HKEx VCM & CAS Consultation Paper:

Disclaimer:

- I do not believe in so-called "Best practices", often an excuse for not thinking about the specifics of a case. Blind copy/paste has cause enough damages in the world of finance.
- I believe excessive segregation of duties (post Barings 1995) has resulted in serious loss of information (correlations overlooked) as well as lack of accountability and responsibility.
- I believe simple, stable, consistent rules but strictly enforced deliver better outcome than complex box-ticking based ones trailing market changes more likely prone to arbitrages.
- Excessive baby-sitting triggers moral hazard compounding problems up to an unsustainable levels. It is impossible to protect people against themselves. Adding more protection and safety devices encourage people to take more risk while feeling safe, until the final straw breaks the camel's back!

General comments:

- "Everybody does it" is not a line of defense. I heard this many times from my compliance officers, so please tell IOSCO as well as checking the assumptions related to "wisdom of crowds".
- Reducing volatility is in straight conflict with the SFC message about prohibition of market stabilization (with Greenshoe seriously controlled).
  - http://www.charltonslaw.com/stabilisation-under-the-securities-and-futures-price-stabilising-rules/
  - In some other exchanges (France early 90s), it was perfectly legitimate for listed companies to reduce volatility buying or selling treasury shares, directly or not.
- Feedback from securities firms, investment banks, fund managers, hedge funds, retail investors include their personal biases. Technical decisions should not be the result of an election or a poll.
- As many markets participants will be providing their feedback about this paper, I will try to focus on "outside-the-box" potential issues.

VCM:

- Before comparing the solutions used in other stock exchanges a first step would be to list an compare the situation and constraints. Such detailed analysis could help support decisions that may deviate from the rest of the crowd!
    - % of HFT and break it down, if possible, between basic Direct Market Access machines and HFT type algos; For instance comparing 1) % of orders executed vs. number of orders sent, 2) distribution of orders send per size (in number of shares),....
    - Frictions like stamp duty, exchange fees,...
    - Number of hours of trading,
    - Types of agents executing,
    - Types of clients executing and some measure of time horizon,
    - Specific situations like the 2 half day sessions of HKEx ...de facto giving time to players to cool down and think about what to do next,

Step by step comments:

- (3) Is HKEx facing the same situations as the Flash Crash in USA? I think NO by few miles.
- (4) "Orderly market": Have HKEx and SFC the same understanding of this? "Orderly market" is a catch all wording that does not mean the same thing for everybody and at any time. It is a source of misunderstanding.
- (5) Totally in agreement.(6) Ok subject to some fine tuning.
- (7) I am not sure the inter-connectedness is will covered in the paper especially for equity derivatives (OTC mainly!!)
- (8) The 5% for derivatives can be a source of confusion. For index futures, it makes sense; for index or stock options it does not make any!
- (8) The big issues is the potential cancellation/amendment of orders during the 5mn cooling-off enabling HKEx sponsored market manipulations! That is a key take out form my personal experience with the Mongolian Stock Exchange that imported that auction feature from LSE. More comments and solutions on this later.
- (8) Two VCM is enough to attract attention and get players watching their screens, ready to act. One might be enough.
- (8) "The VCM would not be in effect in the last 15 minutes of the CTS2 to allow for **efficient price discovery** at market close and to avoid potentially **preventing investors from closing out their positions and being forced to take overnight risks**." I am not totally sure CAS provides for this!! That has to be analyzed further because if liquidity is thin during the CAS, will the +/5% range be enough especially with the UpTick rule still in force?
- (25) "In the Hong Kong market, the aforementioned problems in overseas markets are not present." Those were self-inflicted damages in markets where accidents did happen. What is the real added value for long term stake holders, fund managers, brokers as well as sustainability of the stock exchange from this race to zero? Save increasing the turnover, churning stocks for nothing, to impress people and **misrepresent the real market depth** and sustainability, I fail to see the benefit. However that adds problem for long term investors that have to factor in the impact of HFT as it may impact their benchmark and over/under performance leaving long term investors to ...guess short term moves. In FX, HFT affects the power of Central Banks. I am (and always been) in favor of HFT being severely curtailed.
- (29) "Such extreme price volatility could be due to non-fundamental events such as faulty algorithms and trading errors, whereupon the cooling-off period should give time" Perfectly incorrect! If some derivative traders hold large negative gamma positions, time and proximity to

the strike price could trigger massive selling or purchase of shares that are not fundamental related, not trading errors, not algorithms related! But this kind of causes does not affect the logic behind having a VCM or not.

