



Options on Futures – Briefing Session

Trading Operations, Clearing Operations, Market Surveillance & Monitoring, Market Data
July 2021

HKEX
香港交易所

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NOTICE

Participants should ensure the following before engaging in trading or offering Options on Futures products to clients:

1. Ensure systems (including front office and back office systems) and operational readiness
2. Necessary measures taken to ensure the end users/clients understand the settlement mechanism and risk involved in the new product (e.g. Client-facing staff / clear client interface and client education)
3. Thorough and effective communication made to the clients prior to offering, specifically, on the differentiations between Options on Index and Options on Futures products.



Agenda

- 01 | Introduction
- 02 | Trading Arrangements
- 03 | Clearing Arrangements
- 04 | Market Surveillance & Monitoring
- 05 | Market Data Arrangements
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Options on Futures – Introduction



Introduction – Options on Futures (OOF)

- Broaden listed derivatives offerings
- Introduce a new product type to current Hang Seng Suite
- First options on HKFE which deliver into futures position

New contracts to be introduced:

- OOF on HSI Futures
- OOF on HHI Futures



Key Contract Terms

OOF vs current option on index (OOI) – Using HSI as an illustration

	New Product	Existing Product
Category	HSI OOF	HSI OOI
1. Underlying	<ul style="list-style-type: none"> Hang Seng Index Futures 	<ul style="list-style-type: none"> Hang Seng Index
2. Contract Month / Expiries	Same as OOI but <ul style="list-style-type: none"> no flexi options no weekly options 	<ul style="list-style-type: none"> Short-dated Options³ Long-dated Options³ Flexible Options Weekly Options
3. Contract Size	<ul style="list-style-type: none"> Regular only (no mini's) 	<ul style="list-style-type: none"> Regular & Mini
4. Trading Hours	<ul style="list-style-type: none"> 9:15 a.m. – 12:00 noon (morning trading session) 1:00 p.m. – 4:30 p.m. (afternoon trading session) 5:15 p.m. – 3:00 a.m. (after-hours trading session) 	
5. Expiry Day	<ul style="list-style-type: none"> 3rd Friday 	<ul style="list-style-type: none"> Second last business day
6. Official Settlement Price (OSP) on expiry day	<ul style="list-style-type: none"> EAS – Calculated based on HSIF using a similar methodology that applied in OOI 	<ul style="list-style-type: none"> EAS: taken at (i) 5 minute intervals from 5 minutes after the start of, and up to 5 minutes before the end of, the Continuous Trading Session of SEHK; and (ii) the close of trading on SEHK on the Expiry Day.
7. Settlement Method	<ul style="list-style-type: none"> European. Deliverable. ITM options automatically exercised. Overriding instructions prohibited. Exercise results in a position¹ in the HSIF Contract with the same Contract Month, with a Contracted Price which is equal to the Strike Price of the Option². 	<ul style="list-style-type: none"> European Cash settlement of the Final Settlement Value

1. Exercise results in a long position in the HSIF Contract for Call Option Holder or Put Option Writer and a short position in the HSIF Contract for Call Option Writer or Put Option Holder

2. No delivery incurred should option settlement price equals strike at expiry (i.e. expire worthless)

3. Short-dated Options: Spot Month, the next 3 calendar months and the next 3 calendar quarter months; Long-dated Options: the 3 months of June and December plus the next 3 months of December following the Contract Months specified for Short-dated Options



Options on Futures – Trading Arrangements



Options on Futures (OOF) – Trading Arrangements

OOF vs OOI

	Hang Seng Index Products		Hang Seng China Enterprises Index Products	
	OOF	OOI	OOF	OOI
Market Code	32	34	40	38
HKATS Code	PHS	HSI	PHH	HHI
Commodity Code	4039	4002	4040	4001
Expiry Day	Third Friday	Second last business day	Third Friday	Second last business day
Series Naming convention	PHS28000H1, PHS28000T1	HSI28000H1, HSI28000T1	PHH10200H1, PHH10200T1	HHI10200H1, HHI10200T1
Market Maker Protection	Separate MMP parameter and monitoring for PHS contracts	Separate MMP parameter and monitoring for HSI contracts	Separate MMP parameter and monitoring for PHH contracts	Separate MMP parameter and monitoring for HHI contracts
Trading Halt Mechanism – Trading Halt Reference Contract	HSI spot month futures		HHI spot month futures	
TMC	Combination of PHS monthly contracts only	Combination of HSI monthly contracts only	Combination of PHH monthly contracts only	Combination of HHI monthly contracts only



