TRADING MECHANISM OF CLOSING AUCTION SESSION (CAS) IN THE SECURITIES MARKET
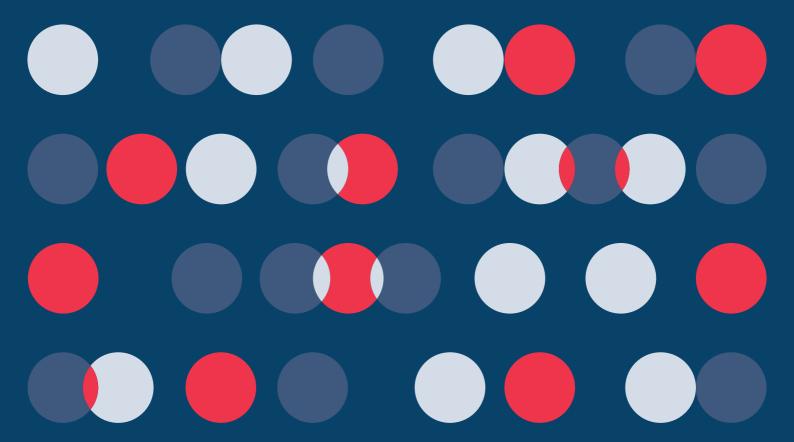
NOTE TO THE READER:

This paper aims to facilitate understanding of investors and traders who may participate in CAS and is compiled based on the relevant Rules of the Exchange ("Trading Rules").   While due care has been taken to provide accurate and up to date information, this paper is for general reference only and if any discrepancies or inconsistencies with the Trading Rules are found, the meanings in the Trading Rules shall prevail.   HKEX and its subsidiaries shall not be responsible or liable for any loss or damage, directly or indirectly, arising from the use of or reliance upon any information provided in this document.

Change History:

Version Date	Summary of Changes
11 May 2016	Initial version for Phase 1 Launch
26 May 2017	Updated version before the launch of CAS Phase 2: • Section 1 – Updated background • Section 2 – Expanded scope of CAS Securities and new process in maintaining List of CAS Securities • Section 9 – Allow input of short selling orders during CAS and allow change of order price and increase in order size for short selling orders carried forward from CTS to CAS • Section 11 – Trading Hours for additional derivative market products • Others – minor editorial changes throughout the entire document

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1. Background

CAS Phase 1 ("Phase 1") was successfully launched on **25 July 2016**.   Subject to approval of relevant rules, CAS Phase 2 ("Phase 2") will be rolled out in early Q3 2017 and will (a) allow input of short selling order during CAS and (b) expand the list of CAS Securities to include more stocks.   The remaining equity securities (around 1,500 as of April 2017), structured products (i.e. Derivative Warrants ("DWs") and Callable Bull/Bear Contracts ("CBBCs")), Leveraged and Inverse Products, equity warrants, and debt securities will continue to be excluded from CAS.

2. Publication and Maintenance of List of CAS Securities

Currently CAS covers only constituent stocks of Hang Seng Composite LargeCap ("HSLI") and MidCap ("HSMI") Indexes, H shares which have corresponding A shares listed on a Mainland exchange, and all Exchange Traded Funds ("ETFs") (together "CAS Securities").   **In Phase 2, list of CAS Securities will expand to also include constituents stocks of Hang Seng Composite SmallCap Index ("HSSI").**

As a temporary measure to maximize the stability and continuity of CAS operations, during Phase 1, stocks removed from the respective indexes have not been removed from list of CAS Securities.   For Phase 2, a refined and permanent process will be implemented to also delete the stocks which have been or would be removed from the respective indexes from list of CAS Securities and the removal schedule will coincide with the relevant index changes (please refer to Appendix 1 for details).

Before Phase 2 implementation, the finalised list of CAS Securities will be published on HKEX website.

3. CAS Trading Hours and Periods

During CAS orders are allowed to be entered into HKEX's cash trading system[1] (the System) for a single price auction which consists of a Reference Price Fixing Period, an Order Input Period, a No Cancellation Period and a Random Closing Period as follows:

	Full Day Trading	Half Day Trading*
Reference Price Fixing Period	16:00 – 16:01	12:00 – 12:01

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[1] AMS/3 is HKEX's current cash trading system.   There is a plan to replace it with the HKEX Orion Trading Platform – Securities Market (OTP-C) after 2017.

