PRE-OPENING SESSION (POS) ENHANCEMENTS IN THE SECURITIES MARKET

HKEX
香港交易所

HKEX Cash Trading

AGENDA

1 Background for POS

2 POS Enhancements
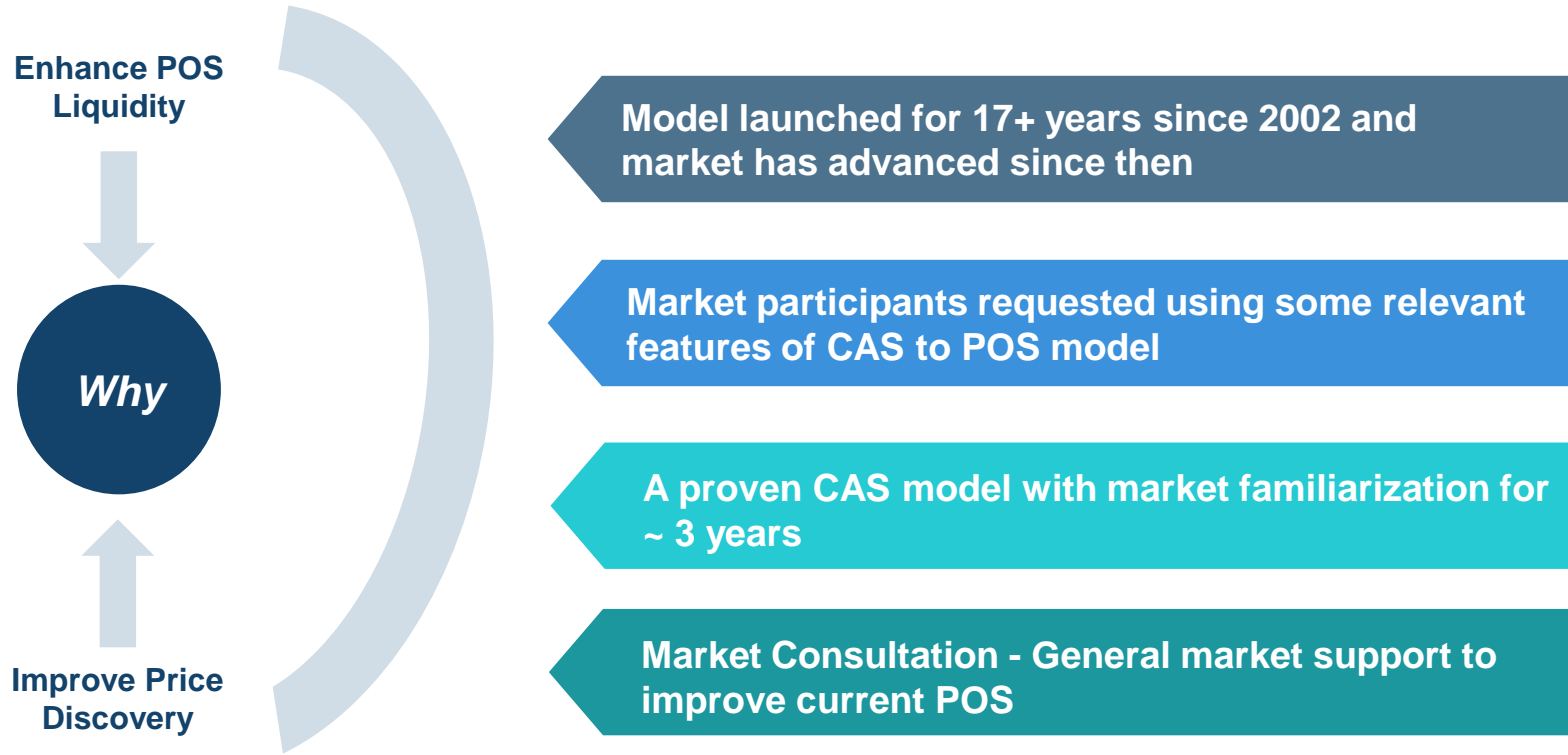
3 Market Education

AGENDA

1 Background for POS

2 POS Enhancements

3 Market Education

Background of POS Enhancement

Enhance POS Liquidity

Why

Improve Price Discovery

Model launched for 17+ years since 2002 and market has advanced since then

Market participants requested using some relevant features of CAS to POS model

A proven CAS model with market familiarization for ~ 3 years

Market Consultation - General market support to improve current POS

AGENDA

1   Background for POS

2   POS Enhancements

3   Market Education

Key Features of Enhanced POS Model

	Pre-Opening Session			After matching
Time	9:00	9:15	9:20 9:22	9:30
Session	Order Input Period (15 mins)	No-cancellation Period (5 mins)	① Random Matching Period (0-2 mins)	Blocking Period (8-10mins)
Description	② Price Limit: ±15% of previous closing price	lowest ask & highest bid (recorded at the end of Order Input Period)		Unfilled at-auction limit orders will be carried forward to CTS as limit orders
	Order Type Allowed:	At-auction Order		
	③ At-auction Limit Order			
	Actions Allowed: ✓ Input/Cancel/Amend	✓ Input ; ✗ Cancel & Amend		

Continuous Trading Session (CTS) →

Other Enhancements

④ Applicable Securities (POS Securities): all equities, funds and Leveraged and Inverse Products (L&I Products)

⑤ Allow short selling on designated securities eligible for short selling (DS) with a tick rule referencing to the previous closing price

⑥ Additional market data dissemination

Enhanced POS Model

APPLICABLE SECURITIES

- All **equities**, including
  - Depository receipts
  - Investment companies
  - Preference shares; and
  - Staple securities

- **Funds**, including
  - Exchange Traded Funds (ETFs) ; and
  - Real Estate Investment Trusts (REITS)

