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Dear HKEx

Re: Consultation Paper on Proposal for Introduction of Volatility Control Mechanism in the Securities and Derivatives Markets and Closing Auction Session in the Securities Market

Optiver welcomes the opportunity to respond to the Hong Kong Exchange and Clearing Limited's Consultation Paper *Proposal For Introduction Of Volatility Control Mechanism In The Securities And Derivatives Markets And Closing Auction Session In The Securities Market.*

This response is intended to address both the SEHK and the HKFE, please forward as appropriate internally.

This paper outlines our initial draft responses to the Consultation Paper.

Volatility control mechanisms are an important feature of modern markets that can address some of the risks associated with undue market moves and trade automation. Volatility control mechanisms have a substantial and successful history in some markets globally and over recent years, and particularly since the 'Flash Crash', have found widespread adoption. We note the 'Flash Crash' was caused by a long-only fund implementing an automated execution program in a market of limited liquidity. We commend the Hong Kong Exchange for adopting volatility control mechanisms for the positive contribution to market integrity we expect them to make.

Optiver also strongly supports the proposal for a Closing Auction Session. Closing auction sessions are very standard mechanisms for clearing remaining orders in markets at the end of trading days and for determining well-contested closing prices and executing orders that reference these prices.

While we have some preferences in regard to shorter timings in the Closing Auction if these are not possible then we fully support the Exchanges proposal as it stands.

Please find our responses to the particular questions in the Consultation Paper below.

Q1: Do you support the introduction of an instrument-level VCM based on a dynamic price limit model in Hong Kong? Please give reasons for your view.

Optiver strongly supports the introduction of an instrument-level VCM based on a dynamic price limit model in Hong Kong.

Automation and semi-automation of trading has brought enormous efficiencies to capital markets but there are associated risks which it is appropriate to address. Just as the move from open-outcry trading to electronic trading introduced 'fat finger' risks whereby the mis-keying of an order could impact market integrity by dislocating prices and it was appropriate to introduce filters and error-checking mechanisms to address these risks, so it is appropriate to address the risks of erroneous automated trading through automated volatility controls.

While in practice these controls will not be triggered often in any particular security they will contribute through their presence over time to increase market confidence.

We view the regulatory consensus on the need for Volatility Control Measures (VCMs) initiated by the IOSCO report as well grounded.

Q2: Do you agree that the proposed VCM model should only be applied to the HSI and HSCEI constituent stocks in the securities market? Please give reasons for your view.

We support the application of the VCM model to the HSI and HSCEI constituent stocks in the securities markets. While ideally VCM would apply to all equity products we note the difficulties created by the higher accepted volatilities in lower priced securities.

Optiver supports the extension of the VCM model's application to selected ETF products from the first phase of the program. The ETF products could be selected by the Exchange on a biannual or quarterly basis on the basis of their liquidity. We would expect these products would have similarly low risks of having the VCM triggered and their inclusion would further strengthen market confidence and integrity.

Q3: Do you agree that the proposed VCM model should only be applied to the HSI, HHI, MHI and MCH (spot month and the next calendar month) index futures in the derivatives market? Please give reasons for your view.

At this time given their priority to the market we support applying the VCM model to the HSI, HHI, MHI, and MCH spot and next calendar month index futures. These contracts would readily support the VCM model as stated.

Q4: Do you agree that the market should have a 15-minute uninterrupted trading period before the end of the last continuous trading? Please give reasons for your view.

The final 15 minutes before the end of the last continuous trading period is a period of high volume and can result in price moves as the market finds its own level. Interruption of the normal market at this time could be detrimental to the market function as it may create uncertainty about the ability to execute volume in the open session.

As such we support the suspension of the VCM during this time and agree with the proposition in Question 4.

Q5: Do you agree with the proposed reference price for the securities market, namely the price of last trade 5 minutes ago? If not, what would you prefer? Please give reasons for your view.

We support the proposed reference price for the securities market as the last trade 5 minutes ago as this is a simple measure to implement and does not create an excessive number of trading pauses per year.

Q6: Do you agree with our proposed reference price for the derivatives market, namely the price of last trade 5 minutes ago? If not, what would you prefer? Please give reasons for your view.

We support the proposed reference price for the derivatives market as the last trade 5 minutes ago as this is a simple measure to implement and does not create an excessive number of trading pauses per year.