Order Input Period	16:01 – 16:06	12:01 – 12:06
No Cancellation Period	16:06 – 16:08	12:06 – 12:08
Random Closing Period	16:08 – 16:10	12:08 – 12:10

* Eves of Christmas, New Year and Lunar New Year

CAS Model and Periods

Reference Price Fixing Period

In the first period (Reference Price Fixing Period), a Reference Price, which sets the allowable price limit of CAS (±5 per cent from the Reference Price), is calculated for each CAS Security.   The Reference Price is determined by taking the median of 5 nominal prices in the last minute of the Continuous Trading Session ("CTS") and the System will take 5 snapshots on the nominal prices at 15-second interval starting from 15:59:00.

After determination of Reference Prices, both the Reference Prices and price limits are disseminated to the market.   Orders outstanding at the end of the preceding CTS will be automatically carried forward to CAS and treated as at-auction limit orders except that the System will cancel those aggressive orders with prices outside the permissible price limit (i.e. buy orders with prices higher than the upper price limit and sell orders with prices lower than the lower limit).

For non-CAS Securities, Reference Prices are also determined in the same way as CAS Securities, and such prices are disseminated to market for information as the Reference Price is the same as the closing price of the respective non-CAS Security. However, orders cannot be entered and executed on non-CAS Securities during CAS.

All order messaging from Exchange Participants ("EPs"), including new input, amendment and cancellation will be rejected by the System during the Reference Price Fixing Period.

Order Input Period

In the second period (Order Input Period), at-auction orders and at-auction limit orders within the ±5 per cent price limit can be entered for CAS Securities. Outstanding orders can also be amended or cancelled during this period.

No Cancellation Period

Starting from the third period (No Cancellation Period), at-auction orders and at-auction limit orders can be entered. However, the prices of new at-auction limit orders must be between the lowest ask & highest bid recorded at the end of Order Input Period (i.e. recorded at 16:06), and no orders can be amended or cancelled.

Random Closing Period

In the last period (Random Closing Period), the order rules from the No Cancellation period apply and the market closes randomly within the two-minute period.

Order Matching

After the random closing period, orders for all CAS Securities are matched at the final Indicative Equilibrium Price ("IEP"). In cases where final IEP cannot be established during CAS, the Reference Price is treated as the final IEP for order matching and also becomes the closing price of the CAS Security. Order matching is based on order type, price and then time priority.

4. Determination of CAS Reference Price

The Reference Price is determined using the closing price calculation method before CAS launch, i.e. the median of the 5 snapshot nominal prices taken from 15:59:00 at 15-second intervals, as illustrated in the following example:

Snapshot	Time	Nominal Price
1st	15:59:00	$131.50
2nd	15:59:15	$131.50
3rd	15:59:30	$131.40
4th	15:59:45	$131.40
5th	16:00:00	$131.30

Five snapshot nominal prices are taken from 15:59:00 at 15-second intervals.
The median price (i.e. the 3rd price, which is $131.40 in the example above) is

then taken as the Reference Price.

The Reference Price is disseminated via HKEX Orion Market Data Platform – Securities Market ("OMD-C") to the market during the Reference Price Fixing Period. It is disseminated for all securities in all markets (i.e. MAIN, GEM, NASD and ETS), including securities that are not covered by CAS.

For securities that are not covered by CAS, the Reference Price is equivalent to their closing price for the trading day.

5. Price Limits for CAS

A two-stage price limit is applied to control the price of limit orders which are either carried forward from CTS to CAS, or newly input during CAS.

	Applicable session	Time Period (Full Day Trading)	Scope of price limit
Stage 1	Order Input Period	16:01 - 16:06	± 5% from Reference Price
Stage 2	No Cancellation Period Random Closing Period	16:06 - time of random close	Within the lowest ask & highest bid at the end of Order Input Period as recorded at 16:06

Stage 1 price limit: applicable to the Order Input Period

The price limit is set at ±5 per cent from the Reference Price.

Outstanding orders within the permissible price limit (i.e. buy order <= upper limit and sell order >= lower limit), including short selling or market making orders, are automatically carried forward from CTS to CAS. The System treats all such orders as at-auction limit orders. Please refer to sections 9 & 10 for the treatment of short selling orders and market making orders in CAS.

Aggressive orders with price outside the permissible price limit (i.e. buy order > upper limit and sell order < lower limit) are cancelled by the System with an order cancellation message returned to the relevant EP. Passive orders with price outside the permissible price limit (i.e. buy order < lower limit and sell order > upper limit) remains on the order book but will not be executed at the end of CAS.