- **Leveraged and Inverse Products**. L&I Products will also be included in Closing Auction Session when POS is implemented for consistency and be launched at the same time

- Exclude structured products, debt securities, equity warrants and rights

Enhanced POS Model

PRICE LIMIT

- Apply **two-stage price limits**

- 1st Stage: ±15% from the previous closing price (NOT applicable to pre-defined scenarios[1])

- 2nd Stage[2]: Upper Price Limit - the higher of the highest bid price and the lowest ask price recorded at the end of order input period.

  Lower Price Limit - the lower of the highest bid price and the lowest ask price recorded at the end of order input period.

  In order to facilitate trading after the pre-opening session, passive at-auction limit orders (i.e. buy order price lower than the Lower Price Limit and sell order price higher than the Upper Price Limit) will still be accepted provided that these orders are within ±15% from the previous closing price.

  *However, these passive orders **will not be matched** during POS since their prices fall outside the range of 2nd stage Upper Price Limit and Lower Price Limit.*

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(1) In the absence of the Previous Closing (e.g. IPO stocks) and stocks resuming from trading suspension, 1st stage price limit checking will be relaxed for Order Input Period.
(2) In case there is no buy order and/or sell orders recorded at the end of Order Input Period, the 2nd stage price limits will be same as the 1st stage price limits.

Enhanced POS Model – Order Input Period

Duration	15 mins (9:00 – 9:15)		
Order Type Allowed	✓ At-auction Order		✓ At-auction Limit Order
Order Price Limit	*1st Stage Price Limit: ±15% of previous closing price* Buy orders: Previous Close -15% ≤ Price ≤ Previous Close + 15% Sell Orders: Previous Close -15% ≤ Price ≤ Previous Close + 15%		
Actions Allowed	*Order* ✓ Input	✓ Amend	✓Cancel
	Manual Trade ✓ Input	✓ Reject (non-direct business)	

Enhanced POS Model – No Cancellation Period
(formerly known as Pre-order Matching Period)