Q7: Do you agree with the proposed triggering level for the securities market, namely 10% from the reference price across the proposed instruments covered by the VCM? If not, what level would you prefer? Please give reasons for your view.

We support this trigger level for the securities market. While it is possible to construct more sophisticated models which take into account the higher volatility of lower priced securities, given the security universe targeted and the benefits of a simple approach we view this as a sound approach.

Q8: Do you agree with the proposed triggering level for the derivatives market, namely 5% from the reference price across the proposed instruments covered by the VCM? If not, what level would you prefer? Please give reasons for your view.

We support the trigger level for the derivatives market indexes matching that of the underlying stocks to prevent disconnection between the futures and the stocks in the event of a major market rally or fall. Namely it should also be 10%.

Q9: Do you agree that a maximum of two VCM triggers per trading session per instrument should be imposed to minimise market interruption? Please give reasons for your view.

We agree with this limit.

When there have been two interruptions to trading in a security due to volatility controls the market will be paying particular attention to that security, which is likely to be in the middle of a repricing event. The purpose of volatility controls is not to prevent securities repricing but rather to ensure it is being consciously done by the market and not the result of unattended trading without time for liquidity to regroup. From this it follows that a limit of two triggers per session per instrument is appropriate.

Q10: Do you support trading within a price limit during the cooling-off period? If not, do you prefer another approach? Please give reasons for your view.

We support trading within the cooling-off period.

This is in line with the VCM having the least market impact it can. Trading during this period for a dislocated security can have the effect of more rapidly returning the security to its pre-move levels.

Trading is price-limited in the cooling-off period so cannot push prices further out of line.

Q11: After the cooling-off period, do you support resuming the same dynamic price limit monitoring mechanism (i.e. ±10% (±5%) from the last trade 5 minutes ago in the securities (derivatives) market)? If not, do you prefer another approach? Please give reasons for your view.

We do support with reservations maintaining the same dynamic price limit mechanism after the cooling off period. The proposed resumption will allow prices to reset in the direction of the move. We do note that if a down (up) price move was an aberration then a return to even slightly above (below) normal pricing would trigger a further VCM cooling off period.

There is a balance to be struck between the simplicity of the mechanism and its potential to further impact market function. While we support the exchange's position as a precaution we would suggest the exchange monitor whether this proves to be an issue over the year following implementation of the VCM.

Q12: Do you have any other suggestions on enhancing the resumption procedures?

We note that there may be value in restarting the cooling off period with an auction as this would remove any issues with the outcome mentioned above where prices return to their level of 5 minutes ago during the cooling off period and are then limited quite tightly in regards to moves in the opposite direction.

Q13: Do you agree that the duration of the cooling-off period should be 5 minutes for both the securities and derivatives markets? If not, what would you prefer and why? Please give reasons for your view.

Optiver views 5 minutes as a long time in the modern markets. It is at the upper end of what is an acceptable period for volatility based price limit periods. In securities markets buyers or sellers have to be found and these calls can take a few minutes but with many brokers observing the market this should be ample time. We would not support any longer period as it would interfere with the efficient functioning of the market, particularly in relation to the trading of related futures.

In summary we would prefer a shorter time period of say 3 minutes, support a 5 minute period if that is what is required to get the VCM up and running but would not support any longer period.

Q14: Do you agree with the additional market data dissemination for the proposed VCM model? If not, what would you propose and why? Please give reasons for your view.

We are comfortable with the proposed data dissemination only in the event a VCM is triggered.

Q15: If a VCM is triggered for a given instrument, should trading of related instrument (e.g. futures contract of different contract months) on the same underlying continue as normal? Please give reasons for your view.

Optiver does not prefer futures and options contracts with a single underlying continuing to trade as normal while a VCM has triggered the restricted trading of that underlying.

Where other directly related (on a one to one basis) derivatives continue to trade without price limitations while the underlying is trading within price limitations due to a VCM trigger there is a risk that where the move is a 'genuine' repricing event that trading in these derivatives could imply a much greater fall or rise in the underlying. Those investors that do not have access to these related products could be left behind and miss out on trading opportunities (to exit or enter exposures) that are open to those with access to these products. Further trading of options in particular without trading in the underlying will by necessity be unhedged and this will result in wider spreads and greater volatility.

For these reasons we prefer suspending directly related derivatives (single stock futures and options) when the underlying is trading within a limited band.