At-auction orders and at-auction limit orders within the ± 5% of the Reference Price can be entered starting from the Order Input Period.   An at-auction limit order that is input during CAS which has a limit price outside the permissible price limit will be rejected by the System.

The Stage 1 price limits and the Reference Price are disseminated to the market via OMD-C during Reference Price fixing period.

In the rare case that no Reference Price can be determined for a CAS Security, no price limit is applied in CAS for such security and all outstanding limit orders of the security are carried over from CTS to CAS.

Stage 2 price limit: applicable to the No Cancellation Period and Random Closing Period between 16:06-16:10

Starting from the No Cancellation Period, the permissible price limit may be further tightened and is set at the highest bid and the lowest ask of the order book at the end of the Order Input Period as recorded at 16:06.   This price limit remains unchanged for the whole period of No Cancellation and Random Closing Periods.

The Stage 2 price limit is disseminated to the market via OMD-C at the beginning of No Cancellation Period.

During the No Cancellation Period and Random Closing Period, the prices of newly input at-auction limit orders must be between the upper and lower limit of the Stage 2 price limit, and no orders can be amended or cancelled.

In case only buy orders or only sell orders exist (or both do not exist) at the end of Order Input Period at 16:06, or the price of the best ask (bid) is higher (lower) than ±5% from the Reference Price, the Stage 2 price limit is simply set at ± 5% from Reference Price (i.e. same as Stage 1).

24-spread and 9-time rule

The price checking in relation to 24-spread rule is not applicable during CAS; while the 9-time rule for at-auction limit order is applicable as usual during CAS.

Price warning

The existing price warning mechanism (i.e. the optional warning message requiring broker reconfirmation when the input price is more than 20 spreads away from the nominal price) is maintained in CAS.

6. Order Types

Only at-auction orders and at-auction limit orders may be input during CAS and these order types can only be input starting from 16:01 (the beginning of the Order Input Period).   All other order types, such as limit orders/ enhanced limit orders/ special limit orders/ odd lots/ special lots, are rejected.

Any new order input and manual trade input for non-CAS Securities during CAS are also rejected.

At-auction Order

An at-auction order is an order with no specified price and is entered into the System for execution at the securities' closing prices determined in CAS.   It enjoys a higher order matching priority than an at-auction limit order and will be matched in time priority at the closing price in CAS.

At-auction Limit Order

An at-auction limit order is an order with a specified price.   An at-auction limit order with a specified price at or more competitive than the final IEP (i.e. closing price) (in case of buying, the specified price is equal to or higher than the closing price, or in case of selling, the specified price is equal to or lower than the closing price) may be matched at the closing price.   An at-auction limit order may be matched in price and time priority at the closing price.   No at-auction limit order will be matched at a price worse than its specified price.

Order type cannot be amended via order modification function.   If an EP wants to change the order type (from at-auction order to at-auction limit orders, or vice versa), they need to cancel the original order and input a new order of another order type.

7. Determination of Indicative Equilibrium Price (IEP) and Closing Price

IEP is the indicative price for order matching during an auction should the auction end at that moment of time.   IEP is determined by the System based on a set of pre-defined rules as explained below.

IEP is the price within the highest bid and the lowest ask and at which the aggregate volume of matchable orders is maximized.   In determining the maximum matchable volume, the volume of both at-auction orders and at-auction limit orders are taken into account.   The IEP is continuously calculated during CAS.
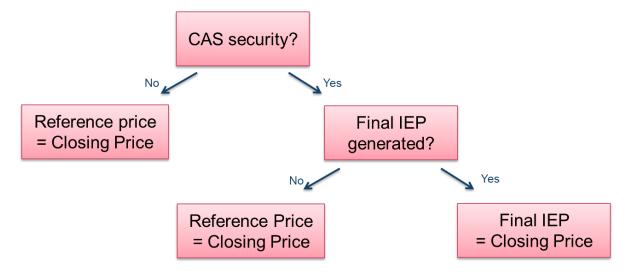
An IEP is only available if the highest bid is equal to or higher than the lowest ask.   If there is more than one price meeting this criterion, the IEP shall be calculated

according to the following rules:

    i.   *The at-auction limit order price which maximises the matchable quantity;*

    ii.   *if more than one price satisfy rule (i) , the IEP will be the price at which the normal order imbalance is the lowest;*

    iii.   *if more than one price satisfy rule (ii), the IEP shall be the highest (lowest) price if there is a buy (sell) surplus at all these prices;*

    iv.   *if more than one price satisfy rule (iii), the IEP will be the price closest to the Reference Price;*

    v.   *If two prices are equidistant from the Reference Price, the IEP shall be the higher of the two prices.   However, if the Reference Price is not available, the IEP shall be the highest of these prices.*

Indicative Equilibrium Volume ("IEV") is the number of shares that can be matched at IEP.

