken into consideration all submissions received, including those late, unverifiable and / or identical submissions, in its analysis, so as to ensure all market voices are heard and addressed as appropriate.

3. Are you implementing the models you proposed in the consultation? If not, what are the key changes and the reasons for the changes?

In response to market feedback received, the final VCM and CAS models have incorporated certain enhancement features:

VCM:

- Maximum number of VCM triggers per instrument and per trading session changed from 2 to 1* - Some respondents opined that the number of triggers could be further reduced for minimum interruption to the market, as one trigger can already alert the market to possible trading anomalies. Over time as the market is more familiar with the VCM mechanism, multiple triggers may be considered as a further enhancement.
- VCM is also excluded for the first 15 minutes of the morning and afternoon Continuous Trading Session (CTS) at market open, in addition to the last 15 minutes of the afternoon CTS per the consultation paper* - There were views that the market open, including the Pre-opening Session and the start of the morning and afternoon CTS, is very important for price discovery and price volatility is normally higher after a period of non-trading for the market to absorb and react to new information. Therefore, free price discovery with no intervention by the VCM would be preferred, as unwarranted trading interruptions could be caused by the VCM.

CAS:

- a) *CAS to include all ETFs instead of just ETFs with Hong Kong equities as underlying starting from Phase 1* - There was market feedback suggesting that even for Phase 1, the CAS should be applied to all ETFs instead of only ETFs with Hong Kong stocks as underlying. HKEx agrees that it will be more optimal to apply the CAS to all ETFs, as this approach will provide a higher level of consistency and facilitate market communication.
- b) *No short selling in Phase 1; will consider rollout in Phase 2 (six months or more from the start of Phase 1, and after a review of Phase 1)* - The majority of the market feedback supported having short selling orders with a tick rule during the CAS. At the same time, some respondents felt that short selling should be implemented in Phase 2, after the market is familiar with the new CAS, rather than immediately in Phase 1. To err on the side of caution, HKEx agreed that short selling should be implemented in Phase 2, when the market will be familiar with the new CAS.
- c) *Order Input Period shortened to 5 minutes, CAS to end at 4:10 pm* - A significant number of respondents expressed the wish for a shorter Order Input Period so that the CAS can end by 4:10 pm. HKEx is of the view that a shorter input period of 5 minutes can be adopted and the CAS can end at 4:10 pm, as that should not have an adverse impact on market trading.

4. Why would trading of the related or linked instruments of a particular security / contract be allowed to continue if the security / contract has had a VCM trigger and is in a “cooling-off” period? What is rationale behind that?

As the security / contract is still allowed to trade within a band during the cooling-off period, its linked or related instruments should be allowed to trade as well. Consideration was given to whether the linked or related instruments should also trade within a band, but defining a band is not practical since the instruments are typically leveraged or may have inherently different product characteristics. Halting trading of these linked or related instruments would not be preferred too as it may have a significant impact and amount to excessive market intervention. Based on the market feedback received, many respondents agreed the approach taken is the preferred approach for the launch of VCM in the Hong Kong market, as it is new to the market. HKEx will obtain feedback from the market on this arrangement after its implementation and may review it again when the market is more familiar with it.

5. Some market participants asked for a 2 per cent price limit for the CAS. What was the rationale for the 5 per cent limit HKEx proposed and did HKEx consider changing it after reviewing the comments it received?

HKEx acknowledged the market’s concern on price volatility in the CAS, so it proposed implementing a price limit. It should be noted that most markets do not have a price limit in their closing auction, and a 5 per cent price limit is the narrowest among those with a price limit.

When HKEx had a closing auction in 2008, it announced at one point that it would implement a 2 per cent price limit, but the closing auction was suspended before the limit was implemented. The price limit was the only proposed measure to curb price instability then and hence a 2 per cent limit was proposed, although many market participants

commented then that it would be too restrictive to trading. The new CAS that HKEx has decided to introduce has a number of other price control measures so the price limit need not be as restrictive as a 2 per cent limit.

Based on daily trading statistics, a 2 per cent limit would be overly restrictive to trading and would make it difficult for many stocks orders to be completed at the close both on normal days as well as on index rebalancing days. Market participants might place orders with more aggressive prices or trade ahead of the market close under such circumstances and hence reduce the utility of the CAS. Also, HKEx noted that even today, some stocks may fluctuate more than 5 per cent within a few minutes, and the 5 per cent price limit is still not wide enough for these stocks.