Q16: If a VCM is triggered for a given instrument, should trading of derivatives (e.g. single stock options or warrants) of that instrument continue as normal? Please give reasons for your view.

See our comments for Q15 on why we do not prefer the continued trading of derivatives such as single stock options in these circumstances.

Q17: Do you have any other comments on the VCM proposal?

We note our suggestion in relation to the alternative of an auction restart after the VCM and have no further comments on the VCM proposal.

Q18: Do you support the introduction of the new CAS model in the Hong Kong securities market? Please give reasons for your view.

Optiver strongly supports the introduction of the CAS model in the Hong Kong securities market.

Closing auctions are the best way to manage the liquidity event that occurs around the close particularly when there is an index rebalance but also more generally.

Closing auctions allow:
- Ease in ensuring investor volumes are completed where possible;
- A well contested closing price;
- The ability to execute at the closing price with normal orders where closing price is within any limits; and
- MOC orders that match off at the closing price.

Q19: Do you agree that the new CAS model should only be applied to the major index constituent stocks (i.e. Hang Seng Composite LargeCap Index and Hang Seng Composite MidCap Index constituents as well as other Stock Connect Securities for Southbound trading)? Please give reasons for your view.

Optiver sees no reason for the general application of the CAS model not to apply to all cash securities.

We support the application to as broad a section of stocks as possible so that the benefits of the CAS can apply as widely as possible. Low liquidity stocks in particular can benefit from the liquidity event created by a CAS.

In the event the market would be more comfortable with a progressive roll out we would also support that approach.

Q20: Do you agree that the new CAS model should be applied to ETF? If yes, which type of ETF should be applied? Please give reasons for your view.
(i) Apply to all ETFs
(ii) Only apply to ETFs with Hong Kong stocks as underlying
Please give reasons for your view.

We support applying the CAS model to all ETFs.

We note that there are different approaches to this globally but our view is that the ETFs can benefit from the liquidity event of a CAS.

Q21: Do you agree that at a later stage the new CAS model should be expanded to other equity securities and funds as proposed? If so, when should the CAS be rolled out to these securities and funds? Please give reasons for your view.

In the event that HKEx does not wish to immediately roll out the CAS to other equity securities and funds we would support a staged further roll out. Given the IT constraints we would suggest this be at least 2-3 months but no longer than 12 months from the initial roll out.

Q22: Do you agree that the new CAS model should exclude structured products, equity warrants and debt securities? Please give reasons for your view.

Optiver supports the extension of the CAS model to equity warrants. Optiver is active in these warrants and holds the liquidity event would likely benefit these derivatives.

Q23: Do you support introducing a price limit during the CAS? Please give reasons for your view.

Optiver would strongly prefer no price limit during the CAS.

While Optiver supports the temporary price limits associated with volatility controls as being, on balance, and in view of their temporary and non-critical price nature, in the interests of the market we do not support artificial price limits where critical prices such as the closing price is being determined.

All price limits distort markets and the distortion of markets always involves unintended consequences and costs to investors. One of the key functions of markets is price discovery this will be damaged if prices are not able to find their natural level by the balancing of buyers and sellers.

If there is residual concern about the potential for market manipulation then these concerns should be addressed directly rather than by attempting to limit the natural movement of the market.

We note that there can be over 12 minutes pass between the snapshot prices and the closing price determination. Information or order flow can readily appear during this time period that would legitimately warrant more than a 5% in a single security.

Limiting the ability of investors and the market more generally to accurately price in this information or order flow may give artificial comfort to investors before the event but at the time may open the exchange up to criticism for artificially restricting the ability of investors to exit (or enter) their positions.

It is in investors' interests and the exchange's own interests not to have prices distorted at the open or close, or for any significant period at any other time.

We note also that 5% limit prices will create an immediate distortion by creating a race to input orders at these prices to get queue priority to maximise the potential to be fully executed. Brokers may even put in speculative orders for this purpose at the beginning of the order input period to attract priority flow and remove or amend these just before the No-Cancellation Period if no flow appears. This is just one of the many unintended possible effects of artificial price limits.

Another significant effect maybe in the price of the futures which may not be able to be fully hedged if there is information that might move the market or a single security. This would thereby impact the interconnected markets.

We strongly oppose any tighter limit.