IEP at the end of CAS would be the final IEP.   If an IEP cannot be determined at the end of CAS, the Reference Price becomes the final IEP.   The final IEP serves as the closing price of a CAS Security which is then used for trade matching for CAS.

8. Order Matching and Dissemination of Closing Price

After the Random Closing Period, orders are matched according to order type, price and time priority (at-auction orders carry a higher matching priority), at the closing price.   No further input/ amendment/ cancellation of orders are allowed during this time.

If an IEP cannot be determined at the end of CAS and Reference Price is not

available, there is no automatic order matching at the end of the random closing period of CAS and all orders are cancelled and deleted from the System automatically at the end of the trading day.

For the closing price of CAS Securities, it is disseminated after the completion of order matching of the respective CAS Securities (i.e. a time between 16:08 and 16:10).

For the closing price of non-CAS Securities, it is disseminated immediately after the end of the Random Closing Period (i.e. a time between 16:08 and 16:10). However, please note that as non-CAS Securities do not have CAS, there is no order matching for them.

9. Short Selling

Input of short selling orders during CAS

In Phase 2, input of short selling orders in CAS, as at-auction limit orders with a price not lower than the CAS reference price ("tick rule in CAS"), will be allowed for designated CAS securities which are eligible for short selling. However, input of short selling at-auction orders will continue to be disallowed. In addition, other price checks applied on the existing at-auction limit orders today, such as the two-staged price limit, will also be applicable to short selling orders input in CAS.

Similar to the arrangement in CTS, short selling of ETFs by all participants, as well as short selling of other CAS Securities by certain participants, including Designated Index Arbitrage Short Selling by a Designated Index Arbitrage Short Selling Participant, Stock Futures Hedging Short Selling by a Designated Stock Futures Hedging Short Selling Participant, and Options Hedging Short Selling by an Options Market Maker or an Options Hedging Participant, will be exempted from application of tick rule in CAS. Structured Product Liquidity Provider Short Selling by a Structured Product Liquidity Provider and Structured Product Hedging Short Selling by a Structured Product Hedging Participant, however, will be disallowed in CAS as structured product trading is excluded in CAS.

Short selling orders carried forward from CTS

Outstanding short selling orders, which are input during CTS and with order prices higher than or equal to the lower price limit (i.e. order price >=95% of Reference Price), are automatically carried forward to CAS. All these orders are treated as at-auction limit orders.

On the other hand, if an outstanding short selling order input during CTS has a price lower than the lower limit (i.e. order price < 95% of Reference Price), it is cancelled

and a message for order cancellation is sent out by the System.

For the short selling orders carried forward to CAS, EPs are allowed to cancel and reduce quantity of the orders during CAS and in such cases the original order priority is maintained. EPs are also allowed to change the order price or increase the quantity of these orders during CAS but in such cases the original order priority will be lost and the amended order will be subject to checking against the tick rule in CAS.

10. Market Making and Liquidity Provision

Structured products

Structured products are excluded from CAS and liquidity provision of structured product is not applicable for DWs and CBBCs during CAS.

Market making securities

SMMs do not need to fulfil their market making obligations during CAS. Accordingly, they are also not allowed by the Trading Rules to input new SMM orders during CAS. SMMs' orders within the permissible price limit (i.e. buy order <= upper limit and sell order >= lower limit) outstanding at the end of the preceding CTS will be automatically carried forward to CAS. During CAS, SMMs may cancel or reduce the quantity of their respective SMM orders carried forward from CTS. However, they are not allowed to increase the quantity or amend the price of these orders. Transactions concluded by SMMs in CAS are not eligible for the market making fee exemptions.

11. Trading Hours After Implementation of CAS

Securities market

With the introduction of CAS, the securities market closing time has been extended to no later than 16:10 from 16:00. For half trading day, the securities market closing time has been extended to no later than 12:10 from 12:00.

