

Legislative Council Panel on Financial Affairs

Proposal of the Hong Kong Exchanges and Clearing Limited to introduce after-hours futures trading

Purpose

This paper briefs Members on the proposal of the Hong Kong Exchanges and Clearing Limited (“HKEx”) to introduce after-hours futures trading.

Background

2. Global financial markets are increasingly inter-related and influence one another around the clock. After-hours futures trading is commonly found in other major financial markets. Major futures exchanges around the world such as CME Group of the United States (“the US”), Eurex and NYSE Liffe of Europe, Australian Stock Exchange, Singapore Exchange, Osaka Securities Exchange of Japan, etc., all have started after-hours futures trading successively to facilitate hedging activities since many years ago. The trading hours of these exchanges’ stock index futures range from 14 to 23 hours per business day, see **Appendix I**. The volume of after-hours trading (vs. the trading volume in their respective day sessions) ranges from 15% to 37%, see **Appendix II**.

3. As for Hong Kong, at present, both the cash and futures markets are closed at night. When major financial news or events break out in Europe or the US after the close of Hong Kong market, the impact can only be reflected on the following business day and investors could either passively sit on their positions until the next business day or to proxy hedge their positions through overseas derivatives markets such as CME, NYSE Liffe or other Asian markets such as Singapore, Japan or Australia. It is noted that some investors are actually using other derivatives products in overseas markets during the night time to hedge their exposure.

4. According to HKEx’s research, as of April 2011, out of the 183 Futures Exchange Participants, at least half of them are already providing after-hours overseas derivatives trading services for their clients during Hong Kong night time. These include 52 local brokers offering overseas derivatives trading for their clients and 39 international brokers having global networks servicing clients in different time zones, including small and medium size brokerage firms.

The Proposal

5. In May 2011, HKEx published a public consultation paper to seek market comments on the proposal to introduce after-hours futures trading (“the Proposal”). HKEx has noted that after-hours futures trading would help reduce the volatility in the next day’s opening and provide new business opportunity to the futures industry.

6. The consultation conclusions were published in December 2011. Among 455 responses received, 353 responses (or about 78%) supported the Proposal. 287 submissions were received from employees of brokerage firms, of which, 243 responses (or about 85%) supported the Proposal. Among the 103 submissions from corporate respondents, 89 responses (or about 90%) supported the Proposal. The latter includes 67 Futures Exchange Participants and two-third of them are small/medium-size securities and futures trading firms.

7. In response to the comments received, HKEx has made a number of refinements to the operational arrangement of the Proposal. A summary of the salient points of the Proposal is set out in paragraphs 8 to 10. For further details, please refer to **Appendix III**.

Duration and Product Coverage

8. Under the revised Proposal, the after-hours futures trading session will open 45 minutes after the close of the regular futures trading session (i.e. 5:00pm) and end at 11:00pm. Products covered include Hang Seng Index (HSI) futures, H-Shares Index (HHI) futures and gold futures.

Risk Management and Margin Arrangement

9. On risk management, brokerage firms participating in after-hours futures trading have to follow capital-based position limit. HKEx also proposes to make reference to the practice of other major markets to impose a 5% price limit, i.e. no sell order of price below 95% and no buy order of price above 105% of the last traded price of the spot month contract in the regular trading session are allowed to be placed. Price limit can prohibit any transactions beyond the range and deter any excessive price movements and can provide certain assurance to brokers that the client margin would not be exhausted by any excessive price movement in the after-hours futures trading session. There are some market comments that the price limit should be lowered from 5% to 2.5%. If the price limit was set at 2.5%, the

anticipated number of times when the market is limited would be more frequent. The historical differences between the daily opening prices and previous closing prices of spot months of HSI futures and HHI futures between January 2005 and June 2011, that exceeded 2.5% on average were about 14 and 24 times per year respectively. This would not be desirable for an orderly traded futures market and would severely curtail the benefit of enabling market participants to hedge exposures during after-hours in the traded futures market.

10. On margin arrangement, the prevailing minimum margin requirement for brokerage firms is set at 5% of the value of the futures contracts, the minimum client margin is at 6% in general. Under HKEx's Proposal, there will be no margin call against brokerage firms during the after-hours futures trading session. HKEx will notify the brokerage firms about their variation adjustments and margin calls during the next regular trading session at 10:00am. HKEx will conduct an assessment for every brokerage firm to see whether it has mark-to-market loss for its positions and whether it fulfils the minimum margin requirement, based on the Opening Price, which is the equilibrium market price derived from the price discovery period of thirty minutes before the opening of the morning trading session. If the fund of a brokerage firm at the clearing house does not meet the minimum margin requirement, it has to settle the margin due by noon on the same day. With the price limit set at up/down 5% as mentioned above, the client margin will not be exhausted at the mark-to-market futures prices during the after-hours futures trading session. With after-hours futures trading, market risk can be managed earlier instead of waiting for the market open in the next trading day. After the market opens on the next day and banking services are available, brokers can handle their clients' margin in the usual way.