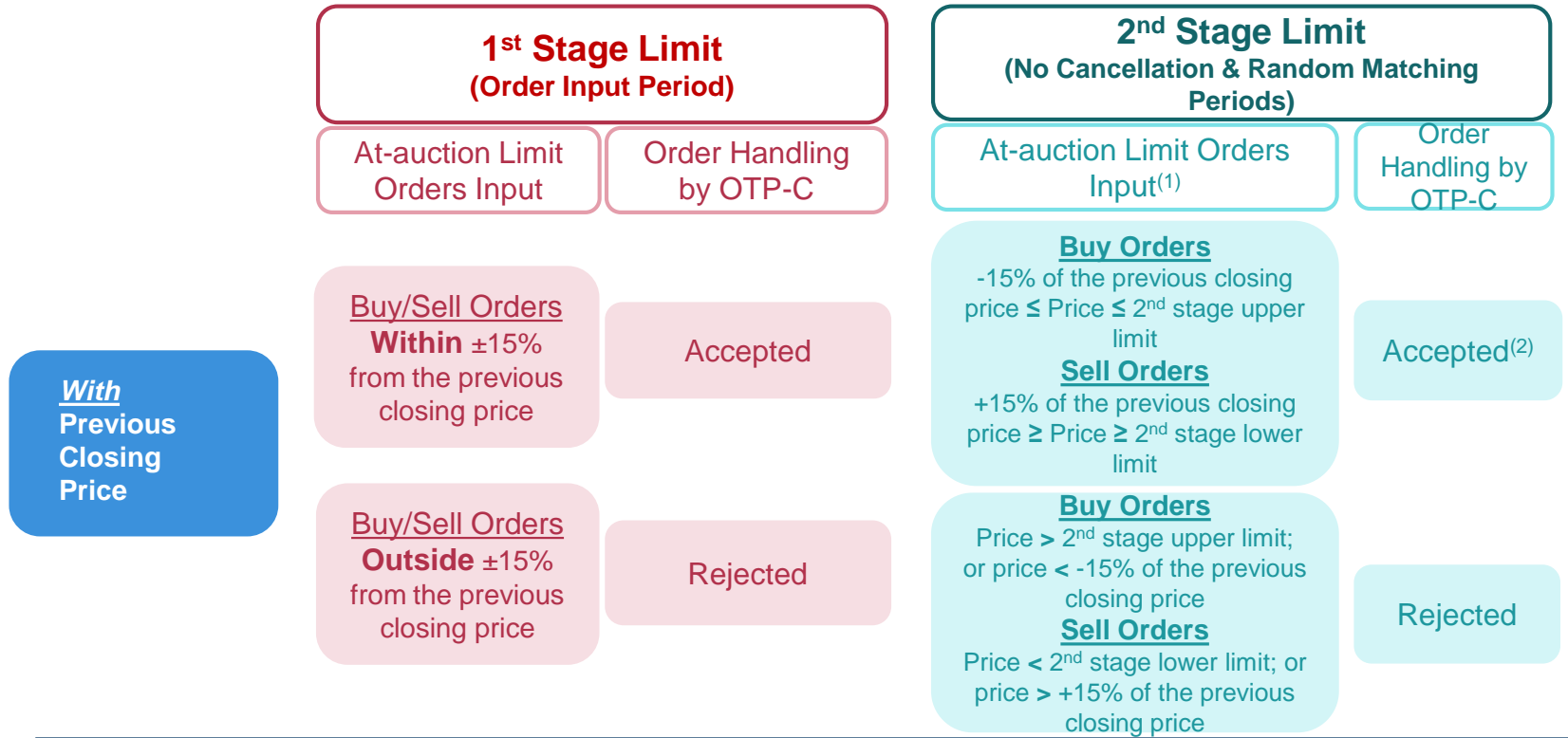| Duration	5 mins (9:15 – 9:20)			
Order Type Allowed	✓ At-auction Order		✓ At-auction Limit Order	
Order Price Limit	*2st Stage Price Limit: lowest ask and highest bid recorded at the end of Order Input Period* Buy Order: Previous Close – 15% ≤ Order Price ≤ Upper Limit Sell Order: Previous Close + 15% ≥ Order Price ≥ Lower Limit • *Lower Limit = lowest ask at 9:15 (if highest bid at 9:15 > lowest ask at 9:15) or highest bid at 9:15 (if highest bid at 9:15 < lowest ask at 9:15)* • *Upper Limit = highest bid at 9:15 (if highest bid at 9:15 > lowest ask at 9:15) or lowest ask at 9:15 (if highest bid at 9:15 < lowest ask at 9:15)*			
Actions Allowed	*Order*	✓ Input	✗ Amend	✗Cancel
	Manual Trade	✓ Input	✓ Reject (non-direct business)	