- (30) Agreed.
- (36) VCM per say. One potential issue is that orders <u>could be cancelled during the Cooling-off Period of 5mn</u>. The Mongolian Stock Exchange (MSE) imported in 2012 the same feature from LSE and here is what I got victim off and the "home made fix" I found.
    - Last price traded is 100, the VCM is triggered at +/-5% so an order to buy above 105 or sell below 95 would trigger the VCM. Imagine there is a "large" sell order (it is MSE, tiny market so flaws are very visible) in the book for 10,000 shares at 106 and no other order. I input a buy order for 10,000 shares at 106. It freezes going into VCM for 5 mn. And during the 5 mn I see the sell order for 10,000 at 106 CANCELLED, so I buy 0 shares. What might the seller have been trying to do? In fact he might probably be trying to buy shares and leaving a 10,000 sell order at 106 he was expecting to create a perception of an "offered market" pushing would-be-sellers to input low limits he could buy from! What to do? Scream to MSE alleging about potential "creation of a false market"? If the "seller" is trying to create a perception the stock is offered, one simple solution is to input a buy order for say 1 share at 106. VCM is triggered and the "seller" has to think if it is really a smart idea to remove his 10,000 shares order because he will sell 1 share. In canceling the order he would make his trick to buy shares clear to everybody. So he might leave the order not considering the 1 share buy order as a threat. Once the trade is completed for 1 share at 106, then the solution is to input at once a buy order for 9,999 shares at 106 that can be executed <u>at once</u> as the VCM limits are now 111.30 and 100.70.That's one solution; there are others. In the end, because of several hard evidences, the MSE decided to remove this LSE feature altogether end of 2013!
    - Inputting a sell order to influence the market to buy shares cheaper is ok if the sell order is <u>really available to buyers for execution</u>. But if it is outside the limits of a VCM and orders can be cancelled during the cooling-off period, that is creating a false market plain and simple and regulators have to sanction it!
    - **What can and should HKEx do? This potential issue triggering market manipulation is not a reason to kill the VCM (or prevent cancellation or orders during cooling off) as it is easy for a large market like HKEx to address it. A simple way is to MONITOR ANY ORDER OUTSIDE THE RANGE CANCELLED during cooling off (size, price, time) for a size larger than say 1/2 day of turnover and check if the same intermediary re-inputs a similar order afterwards as well as smaller orders on the other directio. This would support the idea that the order outside the VCM range would be there for the sole purpose of creating a false perception ...at no risk of being executed...while trading in the other direction. If the same intermediary applies the same strategy on the same stock 2 or 3 times in a week, HKEx passes ASAP the case to SFC for investigation asking this simple question "What is the logic behind the cancellation of the order during the cooling off periods?". Failure to provide any rational explanation for this decision should trigger immediate and PUBLIC sanctions to act as a deterrent for others.**
    - <u>While I don't see immediate serious issues</u>, the Reference Price could be a factor of ...volatility as it is the last traded price 5 mn ago. This enables a drift at a speed of 10% per 5mn. For instance on the way down: S(t and before) = 100, S(t+1mn) = 109, S(t+6mn) = 119.90, S(t+11mn) = 131.89... If the Reference Price was a Moving Average (VWAP) over the last x mn it could smooth further but it all depends on what HKEx and SFC want

to achieve especially considering the SFC position's about "market stabilization" which is somewhere in conflict with the VCM principles!