Implications to Market

11. After-hours session will reduce risk for both investors and brokers and thus enhance market stability. As mentioned above, should there be any event of major market news and movement in the European or the US at the moment, investors holding HKEx's index futures positions will either passively sit on the positions until the next day when Hong Kong market opens, or to proxy hedge their positions through overseas derivatives markets such as CME, NYSE Liffe and other Asian markets such as Singapore, Japan or Australia. With the introduction of after-hours trading in HKEx, investors could directly manage their HKEx's index futures positions during

Hong Kong night time at real time against any major market news and movement in the European or the US markets.

12. After-hours futures trading will also help reduce futures market's opening price volatility. Hong Kong market will be affected by overseas market during night time even though it is closed. The price impact will be seen when Hong Kong market opens on the next day. With the introduction of the after-hours futures trading session, some of the futures trading and hedging needs in response to the overnight news and events will be satisfied in the after-hours futures trading session. As such, overnight buying and selling pressures in the futures market would not be concentrated in the futures market opening period in the next morning and the volatility and magnitude of the futures market price movement at the opening can be reduced. The benefit of after-hours futures trading will enable investors to manage their market risks sooner and incrementally.

13. As after-hours futures trading Proposal received support from market participants, it is believed that many of them will participate in after-hours futures trading, providing sufficient market liquidity. These market participants will monitor market prices during after-hours futures trading session for trading or hedging opportunities. This trading participation should help in guarding against market manipulation. In the event that there are any abnormal price deviations, these market participants will consider these as profit opportunities and trade to counter the price deviations. Various overseas stock index futures markets with less notional turnover than HKEx also managed to conduct after-hours futures trading successfully. Market liquidity is seen in the after-hours trading session of these exchanges, though liquidity is unlikely to be as high as those in the day session.

14. Moreover, the capability for after-hours futures trading is a prerequisite for HKEx to support asset classes traded on a global basis including commodities and foreign exchange. After-hours future trading will also facilitate Hong Kong's development of the Renminbi (RMB) offshore centre and help promote the internationalisation of the RMB products trading by enabling HKEx to serve international trading interest relating to RMB products.

Way forward

15. HKEx will submit the trading and clearing rule amendments in relation to after-hours futures trading to the SFC for approval in the second

half of 2012. After receiving HKEx's Proposal, the SFC will consider the views of all market participants and the development need of the Hong Kong financial market.

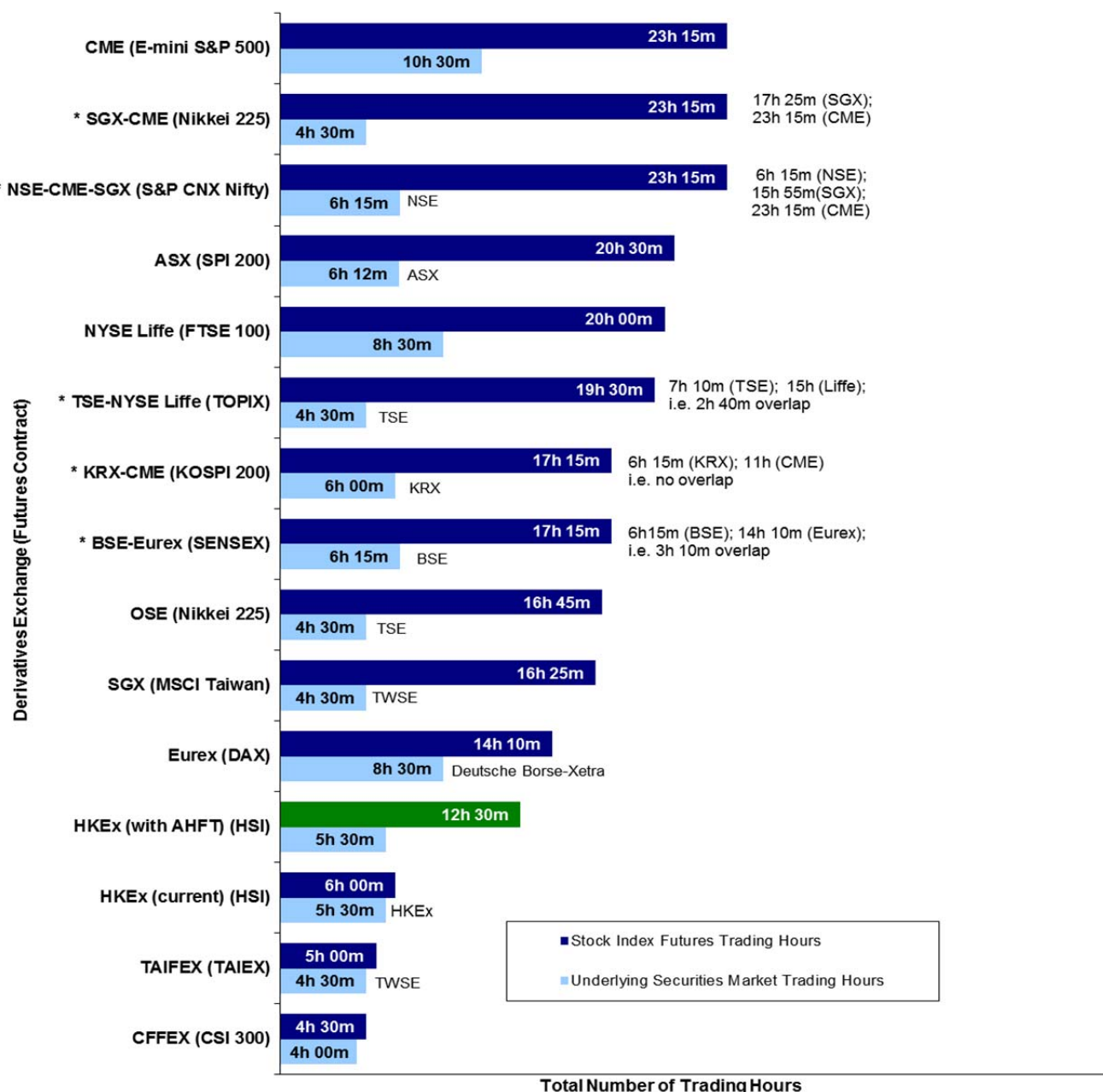
16. To facilitate better preparation by the market, HKEx has explained to industry associations in detail operational arrangements on trading, clearing and risk management under the Proposal, through regular contacts and a series of briefing sessions. HKEx will continue such contacts with the industry. HKEx will facilitate the futures industry in the preparation work, such as enhancements to trading and back office systems and staff training, before the formal implementation of the Proposal.