Enhanced POS Model – Random Matching Period

Duration	0-2 mins (9:20-9:22) (Order matching[1] will **randomly start** between 9:20 – 9:22 at the final IEP)		
Order Type Allowed	✓ At-auction Order		✓ At-auction Limit Order
Order Price Limit	*2nd Stage Price Limit: lowest ask and highest bid recorded at the end of Order Input Period* Buy Order: Previous Close – 15% ≤ Order Price ≤ Upper Limit Sell Order: Previous Close + 15% ≥ Order Price ≥ Lower Limit • *Lower Limit = lowest ask at 9:15 (if highest bid at 9:15 > lowest ask at 9:15) or highest bid at 9:15 (if highest bid at 9:15 < lowest ask at 9:15)* • *Upper Limit = highest bid at 9:15 (if highest bid at 9:15 > lowest ask at 9:15) or lowest ask at 9:15 (if highest bid at 9:15 < lowest ask at 9:15)*		
Actions Allowed	*Order* ✓ Input	✗ Amend	✗ Cancel
	Manual Trade ✓ Input	✓ Reject (non-direct business)	

(1) Upon start of order matching, input / cancel / amend of orders will not be allowed. And no order matching will be conducted if final Indicative Equilibrium Price (IEP) cannot be determined
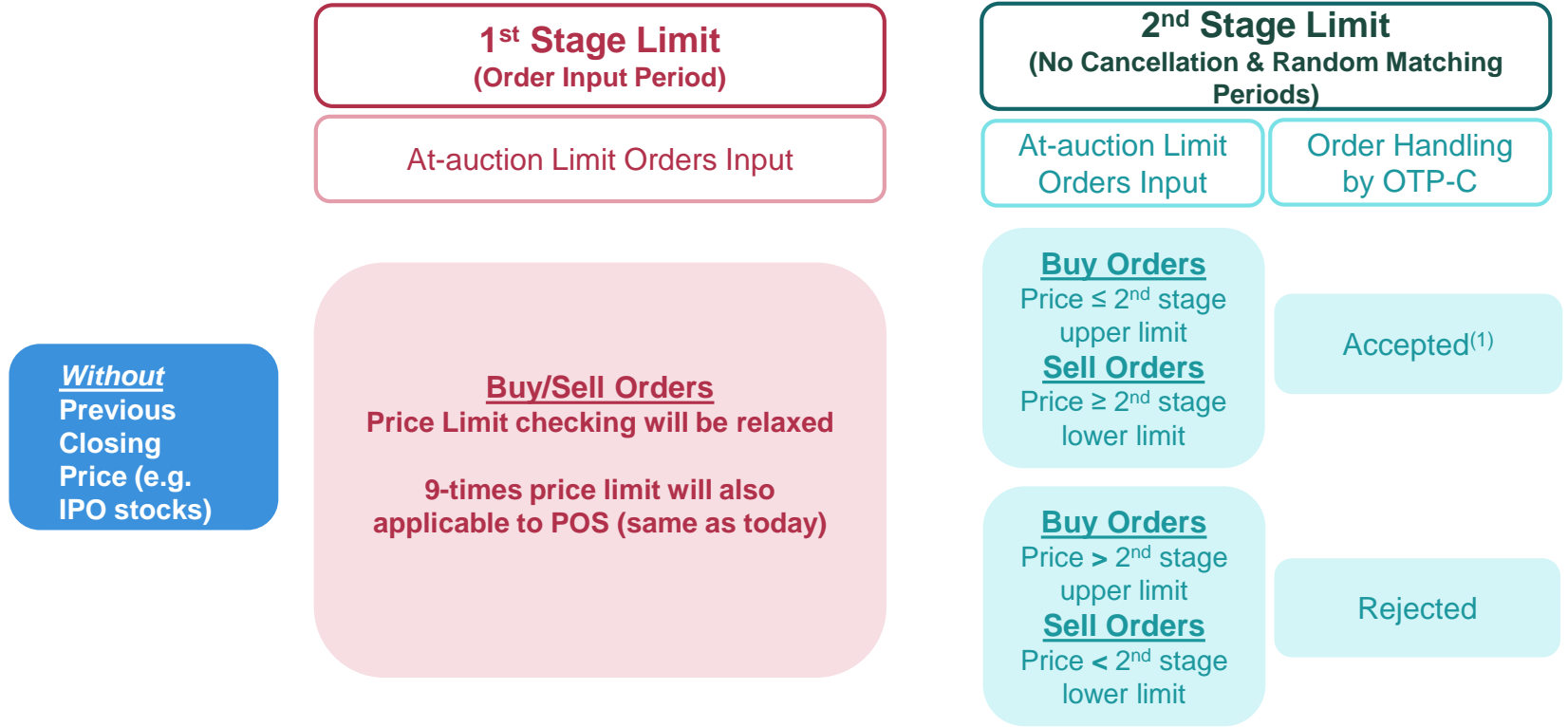
Illustration of Price Limits in POS