HKEx have therefore decided to proceed with the original proposal, i.e. introducing a 5 per cent price limit first during the Order Input Period, which balances retail and institutional market feedback and the strong need to address the price volatility issue. The 5 per cent price limit may be subject to review in the future.

6. What were the key CAS concerns raised by the market during the consultation process and have they been addressed?

The consultation found respondents' key concerns are (1) possible market manipulation; and (2) the perception that retail investors would be disadvantaged in the CAS. They are addressed below:

- As a late comer, Hong Kong has been able to learn from the CAS experience of other markets. HKEx's final CAS model has a number of enhancement features used in other markets to address potential market manipulation. For instance, the model imposes a 5 per cent price limit on at-auction limit orders, allows at-auction limit orders throughout the CAS, provides better market transparency and has a random closing. Implementation will be in phases to allow the market to get familiar with the CAS before further securities are included in scope. The results and effectiveness of the CAS will be reviewed before rollout of the second phase. Besides, HKEx and the Securities and Futures Commission (SFC) will further enhance the joint electronic market surveillance platform to improve the cross market surveillance function. Also, additional spending is budgeted by HKEx for new real time alerts to help monitor suspicious market activity. HKEx will assist the SFC in conducting thorough reviews and taking enforcement actions as necessary should any trading irregularities be detected.
- Participation in the CAS is optional. Investors can choose to participate only in the CTS if they wish. When HKEx had a closing auction before, the liquidity shifted from the CTS to the closing auction was not significant so the CAS's impact on investors who do not participate in it should not be significant. For investors who would like to participate in the CAS, HKEx has built in enhancements such as allowing at-auction limit orders throughout the CAS to provide price protection as well as price improvement opportunities for all investors. This should encourage participation from both retail and institutional players and create a level playing field. HKEx will also work with the Investor Education Centre of the SFC and other relevant parties to provide market and investor education to ensure that the CAS and its features will be well understood by all market participants.

7. How will the two initiatives be implemented? Will the list of securities covered by the VCM and CAS be expanded? If so, what is the likely timetable?

Implementation approach and timeline

For the securities market, the thrust of respondents' feedback was that the CAS and the VCM should have priority over the short Trading Halts that HKEx plans to introduce to allow listed issuer to release inside information during trading hours. Accordingly, the VCM and CAS will be developed and tested together on the AMS/3.8 trading system, but then rolled out sequentially (CAS Phase 1 first and then the VCM) to reduce migration risk.

Adequate preparation lead time of 12 months will be given to the market. Rollout of the CAS and then the VCM in the securities market is tentatively set to start from the third quarter of 2016, while the VCM for the derivatives market has a tentative rollout date of the last quarter of 2016. All these changes are subject to rule amendments that have to be approved by the SFC and market readiness. Relevant specification documents for the system development and implementation of the VCM and CAS will be issued separately.

Applicable products

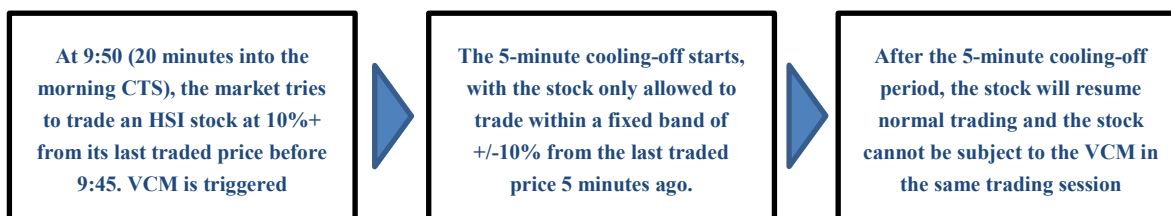
HKEx currently has no plan to include more products in the securities or derivatives markets in the list of products subject to the VCM.

The CAS will be rolled out in two phases, with the list of securities further expanded in Phase 2. Phase 1 is tentatively set to include all the Hang Seng Composite LargeCap and MidCap index constituent stocks, the H shares which have corresponding A shares listed on the exchanges in Mainland China and all ETFs. The list will be finalised and published before the launch of Phase 1. Phase 2 will be rolled out after a review, tentatively planned for six months after Phase 1, and will include all equity securities and funds not covered in Phase 1.