- (45) "market makers may request to waive or relax their market making obligations" That is impractical to tell market makers to ask. Their obligations HAVE TO be WAIVED at once, when the VCM is triggered. Typical "fast market"
- 51) Why worrying about too many "trading interruptions"? If it is LEGITIMATE and USEFUL the number of occurrences should not be of any problem.
- (54) "most exchanges" ? "Everybody does it " is NOT a line of defense. Following sheep that put themselves in serious predicament should not be the way forward.
- (58) b) "A too-recent reference price such as the last traded price is also not preferred" Agreed!
- (66) "more mature in their VCM development": HKEx should not feel ashamed or late. Those exchanges created problems for themselves!
- **(67) "but other order input/amend/cancel operations would be allowed as normal" That is THE PROBLEM enabling creating a false market! This can stay but intensive monitoring, investigations and public sanctions are required so avoid deviant behavior.**
- (75) Same comments as (45) Automatic Waiver one VCM triggered.
- (78) Excessive babysitting triggers moral hazard and much bigger problems later
- (80) See (45) and (75)

CAS:

Step by step comments

- (10) Execution at the CLOSE: Don't overlook the delta hedging from Over The Counter equity derivative trades. It might be OTC (because of HSI futures and options limits among others) as it is bigger than the listed.
- (11) "The issue has led to index tracking errors, which in turn undermines the performance of investment funds and is ultimately be borne by their investors such as pension funds and retail investors." Sounds like storm in a tea cup for me. +5bp one, then -10bp the next day....will get smoothed over time. What does REALLY impact end users? I am not impressed by that. You have to quiz in depth fund managers flagging this. Sounds like tail wagging the dog for me.
- (12) I believe the suspension of CAS after the March 9, 2009 event was a mistake. The CAS might have been sub-optimum but during crisis times one should expect this kind of situations (impacting the seller and creating opportunity for those with buy orders already in!). http://www.sfc.hk/edistributionWeb/gateway/EN/news-and-announcements/news/enforcement-news/doc?refNo=13PR51. Many March 9, 2009 type events happen regularly. Equity derivative structurers dealing with corporate finance type transactions face each time this kind of headaches, i.e. how long should the Asian tail be in order to avoid plastic deformation of the market which is bad for the bank and the client. In the march 2009 case, it was up to the end user to take action again his executing staff, may be fire him. For instance, for tens of years CAC40 American style cash settled options on a stock market, de facto a monthly forward settlement, was a perfect recipe for disaster (created by the authorities!). Derivatives market makers with too many in the money put options...were left with the only, perceived "undesirable", actions to ...protect their books against the loss of ONE MONTH of carry, i.e. selling massively futures before the close and exercising the in the money puts after the close, in the normal course of business! Brainstorming by exchanges and regulators at an early stage will reduce those risks but once in place they have to live with it. For instance, moving regularly goal posts changing rules does not achieve anything positive.
- (14) Differentiating stocks for CAS is adding to complexity. What is the downside of having all the stocks under the new CAS from the start? Structure products, warrants, listed derivatives should never be included as deltas can be extremely different; up to market makers to do their job...or loose clients. For funds, it depends if relatively straight funds where a CAS could and would make sense and funds with derivatives embedded and therefore behaving more like structure products.
- (15) "prices of the new at-auction limit orders would only be permitted within the lowest ask and highest bid of the order book" Anybody planning to do something important during third period could input during the second period 2 buy and sell orders at the +/-5% limits in order to maximize the range. So it's as simple to keep the range at +/-5%.
- (88) "As described in Chapter 6, HKEx introduced a CAS in 2008, but it was suspended in 2009". Any in depth analysis and courageous (i.e. it was a mistake) conclusion?
- (88) "the median of 5 snapshots taken at 15-second intervals during the last minute of trading". I think that is not enough. CAC 40 was using snapshots every 30s during 15mn so for cash & carry (and reverse) arbitrageurs. The risks of a bad shot on unwinding was reduced making the system more robust and unlikely to trigger weird self-defense behavior (if the contract is faulty by construction, then problems WILL arise and there is no point blaming users). If snapshots are too close, there is also risk of overlap, i.e. several tranches of unwinding impacting together with a x2 impact, increasing effect.