17. HKEx will announce the implementation date for after-hours futures trading after obtaining regulatory approval as well as ascertaining system and market readiness.

**Financial Services and the Treasury Bureau
Securities and Futures Commission
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Trading Hours of Stock Index Futures in Global Derivatives Exchanges

The trading hours of stock index futures in the following major derivatives exchanges range from 14 to 23 hours in each trading day:



Note: Trading hours are in standard time and include continuous trading session / closing auction session but exclude pre-market opening of the exchanges.

* After-hours futures trading involve partnership arrangement as follows:

- Mutual Offset Trading: SGX-CME on Nikkei 225 and Nifty futures
- Cross Listing: NSE-CME on Nifty futures; BSE-Eurex on SENSEX futures;
- Position Transfer: TSE - NYSE Liffe on TOPIX futures
- Order Routing: KRX – CME on KOSPI 200 futures

Appendix II

Daily Trading Volume of After-Hours Futures Trading (AHFT) Session Relative to Volume in the Regular Trading Session of Major Derivatives Exchanges (October 2010 to February 2011)

Exchange	Index Futures Products	Launch Date of AHFT	Average Daily Volume in Regular Trading Session (contracts)	Average Daily Volume in AHFT Session (contracts)	% Ratio of Average Daily Volume in AHFT Session to Regular Trading Session
SGX	Nikkei 225	Mar 1996	70,524	26,461	37%
CME	E-mini S&P 500	before 2000	1.5 mil	291,735	20%
NYSE Liffe	FTSE 100	Jun 2008	83,058	16,581	20%
OSE	Nikkei 225	Sep 2007	47,138	8,358	18%
ASX	ASX SPI 200	May 2000	22,945	3,872	17%
Eurex	DAX	Nov 2005	108,400	16,336	15%

(Source: Bloomberg)

Revised Proposal on After-hours Futures Trading

After-hours futures trading with regard to products, trading, clearing and risk management will be implemented as follows:

a) Products

At the initial stage, Hang Seng Index (HSI) futures, H-shares Index (HHI) futures and gold futures would be introduced for after-hours trading. Subject to the development of trading liquidity in the main stock index futures contracts, mini-HSI futures and mini-HHI futures will be introduced at the next stage. Trading arrangements of the stock market will not be affected.

b) Trading

i. Proposed Trading Hours

A new trading session (T+1 Session) will be introduced in the futures market. The opening time of the T+1 Session will be 45 minutes after the close of the regular trading session (T Session), i.e. 5:00 p.m. for stock index futures and gold futures. Trades executed during the T+1 Session (T+1 Trades) will be registered as the following day's trades.