Appendices:

1. How HKEx's VCM will work

The VCM is applicable during Continuous Trading Session (CTS) except the first 15 minutes of the morning and afternoon CTS and the last 15 minutes of the afternoon CTS. It is applicable to just the 81 Hang Seng Index (HSI) and Hang Seng China Enterprise Index (HSCEI) constituent stocks and the eight related index futures contracts. If the market tries to trade these stocks / contracts at a price of more than 10 / 5 per cent away from its last traded price 5 minutes ago, a 5-minute cooling-off period will be triggered. During the cooling-off period, the affected stock / contract will be only allowed to trade within a fixed band. Normal continuous trading will resume when the 5-minute cooling off period ends and the stock / contract cannot be subject to the VCM again in the same trading session.



2. How HKEx's CAS will work

The concluded CAS will last for about 8 to 10 minutes and work as follows:

- In the first period (Blocking Period, 4:00-4:01 pm), a reference price, which sets the allowable price limit of the CAS (± 5 per cent from the reference price), is calculated for each CAS security.
- In the second period (Order Input Period, 4:01-4:06 pm), at-auction orders and at-auction limit orders within the ± 5 per cent price limit can be entered, amended or cancelled.
- Starting from the third period (No-Cancellation Period, 4:06-4:08 pm), prices of new at-auction limit orders must be between the lowest ask and highest bid of the order book, and no orders can be amended or cancelled.
- In the last period (Random Closing Period, 4:08-4:10 pm), the order rules from the No-Cancellation period apply and the market closes randomly within two minutes. After the period, there's order matching for all CAS securities.

Time	9:30-12:00; 13:00-16:00	16:00	16:01	16:06	16:08	16:10
Session	Continuous Trading Session (CTS)	Closing Auction Session				
		Blocking Period (1 min)	Order Input Period (5 mins)	No-cancellation Period (2 mins)	Random Closing Period (2 mins)	
Description	Reference price based on the median of 5-snapshot nominal prices in the last minute of CTS	<ul style="list-style-type: none"> Calculate & publish reference price No Input, Cancel & Amend Orders within price limit will be automatically carried forward 	Price Limit: a 5% of Reference Price	b Within lowest ask & highest bid		
			Order Type Allowed: At-auction Order At-auction Limit Order	At-auction Order At-auction Limit Order		
			Order Input, Cancellation & Amendment: Allowed Input, Cancel & Amend	Input Allowed, Cancel & Amend Not Allowed		
			Other New Measures:			
1. Better transparency by showing the IEP price limit, the 16:00 CTS closing and imbalance information (direction and quantity) 2. Allow short selling orders subject to a tick rule (reference price) in Phase 2 3. Allow matching of at-auction orders at the reference price when an auction price cannot be determined						

3. Respondents by market segment along with feedback statistics

Market Segment	# of responses	Representation	VCM		CAS	
			Support	Oppose	Support	Oppose
1. HKEx Exchange Participants	41	65% and 74% of trading in the securities and derivatives markets	34	7	35	4
2. Asset Management Companies	15	* Including MPF managers serving millions of investors in Hong Kong & managers of ETFs * Global AUM > US\$15 trillion	13	0	15	0

Market Segment	# of responses	Representation	VCM		CAS	
			Support	Oppose	Support	Oppose
3. Industry Associations and Key Market Representatives	10	# of members > 10,000 in total	9	1	7	2
4. Other Corporate Entities	5	2 major index companies, 2 trading firms and a bank in Hong Kong	5	0	5	0
5. Individuals	310	On individual capacity	20	285	15	293

4. High level implementation timeline and securities to be covered by the VCM and CAS

Tentative Schedule	Q3 2016	Q4 2016	1H 2017
Rollout	CAS – Phase 1	VCM – Securities VCM – Derivatives	CAS – Phase 2 (subject to review)
Scope of securities / derivatives products	<p>(List of securities subject to confirmation before rollout)</p> <ul style="list-style-type: none"> • Hang Seng Composite LargeCap & Composite MidCap Index constituent stocks • H shares which have corresponding A shares listed on Mainland securities exchanges • All ETFs 	<p><u>Securities:</u> HSI & HSCEI constituent stocks (currently 81 stocks)</p> <p><u>Derivatives:</u> HSI Futures (HSI), Mini-HSI Futures (MHI), H-shares Index Futures (HHI) and Mini H-shares Index Futures (MCH) spot month and the next calendar month contracts (currently 8 contracts)</p> <p><u>Excludes:</u> Far month contracts, options and all other derivatives products</p>	<p>All equity securities and funds</p> <p>Note: Other CAS features will be same as Phase 1 except that short selling with a tick rule will be considered in Phase 2 (there's no short selling in Phase 1)</p>