Options on Futures – Clearing Arrangements



Options on Futures (OOF) – Clearing Arrangements

Settlement upon Expiry – Current vs Proposed

In-the-money Options

Position Held	Current Index Options (Cash settled)	Proposed Contracts (Physically settled – HKCC deliver)
Long Call	<u>Receive</u> Final Settlement Value [^]	<u>Long</u> position of Spot Month Futures* at Strike Price
Long Put		<u>Short</u> position of Spot Month Futures* at Strike Price
Short Call	<u>Pay</u> Final Settlement Value [^]	<u>Short</u> position of Spot Month Futures* at Strike Price
Short Put		<u>Long</u> position of Spot Month Futures* at Strike Price

At / Out-of-the-money Options

Position Held	Existing Index Options	Proposed Contracts
Long Call / Put		Expired worthless
Short Call / Put		Expired worthless

[^]Final Settlement Value = The difference between the Official Settlement Price and the Strike Price of the Option, multiplied by the Contract Multiplier

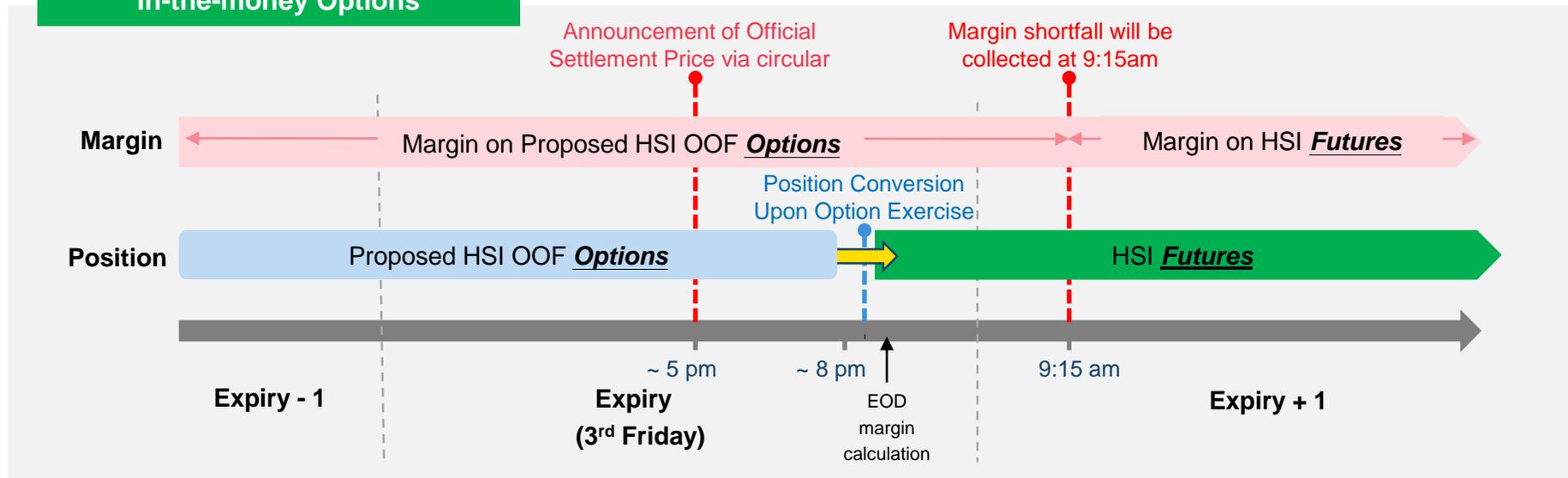
* All futures positions shall be assigned at a price equal to the Strike Price of such options



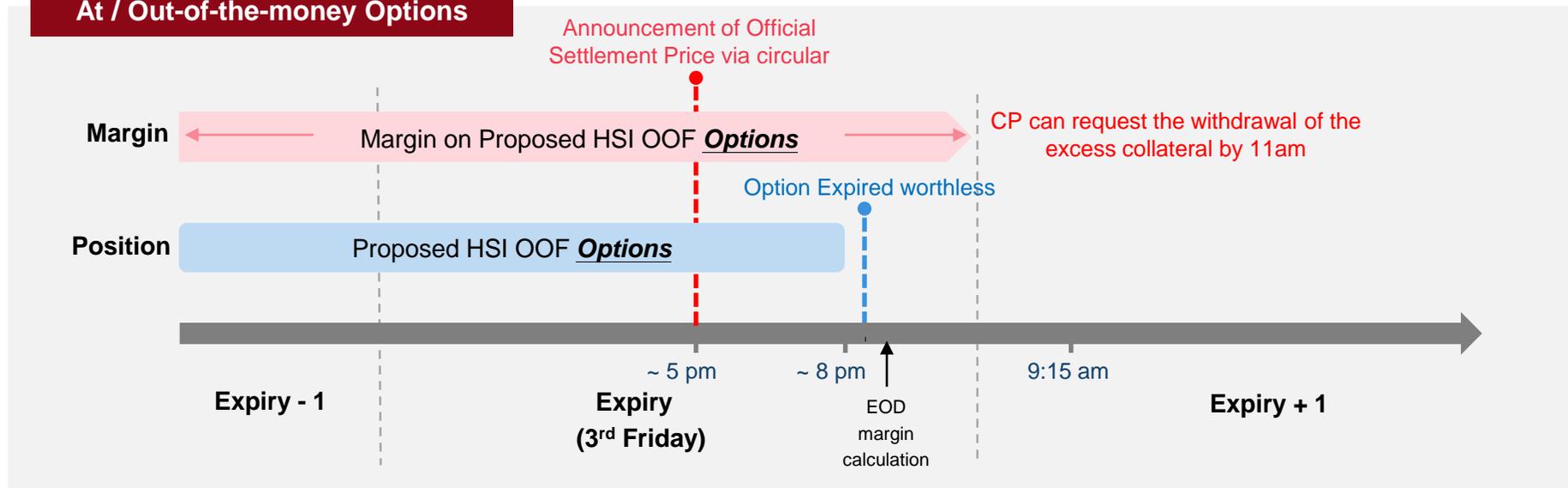
Options on Futures (OOF) – Clearing Arrangements