The T+1 Session will end at 11:00 p.m.

ii. Holiday Arrangements

If it is a Hong Kong public holiday or there is half-day trading in the HKEx securities market, there would be no T+1 Session on that day.

iii. Typhoon or Black Rainstorm Arrangements

If Typhoon Signal No. 8 or a Black Rainstorm Warning is hoisted and is not lowered before 12:00 noon, there would be no T+1 Session.

iv. Order Types

All rest of day orders, until expiry orders and specified date orders, by default, will be effective only in T Session and outstanding orders will be carried forward to the next T Session and so on whilst outstanding.

For Exchange Participants and their clients participating in after-hours trading need to select the order attribute “T+1” when entering their rest of day orders, until expiry orders and specified date orders for those orders that should be effective for both T Session and the T+1 Session. These orders with “T+1” attribute will be carried forward from T+1 Session and back into T Session and so on whilst outstanding.

Fill-or-kill orders and fill-and-kill orders which are to be executed (or not) immediately, the order attribute “T+1” will not be applicable and will be ignored.

v. Price Limit Up/Down Mechanism

- The proposed percentage for the price limit up/down is 5%, which will be reviewed and adjusted according to market situation
- No sell order of price below 95% and no buy order of price above 105% of the last traded price of the spot month contract in the T Session will be allowed
- Trading (for all contract months) will be allowed only within the price limit range during the T+1 Session

Note: Trading in the T Session will not be subject to this price limit up/down mechanism.

vi. Handling of Error Trades

Existing error trade rules will apply in the T+1 Session.

vii. Block Trade Facility Not Applicable

At the initial stage, the Block Trade Facility will not be available in the T+1 Session. HKEx will consider introducing the Block Trade Facility when options products are available for trading in the T+1 Session.

c) Clearing

i. Clearing of Trades Executed in T+1 Session

T+1 Trades will be registered as the following day's trades. Together with trades executed in the following day's T Session, these trades will undergo the standard clearing process during the standard clearing session (T Clearing Session). With after-hours futures trading, the T Clearing Session will start 1 hour earlier than the T Session for respective futures products. T Clearing Session ends at 6:45 p.m. i.e. existing System Input Cutoff Time.

In addition, a new clearing session (T+1 Clearing Session) will be introduced. The T+1 Clearing Session will start at the same time as the T+1 Session and end 45 minutes after the close of the T+1 Session (i.e. 11:45 p.m.).

A comparison of time windows for existing and proposed clearing sessions is as follows:

Product	Time Window	T Clearing Session	T+1 Clearing Session
HSI/HHI Futures	Existing Time Window	8:45 a.m. – 6:45 p.m.	N/A
	Proposed Time Window	7:45 a.m. – 6:45 p.m.	5:00 p.m. – 11:45 p.m.
Gold Futures	Existing Time Window	8:30 a.m. – 6:45 p.m.	N/A
	Proposed Time Window	7:30 a.m. – 6:45 p.m.	5:00 p.m. – 11:45 p.m.

This dual clearing session arrangement enables trading during T+1 Session (whereby executed trades are registered as T+1 Trades) and day-end processing of T trades to take place concurrently. Brokers can still process post-trade activities on T trades as normal during the T Clearing Session while trading can take place under T+1 Session.

ii. Position Recording

Positions will be maintained according to clearing dates and separate records are held at all times for T day and T+1 day

positions. T day positions will be finalized after the end of T Clearing Session at 6:45 p.m. and subject to day-end margin calculation. T+1 day positions will be finalized after the end of T+1 Clearing Session at 11:45 p.m. These T+1 day positions will become T day opening positions on the following day, i.e. the following day's positions are made up of positions created during the T Session on that day plus trades/post-trades executed during the T+1 Session of the previous day.

d) **Risk Management**

In the absence of a level of banking support to facilitate intra-day call capability during the T+1 Session similar to that during the T Session, the following additional risk management measures will be implemented to mitigate the counterparty risks associated with after-hours futures trading.

- i. Perform monitoring of brokers' capital-based position limit (CBPL) based on both the current market prices and positions at regular intervals during the T+1 Session, supplemented by ad-hoc CBPL monitoring. Brokers breaching their CBPL may be requested to reduce their exposure to re-establish compliance with their CBPL and risk being disconnected from the HKEx trading system and closing out action should they fail to comply with such request or further increase their exposure.
- ii. A mandatory variation adjustment and margin call to markets (based on the morning Calculated Opening Prices¹) with T+1 Session will be introduced following the market open of each T Session to collect by 12:00 noon both mark-to-market loss and margin of all positions including that created by trades in T+1 Session. The Calculated Opening Price is the equilibrium market price derived from the price discovery period of thirty minutes before the opening of the morning trading session.
- iii. There will be no intra-day variation adjustment or margin call during the T+1 Session.

-END-

¹ If the Calculated Opening Price is not available, market price shortly after the market open will be used.