We understand a number of industry groups have proposed a 2% limit. This would be a major distortion of the market and seriously call into question the validity of the closing prices and the market's commitment to allowing prices to find their own level.

Markets gain their validity as sources of pricing from the interaction between buyers and sellers and not from the restriction of artificial setting of prices.

If these industry groups are basing their concerns over the previous experience of significant moves in the close then we would suggest that they revisit whether this would be something that would be better addressed through a review of the market manipulation rules.

In the absence of abuse, markets can be relied upon to find the right level based on the willing interaction of buyers and sellers. This is a fundamental quality of equity investments as opposed to holders to term of fixed income and banking products where pricing outcomes are known in advance.

Optiver believes in and supports markets and market-based outcomes. We support the exchange's efforts to increase understanding that well designed and run markets are inherently fair and that retail investors benefit the most from full participation in authentic markets.

We question the basis for commentary from some quarters that moves in excess of 2% should not be allowed in the CAS. We note that similar restrictions for any other time of day would be a strange request of a free market. From this we ask why at a particular time of day around the close that distortionary limits should be placed on the movements of stocks.

It is important to understand that stock prices cannot truly be restricted. What can be restricted is the ability of investors to deal at particular prices and this is what will happen under price restrictions in the close. If a stock were to come under selling pressure that would

see it close down 4% this pressure is not abated by refusing to allow investors to trade in this security at anything but a down 2% price. Investors will just have to wait until the next trading session or trading in related securities that do not have these restrictions (and by this investors in the underlying may be disadvantaged compared to investors in its derivatives).

Strong movements up are typically good for long investors and strong movements down provide buying opportunities for long investors if there is a mispricing. There will be no advantage for retail investors if they are unable to exit positions from securities that would like to trade higher (or lower) due to a distorted close.

There is a risk that market rules that impose price limits will inadvertently create artificial prices in the market.

We encourage the Exchange to align its position with its core principles in support of markets free from manipulation in relation to the CAS limit proposal and reject any proposal for tighter price limits.

Q24: Do you support a price limit of 5% during the Order Input Period for all CAS Securities? Please give reasons for your view.

Optiver would strongly prefer no price limit during the order input period. The exchange should not artificially constrain the price movements of securities on an arbitrary basis particularly during the setting of key prices such as the closing price. See our arguments above.

Please note we would strongly oppose any tighter limit than 5%.

Q25: Do you agree that a further price limit within the best bid and best ask should be applied during the No-Cancellation Period and Random Closing Period? Please give reasons for your view.

We do not agree with this proposal as per our reasons above.

Q26: Do you agree that at-auction limit orders should be allowed throughout the CAS? Please give reasons for your view.

At auction, limit orders are valid orders that should not be excluded from being input during the order input period of the CAS.

These orders add to liquidity and requiring their entry only at the end of the period creates increased execution risk for investors.

Q27: Do you think short selling orders with a tick rule should be allowed during the CAS? Please give reasons for your view.

Optiver supports the short selling of orders during the CAS as a valid contribution to market liquidity and a valuable mechanism to limit unwarranted volatility in prices for the significant closing price determination.

Q28: If short selling order is to be allowed, should it be at or higher than the reference price? Please give reasons for your view. Optiver supports short-selling during the CAS and would prefer that it not be limited to prices higher than the reference price.

If a security is overvalued, it is in investors' best long term interests to have this information relayed to the market as soon as possible by those investors closing long positions and creating short positions.

Q29: Do you agree that order amendment and cancellation should be disallowed during the No-Cancellation Period and Random Closing Period? Please give reasons for your view.

We would prefer no restrictions on order amendment and cancellation during the No-Cancellation Period and Random Closing Period.

These periods combined create a window of up to 4 minutes when orders might go stale. This creates risks for investors in that their orders may be out of date and they may wish to cancel. The modern markets generally allow micro-second accuracy of orders in order to assist firms in managing their risk exposures a period up to 4 minutes is an anachronism in comparison.

Further, where brokers have clients that would like to cancel orders during this period we envisage many brokers will take these uncancellable/unamendable orders on their error book and place opposing orders to close these positions.

Q30: Do you agree that random closing be adopted in the CAS to prevent gaming? Please give reasons for your view.

Optiver supports random closing to help prevent gaming of the CAS.

Q31: If random closing is to be adopted, should it be over a period of up to 2 minutes or would you prefer a different duration? Please give reasons for your view.