The trading hours of the securities market under the CAS model is as set out in the table below for full and half day trading respectively:

Securities market trading hours under CAS model (Full Day)		
Trading sessions	Previous trading hours	Trading hours with CAS
Pre-opening Session	9:00-9:30	Remain unchanged
Morning Session	9:30-12:00	Remain unchanged

Securities market trading hours under CAS model (Full Day)		
Trading sessions	Previous trading hours	Trading hours with CAS
Extended Morning Session	12:00-13:00	Remain unchanged
Afternoon Session	13:00-16:00	Remain unchanged
CAS (applicable to all CAS Securities)		
Reference Price Fixing	N/A	16:00-16:01
Order Input	N/A	16:01-16:06
No Cancellation	N/A	16:06-16:08
Random Closing	N/A	16:08-16:10

Securities market trading hours under CAS model (Half Day)		
Trading sessions	Previous trading hours	Trading hours with CAS
Pre-opening Session	9:00-9:30	Remain unchanged
Morning Session	9:30-12:00	Remain unchanged
CAS (applicable to all CAS Securities)		
Reference Price Fixing	N/A	12:00-12:01
Order Input	N/A	12:01-12:06
No Cancellation	N/A	12:06-12:08
Random Closing	N/A	12:08-12:10

Market closing times for non-CAS Securities continue to be 16:00 for full day trading and 12:00 for half day trading.

Given structured products will not be covered under CAS, market participants should also note that the market closing time for a structured product (i.e. DW or CBBC) and its underlying security could be different.

Derivatives market

For the derivatives market, the closing times of normal trading session for Stock Index Futures/Options, Currencies Futures and Commodities Futures has been changed from 16:15 to 16:30 for a normal trading day and from 12:00 to 12:30 for a half trading day, except on the last trading day of the contracts. The opening times of After-Hours Futures Trading have been changed from 17:00 to 17:15 in order to maintain the existing 45 minutes break before the start of AHFT.

The following tables summarise the change of trading hours for the derivatives market since the implementation of CAS on 25 July 2016 for both full day and half day trading:

(a) Summary of trading hours after CAS implementation

Product Class	Market	Full-Day Trading				Half-Day Trading	
		Previous Closing Time	Current Closing Time	Previous AHFT Opening Time	Current AHFT Opening Time	Previous Closing Time	Current Closing Time
Equity and Index Products	Index Futures (HSI, HHI, MHI, MCH)	16:15	16:30	17:00	17:15	12:00	12:30
	Index Futures (CHH, DHS, DHH, VHS, BOV, SAF, BSE, MCX, Sector Index)	16:15	16:30	N/A	N/A	12:00	12:30
	Index Options (HSI, HHI, MHI, MCH[2], XHS, XHH)	16:15	16:30	N/A	N/A	12:00	12:30
	Stock Futures & Options	16:00	No change	N/A	N/A	12:00	No change
Interest Rate , Bond and	RMB Currencies	16:15	16:30	17:00	17:15	12:00	12:30

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[2] Mini-Hang Sang Enterprises Index (MCH) Options launched on 5 September 2016

Currencies Products	Futures & Options[3]						
	HIBOR Futures	17:00	No change	N/A	N/A	12:00	No change
	MOF T-Bond Futures[4]	16:30	No change	N/A	N/A	12:00	No change
Commodities Products	LME Mini Futures (LRA, LRC, LRN, LRP, LRS, LRZ)	16:15	16:30	17:00	17:15	12:00	12:30

(b) Summary of trading hours on last trading day after CAS implementation

Product Class	Market	Full-Day Trading		Half-Day Trading	
		Previous Last Trading Time	Current Last Trading Time	Previous Last Trading Time	Current Last Trading Time
Equity and Index Products	Index Futures (HSI, HHI, MHI, MCH, VHS, Sector Index Futures)	16:00	No change	12:00	No change
	Index Futures (DHS, DHH, BOV, SAF, BSE, MCX)	16:15	16:30	12:00	12:30
	Index Futures (CHH)	15:00	No change	12:00	No change
	Index Options (HSI, HHI, MHI,	16:00	No change	12:00	No change

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[3] USD/CNH Options launched on 20 March 2017

[4] MOF T-Bond Futures launched on 10 April 2017

	MCH, XHS, XHH)				
	Stock Futures & Options	16:00	No change	12:00	No change
Interest Rate, Bond and Currencies Products	RMB Currencies Futures & Options	11:00	No change	11:00	No change
	HIBOR Futures	11:00	No change	11:00	No change
	MOF T-Bond Futures	16:30	No change	12:00	No change
Commodities Products	LME Mini Futures (LRA, LRC, LRN, LRP, LRS, LRZ)	*	No change	12:00	12:30