1st Stage Limit (Order Input Period)		**2nd Stage Limit** (No Cancellation & Random Matching Periods)	
At-auction Limit Orders Input	Order Handling by OTP-C	At-auction Limit Orders Input[1]	Order Handling by OTP-C

With Previous Closing Price

1st Stage Limit		2nd Stage Limit	
Buy/Sell Orders **Within** ±15% from the previous closing price	Accepted	**Buy Orders** -15% of the previous closing price ≤ Price ≤ 2nd stage upper limit **Sell Orders** +15% of the previous closing price ≥ Price ≥ 2nd stage lower limit	Accepted[2]
Buy/Sell Orders **Outside** ±15% from the previous closing price	Rejected	**Buy Orders** Price > 2nd stage upper limit; or price < -15% of the previous closing price **Sell Orders** Price < 2nd stage lower limit; or price > +15% of the previous closing price	Rejected

(1) All At-auction limit orders input in No Cancellation Period and Random Matching Period cannot deviate more than ±15% of previous closing price (i.e. 1st stage limit).
(2) IEP will only be formed within the range of the highest bid and lowest ask recorded at the end of the order input period, when the highest bid is equal to or higher than the lowest ask

Illustration of Price Limits in POS

1st Stage Limit (Order Input Period)	2nd Stage Limit (No Cancellation & Random Matching Periods)	
At-auction Limit Orders Input	At-auction Limit Orders Input	Order Handling by OTP-C

Without Previous Closing Price (e.g. IPO stocks)

Buy/Sell Orders
Price Limit checking will be relaxed

9-times price limit will also applicable to POS (same as today)

Buy Orders
Price ≤ 2nd stage upper limit
Sell Orders
Price ≥ 2nd stage lower limit

Accepted[1]

Buy Orders
Price > 2nd stage upper limit
Sell Orders
Price < 2nd stage lower limit

Rejected

(1) IEP will only be formed within the range of the highest bid and lowest ask recorded at the end of the order input period, when the highest bid is equal to or higher than the lowest ask

Enhanced POS Model – Blocking Period

Duration	8-10 mins (9:20 – 9:30) **(Start between 9:20 – 9:22 immediately after completion of order matching)**
Order Type Allowed	✕ At-auction Order ✕ At-auction Limit Order
Actions Allowed	*Order* ✕ Input ✕ Amend ✕Cancel *Manual Trade* ✕ Input ✕ Reject
Outstanding Orders	*At-auction Order* : unfilled orders will be cancelled by OTPC *At-auction Limit Order* : unfilled orders with input price not deviating 9 times or more from the nominal price will be converted to limit orders and carried forward to the Morning Continuous Trading Session

Enhanced POS Model

SHORT SELL ALLOWANCE

- Short selling order (except at-auction order) can be input on the Designated Securities[1] which are eligible for short selling during POS, with price **cannot be lower than previous closing price** (i.e. tick rule)

- In the absence of the Previous Closing Price, input of short sell orders in POS will be rejected.

- Tick rule will be relaxed for ETFs and L&I products.

- Same as the arrangement in Closing Auction Session (CAS), short selling by certain participants will be exempted from tick rule[2] while certain type of short selling will be disallowed[3]

(1) The list of all Designated Securities is available on the Exchange's website.
(2) 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 tick rule.
(3) Structured Product Liquidity Provider Short Selling by a Structured Product Liquidity Provider and Structured Product Hedging Short Selling by a Structured Product Hedging Participant will be disallowed.