Optiver would prefer a shorter period of 30 seconds to prevent gaming during the random closing period. Two minutes is a very long time in relation to the modern market and the ability of participants to respond to any last minute orders.

Q32: In the absence of a final IEP, do you agree that the reference price should be used as the closing price and for trade matching? Please give reasons for your view.

We do not have a preference in regard to this proposal.

Q33: What would be the preferred duration of the CAS?
- Same as the proposed model, i.e. 7-minute Order Input Period to end the CAS at 16:12; or
- 5-minute Order Input Period to end the CAS at 16:10; or
- Others, please specify

Please give reasons for your view.

Optiver would support a minimally intrusive CAS that would still allow sufficient time for all broker orders to be added. In this regard we would shorten the order input period to 5 minutes, remove the no cancellation period and have the random closing period shortened to 30 seconds. Cancel and amends would be allowed throughout the CAS.

Q34: Do you agree that some features of the new CAS model may also be beneficial for the POS and/or the Trading Halts? If so, which feature(s)? Please give reasons for your view.

We would prefer no changes to the POS and or Trading Halt processes at this time.

Q35: Do you agree that any enhancements for POS and/or the Trading Halts should be implemented later rather than during the introduction of the new CAS? Please give reasons for your view.

Optiver would prefer no changes to the POS being made at this time. It may be appropriate to revisit these matters with the Orion upgrade with full consultation.

Q36: Do you foresee any issues with your day end processing such as margin calls in the cash market due to the extended trading time for 12 minutes? If yes, how may the issue be resolved? Please give reasons for your view.
Q37: To maintain the 45 minutes break before the start of AHFT, do you agree that the start time of AHFT to be changed from 17:00 to 17:15? If not, what time do you prefer? Please give reasons for your view.

We do not hold strong views in relation to these matters.

Q38: Which implementation approach for the securities market would you prefer:
- *(i)   the development and testing of the VCM, CAS and Trading Halts functionalities are to be implemented together on the AMS/3.8 platform and be rolled out one by one; or*
- *(ii)   (1) the development, testing and rollout of VCM and CAS are to be implemented together on the AMS/3.8 platform, and (2) Trading Halts proposal is to be introduced as part of the Exchange's next-generation trading system, the Orion Trading Platform-Cash; or*
- *(iii)   Others, please specify.*

Please give reasons for your view.

Generally updates are de-risked by rolling out separately, as such we would prefer option (i). If it is easier to wait for the Trading Halt proposal to be rolled out with Orion we would also be supportive of this.

Q39: What should be the implementation priority among the three initiatives (i.e. VCM, CAS and Trading Halts) in the securities market? Please give reasons for your view.

We would view the priority as VCM, CAS and Trading Halts. VCM addresses the risk of large market dislocations, CAS is a market improvement as is Trading Halts.

Q40: How long do you need to prepare for the rollout starting from the issuance of the specification for each initiative:
(i) VCM:
        a). under 3 months; b). 4-6 months; c). 7-12 months; d). >12 months
(ii) CAS:
        a). under 3 months; b). 4-6 months; c). 7-12 months; d). >12 months
Please give reasons for your reply.

We would suggest based on experience that measures should allow 7-12 months for development and implementation. As noted our preference is to stagger the introductions of the VCM and CAS measures (by several weeks to a month) to further reduce risk, but the improvements can be developed simultaneously.

It is in the best interest of all market participants to extend Market Maker exemptions into the closing auction. As a comparison, there is no exception in all the developed exchanges (Europe and US) in which we participate. This will help market efficiency in two ways:

- Market Makers might need to hedge gamma or pin risk positions on expiry which will depend on the closing price and cause the least market impact.
- If there is no Market Maker exception in the closing auction, Market Markers might need to quote wider towards the close to make sure they are flat before the auction. This will cause market inefficiency and be detrimental to all market participants.

Conclusion

Optiver commends and thanks the Exchange for these very beneficial proposals in the VCM and CAS.

We fully support both proposals as in line with best practice internationally and in the interests of all security investors.

While we have noted some areas where our ideal design would differ slightly from the Exchange proposals we reiterate that we are fully supportive of proceeding with the design as outlined in the Consultation Paper.

We thank the Exchange for its assistance in understanding the proposals and would be pleased to answer any questions in relation to our submission.

Yours sincerely