*Note: * after-hours trading session during British Summer Time/ after-hours trading session outside British Summer Time LRA: 20:00/ 21:00, LRZ: 19:55/ 20:55, LRC: 19:35/ 20:35, LRN: 20:05/ 21:05, LRS :19:45/ 20:45, LRP: 19:50/ 20:50*

The following tables summarise the change of final settlement price calculation algorithm for HSI & HHI futures and stock futures after CAS implementation:

(i) Change in HSI & HHI futures final settlement price calculation algorithm

Readings	Previous Arrangement	Current Arrangement
The 1st – 65th readings to be taken with 5 minutes interval	Index readings are taken during the period from: 9:30 a.m. to 12:00 noon.; and 1:00 p.m. to 3:55 p.m.	No change
The 66th reading to be taken	The last index reading is taken when the official closing of stock prices are disseminated at the end of the continuous trading session in the SEHK	The last index reading is taken after the official closing of stock prices are disseminated at the end of the closing auction session in the SEHK

(ii) Change in stock futures final settlement price calculation algorithm

Readings	Previous Arrangement	Current Arrangement
The 1st – 65th readings to be taken with 5 minutes interval	Readings are taken during the period from: 9:30 a.m. to 12:00 noon.; and 1:00 p.m. to 3:55 p.m.	No change
The 66th reading to be taken	The last reading is the closing price taken when the official closing of stock price is disseminated at the end of the continuous trading session in the SEHK	The last reading is the closing price taken when they are disseminated at the end of the closing auction session in the SEHK

The following table summarises the change of final settlement price determination period for Volatility Index Futures after CAS implementation:

Market	Full-Day Trading		Half-Day Trading	
	Previous Arrangement	Current Arrangement	Previous Arrangement	Current Arrangement
Volatility Index Futures (VHS)	15:30 – 16:00	No change	11:15 – 11:45	11:30 – 12:00

The Final Settlement Price for HSI Volatility Index Futures Contracts shall be a number, rounded down to the nearest two (2) decimal places, determined by the Clearing House and shall be the average of quotations of the HSI Volatility Index compiled, computed and disseminated by Hang Seng Indexes Company Limited taken at (i) one (1) minute intervals between 3:30 p.m. and up to 4:00 p.m. on the Last Trading Day; or (ii) one (1) minute intervals between 11:30 a.m. and up to 12:00 noon on the Last Trading Day which falls on Christmas Eve, New Year's Eve or Lunar New Year's Eve. The Chief Executive of the Exchange has the power under the Regulations for trading Stock Index Futures Contracts to determine the Final Settlement Price under certain circumstances

Revised publication window for publishing issuers' documents on the HKEX website

To align with the revised closing time for trading equity index futures and options upon implementation of CAS, the commencement of the evening publication window for

publishing issuers' documents on the HKEX website has been changed from 16:15 to 16:30 for a normal trading day and from 12:00 to 12:30 for a half trading day.

12. Typhoon Arrangements

Change to the typhoon arrangement after implementation of CAS

Securities market

If a Typhoon Signal No. 8 or above is hoisted before 15:45 (for full day trading) or 11:45 (for half day trading), trading will terminate 15 minutes after the hoisting of the Signal.   There will be no CAS for that trading day if trading has not been resumed by 15:45 (for full day trading) or 11:45 (for half day trading).

If a Typhoon Signal No. 8 or above is hoisted at or after 15:45 (for full day trading) or 11:45 (for half day trading), trading for the day will continue as normal until the end of CAS.

Derivatives market

(a) For stock index futures and options, currencies futures and options and commodities futures

 I. For full day trading

  If a Typhoon Signal No. 8 or above is hoisted before 15:45, trading will be terminated 15 minutes after the hoisting of the Signal.

  If a Typhoon Signal No. 8 or above is hoisted at or after 15:45 but before 16:00, trading will be terminated at 16:15.

  If a Typhoon Signal No. 8 or above is hoisted after 16:00, trading will be terminated 15 minutes after the hoisting of the Signal.

 II. For half day trading

  If a Typhoon Signal No. 8 or above is hoisted before 11:45, trading will be terminated 15 minutes after the hoisting of the Signal.

  If a Typhoon Signal No. 8 or above is hoisted at or after 11:45 but before 12:00, trading will be terminated at 12:15.

  If a Typhoon Signal No. 8 or above is hoisted after 12:00, trading will be terminated 15 minutes after the hoisting of the Signal.