- (91) " sometimes it was over 20% on index rebalancing". HKEx indices are market capitalization weighted so there are needs to "rebalance" only for changes in components of the indices and arbitrageurs do not take the risk to rebalance on the day where weights are changed. There is never enough liquidity. However on expiry day, people may go out of cash & carry (or reverse) arbitrages or in (from futures spreads), so activity may be substantial but Hang Seng Index futures and options positions limits are still very small, legacy of 1999 so it is not a problem for now but it might be in the future once those obsolete limits are corrected.
- (93) "during the CAS, individual securities in some instances experienced large price swings". Of course, it is at that time that equity derivative traders will fine tune their delta to be within risk limits. **It is also the best time to execute the initial hedge for Over-The-Counter equity derivative trades because there is an OFFICIAL price, with decent size, to show to the client to justify "fixing terms"**, HK$ strike prices and HK$ premium. The other solution is to use VWAP for larger trades, including over several days, weeks, months...
- (96) "Owing to the event, HKEx decided to suspend the CAS with effect on 23 March 2009 to restore investor confidence"? Relying on perceptions? What is that? Technical rules cannot be left to derivative (because it boils down to derivatives, options or futures or derivative logic, at the end of the day) illiterate people's perceptions.
- (97) The SFAT proved that SFC overreacted. Why did the SFC do that? Likely to deal with perceptions instead of trying really to understand technically the problem and explain. That is an ongoing SFC risk likely to happen again.
- (100) "The total amount of rebalancing and MOC fund flow is estimated to be over HK$1.2 trillion in 2013, and the amount is expected to grow further in line with the development of passive/index tracking funds." How ridiculous are the limit of positions on Hang Seng Index futures and options relative to this? With bigger limits, markets players would likely use listed futures (over OTC equity swaps) increasing turnover and TRANSPARENCY.
- (106) "Based on research into international practice". Please resist to so-called "best practices" as HKEx is not facing the same problems as other markets.
- (111) I think the cost+complication/benefit of having 2 phases is not good.
- **(113) The 5 snapshots in 1 mn for the reference price is in my opinion not enough. More snapshot during a slightly longer period would enable something 1) more representative defining the range for the CAS, 2) because more significant and more robust, less likely to attract tentative to control that the reference price and the range. Why not a WVAP over 5-10mn ?**
- **(113) Having the UpTick rule in addition to limitations on fluctuations is not a good idea....and what does it mean anyway? During the 7mn or the 2mn or both? What is the "Ask Price" for the purpose of the Uptick rule? This situation by itself is worth for equity derivative traders to before the CAS, with few shares purchased, to have a higher reference price in order to input after large (short) sell orders while complying with the UpTick rule! So that could trigger serious volatility JUST BEFORE CAS for THAT purpose!** Removing the UpTick rule requirement during CAS would offer a simpler more liquid market.
- (162) Real risk. 5 snapshots is not enough. See 113.
- (163) The end of the day is NOT the time to "discover prices" but to settle left-over as well as implement derivative trades that need an official HKEx price for fixing but compatible with a closing. For bigger size, market participants have to use WVAP, if needed over several days, because a "close" is only a close, not the whole market, so there is a real of "tail wagging the dog" if market participants expectations are too high.

Questions (40):

1	No	Not critical as HKEx does not face the same self-inflicted challenges as other markets.
2	No	More risk of abuses on smaller stocks (MSE example) but if strong monitoring and SFC actions then it is not an issue. Consistency and simplicity is more important to me.
3	No	
4	Yes	
5	Yes	
6	Yes	
7	Yes	
8	No	Not sure why only 5%.
9	Yes	
10	Yes	
11	Yes	
12	No	
13	Yes	
14	Yes	
15	Yes	
16	No	Trading yes, but Market Makers obligations waived at once, not for them to ask!
17	No	
18	Yes	The 5 x every 15s was an accident waiting to happen. not enough, too short.
19	No	Same for all.
20	Yes	All ETFs
21	Yes/No	Funds Yes; rest (what is that?) No.
22	Yes	
23	Yes	
24	Yes	
25	No	
26	Yes	Because it is additional liquidity.
27	Yes/No	Short selling orders Yes; Uptick rule: Not needed!
28	No	ANY price. No Uptick rule.
29	Yes	
30	Yes	
31	Yes	
32	Yes	But that has to be some kind of average, if possible 5-10mn WVAP.
33	(i)	
34	No	Proposed CAS model needs to be tested and consequences analyzed before.
35	Yes	See above.
36	No	Check with Back Office of brokers but that should not be a major issue, not different from longer trading hours.
37	Yes	
38	?	No view.
39	CAS	CAS first; VCM can wait.
40	NA	Not impacted.