Enhanced POS Model

MARKET DATA DISSEMINATION

Disseminate to Market:

- POS stock indicator

- Reference Price for Order Input Period

- Indicative Equilibrium Price (IEP)

- Indicative Equilibrium Volume (IEV)

- Order imbalance information (direction and quantity)

- Stage 1 and Stage 2 price limits

- Trading State during POS

System message dissemination to relevant EPs

- Order rejection (during POS) due to violation of price limit

Information Dissemination for POS Enhancements

Pre-opening Session

OMD-C Start → Order Input → No Cancellation → Random Matching → Order Matching → Blocking → **Continuous Trading Session**

1 **Trading Session Status (add new trading session)**

- Trading Session = Order Input
- Trading Session = No Cancellation
- Trading Session = Random Match
- Trading Session = Order Match
- Trading Session = Blocking

2 **Reference Price (new in POS)**

- Previous Close Price, Upper and Lower price limit for Order Input in **Security Definition Message**
- Upper and Lower price limit for No Cancellation & Random Matching in **Ref Price Message**
- Reset 0 in **Ref Price Message**

3 **IEP and Order Imbalance (OI) (new in POS)**

- IEP and OI

Preparation for Market Readiness

POS Enhancement

POS Enhancement	Date	Participants
End-to-End Test	Test Period: 14 July 2020 – 10 Aug 2020 Test Result Submission: on or before 12 Aug 2020	Mandatory for <u>all</u> EPs to participate
Market Rehearsal	Late August / September 2020, Saturday	Mandatory for <u>all</u> EPs to participate
Launch	Tentative October 2020	~

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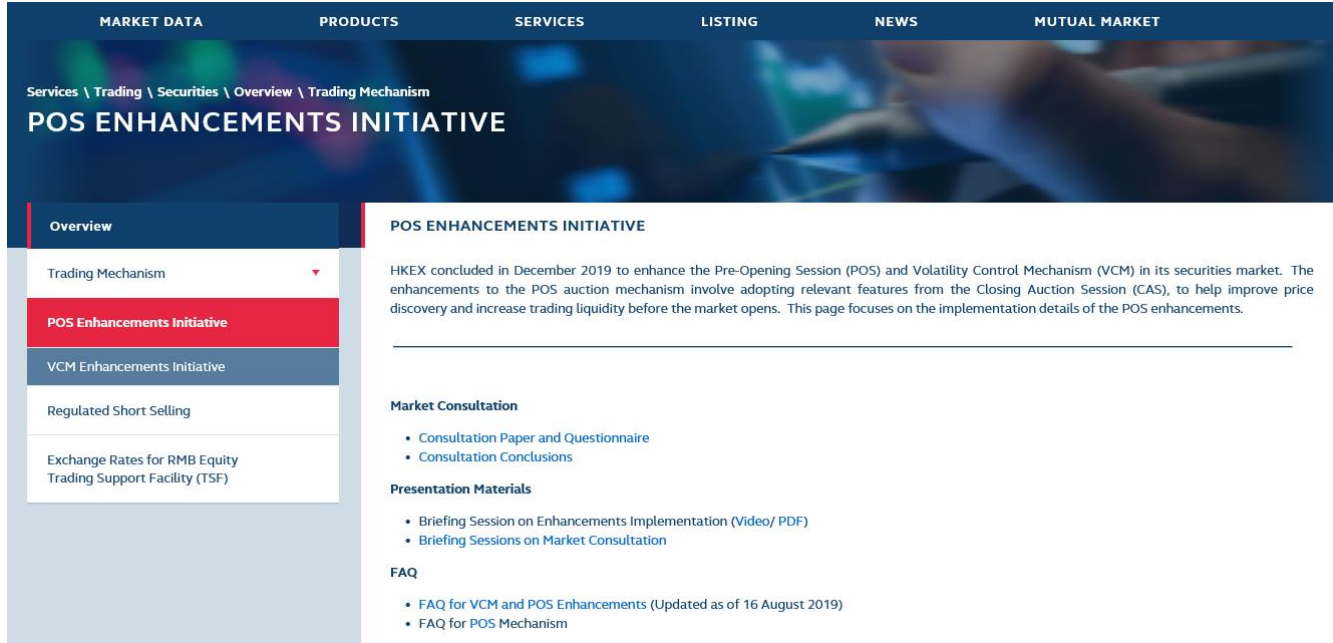
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Further Information

✓ **Project Corner** has been established to provide relevant information
Services\ Trading\ Securities\ Overview\ Trading Mechanism\ POS Enhancements Initiative

Any Questions?

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