Margin Collection and Settlement Timeline on OOF Exercise and Expiry

In-the-money Options



At / Out-of-the-money Options



Options on Futures (OOF) – Clearing and Risk Management Arrangements

Summary Highlight

Clearing Arrangement

- OOF will follow the clearing and settlement arrangement of the current Option on Index (“OOI”) products on HSI and HSCEI on HKFE until the expiry.
- When the OOF is exercised on its expiry day, new trade of the underlying futures will be generated and shown in DCASS with below description in order to identify the newly created futures trade is arisen from OOF:

DCASS Module	Description
Trade History	TYPE = “New contract”
Clearing Information	When EVENT = “Exercise” or “Assignment”; Class = “New Contract”

- The **newly created futures positions** arisen from OOF will be updated to CPs’ position account immediately together with their existing futures positions **during HKCC end of day processing**.
- CPs can only conduct **position adjustment** for the newly created futures position **after the HKCC end of day processing**. These adjustments will be treated as the **post trade of next clearing day (T+1)**.
- The newly created futures position will be included in the calculation of the end of day margin requirement on the expiry day, CPs will need to arrange funding to settle the Variation Adjustment (“VA”) and the Initial Margin (“IM”) for such futures position by 9:15 a.m. on the next business day.

Risk Management (RM) Arrangement

- Follow the existing RM arrangement, such as intra-day call, capital based position limit (“CBPL”) and concentration risk assessment.



Options on Futures (OOF) – Settlement Method

Points to note

- Official Settlement Price (OSP): Average of 5-minute snapshots on the underlying futures in 9:30 a.m. – 4:00 p.m.
- All in-the-money options will be automatically exercised based on OSP above, no contrarian instructions accepted
- All at-the-money and out-of-the-money options will **NOT** be exercised
- Similar to all physically-settled options, an option position holder should be aware that the final P&L of such position would be affected by the price of the underlying asset
- There may be cases where the delivered position will incur immediate mark-to-market gain/loss (the price of delivered position may not be the same as official settlement price)
- Participants who do not wish positions to settle into futures could opt to square their positions before expiry or consider the cash-settled OOI
- Participants should closely monitor and manage their risk at all times



Options on Futures (OOF) – Settlement Method

Points to note

Illustrative Example on Expiry Day

Position = Long 28,000 Call
Official Settlement Price = 28,020

<u>Types of Product Holders</u>	<u>Situation 1:</u> Futures Price @ T Close = 28,050	<u>Situation 2:</u> Futures Price @ T Close = 27,950
<u>OOF Holder:</u> being assigned a long position in futures @ 28,000	<u>P&L of the futures position:</u> <i>(mark to market)</i> +50 index points	<u>P&L of the futures position:</u> <i>(mark to market)</i> -50 index points
<u>OOF Holder:</u> Receive final settlement value (OSP – strike price)	<u>P&L:</u> <i>(settle in cash)</i> +20 index points	<u>P&L:</u> <i>(settle in cash)</i> +20 index points

Participants should ensure the following before engaging in the trading of OOF:

- the front office and back office systems (including client statements & LOP) needs to be able to distinguish between OOI and OOF
- thorough and effective communication to clients on the differences between OOI and OOF
- necessary measures taken to minimise client confusion (e.g. clear client interface and client-facing staff to be fully informed)



Options on Futures – Market Surveillance & Monitoring



Options on Futures (OOF) – Market Surveillance & Monitoring

Summary Highlight – Position Limit (“PL”) Monitoring

Position Limit Calculation:

- Before the sub-legislation of the Securities and Futures Ordinance (“SFO”) is amended to include the proposed OOF contracts in the combined position limit, EPs and their clients are required to observe **both** the existing statutory PL under the SFO and the exchange PL stipulated in the Contract Specifications under the HKFE Rules.
- The below table illustrates the contracts to be included in the calculation of exchange PL versus statutory PL prior to the amendment of sub-legislation of the SFO (Example: HSI product suite)

	HSI Futures (+mini)	HSI Options (+mini)	HSI OOF	Weekly HSI Options	Hang Seng Net Total Return Index Futures	Hang Seng Gross Total Return Index Futures
Exchange Position Limit (10,000 net delta)	Y	Y	<u>Y</u>	Y	Y	Y
Statutory Position Limit (10,000 net delta)	Y	Y				

Position Limit Monitoring on Expiry Day:

- EPs should be aware that the exercise event on expiry day for in-the-money OOF could potentially result in a change in the position limit usage. Therefore, appropriate monitoring measures should be in place to ensure the compliance of position limit requirements at all time.



Options on Futures (OOF) – Market Surveillance & Monitoring

Summary Highlight – Large Open Position (“LOP”) Reporting

Product Codes for LOP reporting:

- EPs are reminded to update all necessary system parameters to ensure an effective LOP monitoring is in place for detection of reportable positions for the proposed OOF contracts.

Product	LOP reporting product code	Reporting level
OOF on HSI	PHSO	500 open contracts in any one series
OOF on HSCEI	PHHO	500 open contracts in any one series

60% reporting rule on stock index futures and options:

- EPs should note that the LOP reporting requirement on EPs with open position held for their own account or any client exceeding 60% of the position limit of stock index futures and options products with the same underlying index **is also applicable to the proposed OOF contracts.**

LOP reporting on OOF Expiry Day:

- EPs shall report the LOP based on their books and records. In case of any discrepancies between the reported LOP and DCASS records on expiry day of the proposed OOF contracts, HKFE will also make reference to EP’s exercise record in DCASS to assess the rationale behind of such discrepancies.
- If the discrepancies are considered resulting from the timing difference of post trade adjustments made between EP’s own books and DCASS following the exercise event of the proposed OOF contracts. EPs are not required to provide an explanation on such discrepancies.



Options on Futures – Market Data



Options on Futures (OOF) – Market Data Arrangements

The real-time market data of OOF on HSI and OOF on HSCEI will be published in Orion Market Data Platform – Derivatives Market (OMD-D) as illustrated below:

OMD-D Data Feed	Derivatives Lite (D-Lite)	Derivatives Standard (DS)	Derivatives Premium (DP)	Derivatives FullTick (DF)
Market Group	Non-SOM			
OMD-D Partition*	2			
Reference Data Multicast Channel*	151 & 201			
Order Book Data Multicast Channel*	237	234	231	221
Trade Data Multicast Channel*	211 (via Derivatives Trade feed)	211 (via Derivatives Trade feed)	231	221

* Partition and Channel assignment are under the version of OMD-D Resilience Enhancement and Additional Matching Engines in HKATS to-be-launched on 2 August 2021



Readiness – Market Data Arrangements

Readiness Preparation

To facilitate OMD-D Clients to prepare the launch of OOF, the following testing facilities have been arranged:

1. **28 July 2021 (Wednesday):** Distribute **Canned Data**
2. **7 August 2021 (Saturday):** Conduct **Market Test** – optional participation; same rundown as Readiness Test in Trading Arrangements
3. **One trading day before launch:** Pre-launch to have OOF in Reference Data but in “suspended” state (non-tradable)

Vendor Access Code

30 July 2021 (Friday): For Information Vendors, please return the Vendor Access Code Confirmation Form for publishing on HKEX website for publicity.



Options on Futures – Readiness Test



Readiness Test on 7 August 2021

<u>Time</u>	<u>Event</u>
14:00	Login session
14:05	Clearing Session Ready
14:30	Regular Trading Session – Market Open
16:00	Last Trading Time for OOF August 2021 contracts
16:30	Regular Trading Session – Market Close
17:00	After Hours Trading Session – Market Open
17:30	Clearing Session Close for T Session
18:30	Day End Batch Complete (In-the Money OOF exercised and generated new futures trade)
19:00	After Hours Trading Session – Market Close

- EPs and CPs who wish to trade and clear Options on Futures Products at launch are required to complete the Readiness Test successfully, including:
 - End to end readiness for OOF products
 - Trading and clearing operations for existing products will remain intact
- The Test will consist of two parts for DCASS:
 - Part A: Simulation of Clearing, for example perform post-trade activities, experience the exercise and assignment of OOF during day-end batch.
 - Part B: Report Verification: A list of DCASS and CCMS reports will be distributed to CPs via emails for verification.



Q&A



Thank you

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