Conclusion:

The main points for me are:

- Is the VCM compatible with the substance of the SFC thinking in relation to prices stabilizations?
- HKEx does not face the same issues that other stock markets have created for themselves.
- The risk of creating a false market related to VCM where orders positioned outside the +/-10% range could be cancelled during the VCM. That can be addressed with monitoring of orders removed and in case of repetitive pattern case passed to SFC for swift investigation starting with the question "why did you remove your order during VCM?" and if needed sanction but made public to deter others.
- Market makers obligations should be automatically waived once VCM kicks in.
- The reference price for the CAS is important so a WVAP would be safer.
- Removing the UpTick rule during CAS would add liquidity while risk is contained anyway by ONE quotation within a +/-5% range.

Further topics that deserve attention:

- Hang Seng Index futures and options limits for Open Interest
  - That belongs to the past (1999) and should be removed in order for HKEx to develop. The limits are ridiculously small pushing market players to trade Over-The-Counter instead of using listed Hang Seng Index futures and options. It also affects the cash & carry (and reverse) mechanism arbitrages as arbitrageurs have to keep the bulk of the positions through equity swaps, not futures,...which limits the activity on spread rolling which could help end users in need to roll. The sizes are there anyway but invisible to HKEx and SFC. Is it what SFC wishes? For a market of the size of HKEx, those limits per participants could be increased by x5 and I have no doubt it would be beneficial for HKEx, securities firms and end users increasing activity and efficiency. How long does HKEx think the Chinese index futures will stay at the current limits while still relatively young?
- Up Tick rule
  - That belongs to the past too. The rest of what has been put in place for short selling is enough to prevent abuses. There is one direct impact of the UpTick rule on HKEx: the issuance of convertible and exchangeable bonds since 1999 (on stocks that are only listed on HKEx!). A relative comparison with other markets before and after 1999 could prove beyond doubt that issuances have decreased relative to other markets. (The fact that CBs and EBs are not at listed on HKEx should not matter as it enables HKEx listed entities to have access to more tools to grow.) CBs and EBs are placed to hedge funds ("HF"). Targeted investors are informed after HKEx close, HF send orders, books are closed and allocation done around 9-10pm Hong Kong time. HF have secured earlier their borrowing of shares to sell (UpTick rule) the next day at the opening where they face in full the market slippage, waiting on the offer side, for somebody kind enough to lift their offer while the stock is dropping! Hedge ratios are ~25-30% so a 10% slippage from close to EXECUTION of the hedge means a cost of 2.50%. HF bidding the CBs and EBs know that well, so they bid less aggressively. The cost of this is in fact born by the issuer! Of course, in some cases, it is possible for would-be-buyers to secure some shares with a synthetic borrow (buy shares / "sell" equity swap) enabling the HF to be the legal owner of the shares and not be impacted by the UpTick rule. It's often possible but heavy and costly anyway impacting negatively the issuers. At a time where interest rates are very low, the yield curve quite flat, issuing CBs and EBs could be a great opportunity for HKEx if the impact of the slippage was not so high because of the UpTick rule.
  - The UpTick rule impacts also equity derivative traders when they are short options (negative gamma) and short delta therefore short shares and having to sell more when the market decreases. Because of this inefficiency again, equity derivative traders have to hold physical inventory of shares de facto giving them a biased axe of quotation to clients. Again it's a cost for the end-users.