(b) For HIBOR futures and MOF T-Bond Futures

 i. For full day trading

  If a Typhoon Signal No. 8 or above is hoisted before 15:45, trading will be

terminated 15 minutes after the hoisting of the Signal.

If a Typhoon Signal No. 8 or above is hoisted at or after 15:45 but before 16:00, trading will be terminated at 16:15.

If a Typhoon Signal No. 8 or above is hoisted after 16:00, trading will be terminated 15 minutes after the hoisting of the Signal.

ii.   For half day trading

Typhoon arrangement for half day trading will remain unchanged (i.e. trading will be terminated 15 minutes after the hoisting of the Signal).

(c)   Typhoon arrangement for stock futures and options will remain unchanged (i.e. trading will be terminated 15 minutes after the hoisting of the Signal).

13. Additional Market Data Dissemination

CAS offers better auction transparency by providing market participants with additional market information in addition to the IEP, the IEV and the order queues currently available during the Pre-opening Session ("POS").   Additional market information includes CAS stock indicator, order imbalance information (direction and quantity), Reference Price, Stage 1 and Stage 2 price limits (upper and lower price limits).

OMD-C disseminates the above information to the market.   Before the start of a trading day, the OMD-C message for providing reference data indicates whether a security is eligible for CAS or not on that day by a newly introduced CAS Security indicator.

The Reference Price is disseminated once it is determined during the Reference Price Fixing Period between 16:00 to 16:01 for each security, regardless of CAS eligibility of that security.   For a non-CAS Security, the Reference Price disseminated during the Reference Price Fixing Period is equivalent to its closing price for the trading day which is disseminated after the close of the market.

The lower and upper price limits for the Order Input Period (Stage 1 price limits) are disseminated along with the Reference Price once determined during the Reference Price Fixing Period.   At the end of the Order Input Period at 16:06, Stage 2 price limits are disseminated for each CAS Security, even if the price limits of that security stay unchanged from its Stage 1 price limits.

The IEP and IEV are disseminated during CAS in the same manner as during POS. In addition, order imbalance information, including the buy/sell direction and the imbalance quantity, at the latest IEP are also disseminated during CAS when there is a change of order imbalance direction or quantity.   For clarity's sake, order

imbalance information remains unavailable during POS.

The closing prices of **all** securities, regardless of CAS eligibility of the securities, are determined shortly after the completion of order matching which can happen at any time during the Random Close Period from 16:08 and 16:10. OMD-C will disseminate the closing prices once determined.

Similar to POS, trade related messages such as trade tickers, trades and statistics are disseminated during CAS. Also, nominal price, which will be the same as the IEP if IEP is available, will be disseminated during CAS if there is any update.

Similar to POS, OMD-C will provide aggregate order book update for the best 10 bids and best 10 offers as well as the broker queue during CAS. On the other hand, individual at-auction orders and at-auction limit orders will not be available in OMD-C during CAS, following the same treatment as in POS.

14. Callable Bull/Bear Contract (CBBC) Mandatory Call Event (MCE)

Given structured products will not be covered under CAS, it is possible that the market closing time for a structured product would be different from its underlying security.

For CBBC with a CAS Security as underlying asset, the CBBC could be called (i.e. undergo an MCE) when its underlying security hits the call price at the end of CAS.

15. Input and Rejection of Manual Trade

Input of manual trade for CAS Securities is allowed throughout CAS period except during the Reference Price Fixing Period. Similarly, the System would also accept rejections of manual trades which are inputted during CAS. However, rejection of manual trades that are inputted before CAS would not be accepted by the System.

All orders or trades handling by the EPs, including manual trade inputs or rejections, would not be allowed after the end of the Random Closing Period.

16. Enquiries and Others

Market participants who want to further understand the details of CAS can refer to the following website, email accounts and hotline numbers:

CAS/VCM webpage	http://www.hkex.com.hk/eng/market/sec_tradinfra/vcm_cas/vcm_cas.htm
Email	Securities Market: AMS3Info@hkex.com.hk Market Data/OMD-C: IVSupport@hkex.com.hk
Hotline	Securities Market: 2840 3626 Market Data/OMD-C: 2211 6558

Appendix 1: Maintenance Process of List of CAS Securities in Phase 2

Type of CAS Securities	Phase 1		Phase 2	
	Addition	Deletion	Addition	Deletion
1. Index constituent stocks*	Upon effective date of the index change	**No deletion**	Same as Phase 1	**Upon effective date of the index change**
2. A/H stocks	Upon listing of the A/H shares or upon listing of the corresponding A share for an existing H share	Upon delisting of the H share or the corresponding A share		Same as Phase 1
3. ETFs	Upon listing	Upon delisting		

* Including Hang Seng Composite LargeCap and MidCap Index constituent stocks in Phase 1, and in addition Hang Seng Composite SmallCap Index constituent stocks in Phase 2.

Appendix 2: Selected FAQs

1. If the Reference Price is at $100, and at the end of CAS the order book only has 1 at-auction limit buy order at $99 and 1 at-auction sell order, will these orders be matched?

    Ans: As IEP cannot be formed, the Reference Price ($100) will become the closing price. However, as the limit order buy at $99 is lower than closing price ($100), the two orders cannot be matched.

2. If the Reference Price is at $100, and at the end of CAS the order book only has 1 at-auction limit sell order at $99 and 1 at-auction buy order, will these orders be matched?

    Ans: Yes, since IEP cannot be formed, the Reference Price ($100) will be the closing price and the limit sell order ($99) is matchable at $100.

3. If the Reference Price is at $100, and at the end of CAS the order book only has 1 at-auction sell order and 1 at-auction buy order, will these orders be matched?

    Ans: Yes, the closing price will be at $100 and the orders will be matched at that price.

4. After 16:00, will the System cancel orders that are already in the order book during CTS, with price limits set outside of the 5% Reference Price buffer?

    Ans: After 16:00, on CAS Securities, the System will cancel the high bid and low ask orders (i.e. buy order with price higher than 5% limit and sell order with price lower than 5% limit) while the passive orders (buy order with price lower than the lower price limit or sell order with price higher than the upper price limit) will still be carried forward to CAS but these orders will not be matched in CAS.

5. After 16:00, will the System reject new orders that are submitted, with price limits set outside of the 5% Reference Price buffer?

    Ans: Yes, during Order Input Period, the System will reject new buy and sell orders with prices which deviate more than 5% from the Reference Price. For example, if the Reference Price is $100, the System will reject buy and sell orders with prices lower than $95 or higher than $105. During No Cancellation Period and Random Closing Period, the System will reject new buy and sell orders with prices outside the highest bid and lowest ask recorded at the end of Order Input Period (i.e. 16:06).

6. If there is no overlap in CAS limit order book at the end of CAS, how will the closing price be calculated?

Ans: The Reference Price will be the closing price.

7. If Reference Price is set at $100, and at the end of CAS if best bid is set at $101 and best offer is set at $102 and no other at-auction order (i.e. no overlap in limit order book), how will the closing price be calculated and will there be order matching?

Ans: The Reference Price will be the closing price and there will be no order matching.

8. If there is a one-sided book (no buyers or no sellers), in the final two minutes of CAS, how will the closing price be calculated?

Ans: The Reference Price will be the closing price.

9. Is there still a nominal price check validation during CAS, and if so is CAS going to adopt the 9-time rule, or the 24-spread rule or simply a 5% upper/lower limit rule?

Ans: In CAS, orders will be subject to 5% price limit and 9-time rule but 24-spread rule will not applicable for CAS.

10. Will the existing price warning mechanism apply in CAS?

Ans: Yes, it will apply in CAS.

11. If a short sell is submitted prior to 16:00, yet its price is lower than the Reference Price but higher than the lower price limit in the first stage, will the short sell be carried over to CAS?

Ans: Yes, provided that the price of this short selling order is higher than the lower price limit.

12. In a rare case, what would be the price limit if the highest bid or lowest ask fall outside the 5% price limit at the end of Order Input Period?

Ans: At any time during CAS, order price must not deviate more than 5% from the Reference Price.

13. If there is no overlap in CAS limit order book at the end of Order Input Period (e.g. highest bid at $98 is lower than the lowest ask at $101), IEP is not available.

How will the second stage price limit for No Cancellation Period and Random Closing Period be determined?

Ans: The price limit for No Cancellation Period and Random Closing Period is still set within the highest bid and the lowest ask of the order book at the end of the Order Input Period as recorded at 16:06.   For this case, the upper price limit is $101 while the lower limit is $98.

14. Can I input short sell orders in CAS as at-auction orders?

Ans: No. Only at-auction limit orders are allowed for short sell orders in CAS. At-auction orders are not allowed because these orders might be transacted at a price lower than the Reference Price, which is opposed to the tick rule in CAS.