March 2020

HKEX
香港交易所

RESEARCH REPORT

THE HONG KONG COMMODITIES MARKET

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24 March 2020

SUMMARY

As a global financial centre, Hong Kong has achieved remarkable performances in many areas of the financial sector. However, the development in the commodities market in Hong Kong is relatively weak and currently sits behind other commodity trading hubs such as New York and London. One of the key elements of a successful commodity trading hub is the easy access to commodity exchanges and a wide range of price discovery and hedging solutions.

The only self-regulated spot commodities market in Hong Kong is operated by the Chinese Gold & Silver Exchange Society (CGSE). It provides platforms, facilities and related services for its members to trade gold and silver. Alongside, the only regulated commodity derivatives market is operated by the Hong Kong Futures Exchange (HKFE) which has been actively enriching its product offerings to support and facilitate Hong Kong's commodities market development in recent years.

During 2014 to 2019, HKFE launched futures contracts on precious metals, base metals and ferrous metals to foster commodities' hedging and arbitrage activities in the Asian time zone. In respect of precious metals, while liquidity steadily improves in the Gold Futures, six gold futures indices denominated in both US dollar (USD) and offshore Renminbi were launched in June 2019. This paved the way for introduction of more precious metal derivative products in the future.

As for HKFE's base metal products, six USD London Metal Mini Futures contracts, namely Aluminium, Copper, Lead, Nickel, Tin and Zinc were introduced to the market in August 2019. These mini futures simplified the base metal trading mechanism of the traditional base metal contracts on the London Metal Exchange (LME). In the meantime, HKEX and LME have been engaged in constructive discussions for various collaboration schemes towards a "Hong Kong-London Connect".

HKEX is also making inroads into the ferrous sector. The HKFE's cash-settled TSI Iron Ore Fines 62% Fe CFR China Futures (Iron Ore Futures) commenced trading in November 2017 and saw respectable trading activity in 2019.

As HKEX rolled out its commodity strategies, market participants reflected a lot of feedback and useful suggestions for future development which would require integrated efforts. Suggestions include having warehousing in Hong Kong to enable physical delivery of base metals, reducing the current contract size of Gold Futures and recognizing gold bars manufactured by qualified local refineries. There is still much room for further cooperation between the CGSE, HKFE and the over-the-counter commodity market to elevate Hong Kong's international status as a global commodity trading centre.

1. THE COMMODITIES MARKET IN HONG KONG — LOW BASE BUT HIGH POTENTIAL

Hong Kong is well regarded by the world as a preeminent international financial centre, with remarkable performance in many areas of the financial sector, including the possession of the highest concentration of insurers and the highest insurance density in Asia[1], the largest offshore liquidity pool for Renminbi ("RMB") in the world[2], and a stock exchange which ranked among the top five globally every year in the past decade in terms of funds raised from initial public offerings ("IPO")[3]. Nonetheless, heavy focus on equities has resulted in the relative under-development in other areas, such as fixed income and commodities. Developing a broader and deeper array of asset classes is of paramount importance as this will lessen the dependence of the Hong Kong financial market on a particular type of financial instruments (i.e. a particular market segment), thereby strengthening up the overall Hong Kong financial sector to be more resilient, especially when a particular market segment underperforms.

Compared to the fixed-income sector, the commodities sector might even be a weaker link. Commodity trading has a unique economic model and distinctive risks that need to be managed. It requires special skills to master it well. Many companies, therefore, set up standalone units for their commodity trading activities. This forms a centre of excellence that pools skills across trading, marketing, logistics and risk management. Further, centres of such excellence are often located in the commodity trading hubs.

There are a number of commodity trading hubs around the world. Examples are Chicago — a major hub for agricultural products, London — a hub for metals and Houston — a hub for energy trading. At the centre of Asian commodity trade routes, Singapore acts as the commodity trading hub for rubber, iron ore and precious metals. Many of these hubs have existed for decades as assembly points for commodity trading. Proximity to physical flows and infrastructure for commodity transport is often the historical reason of why many of the largest global commodity hubs are located where they are today and why different hubs have become specialised in different commodity products.

One of the key elements of a successful commodity trading hub is the easy access to commodity exchanges and a wide range of price discovery and hedging solutions, such as soybean futures on the Chicago Board of Trade (CBOT), West Texas Intermediate (WTI) light sweet crude oil futures on the Intercontinental Exchange (ICE) and rubber futures on the Singapore Commodity Exchange (SICOM).

In Hong Kong, the only regulated spot commodities market is operated by the Chinese Gold & Silver Exchange Society (CGSE), while the Hong Kong Futures Exchange (HKFE), a wholly-owned subsidiary of Hong Kong Exchanges and Clearing Limited (HKEX), operates the only regulated commodity derivatives market. The CGSE, by its name, offers spot trading only for gold and silver. On the other hand, in the light of the weak commodity segment in Hong Kong, the HKFE has been actively enriching its product offerings of commodity derivatives in recent years. See Figure 1 for an illustration of gold trading in Hong Kong and sub-sections below on a briefing of CGSE and HKFE.

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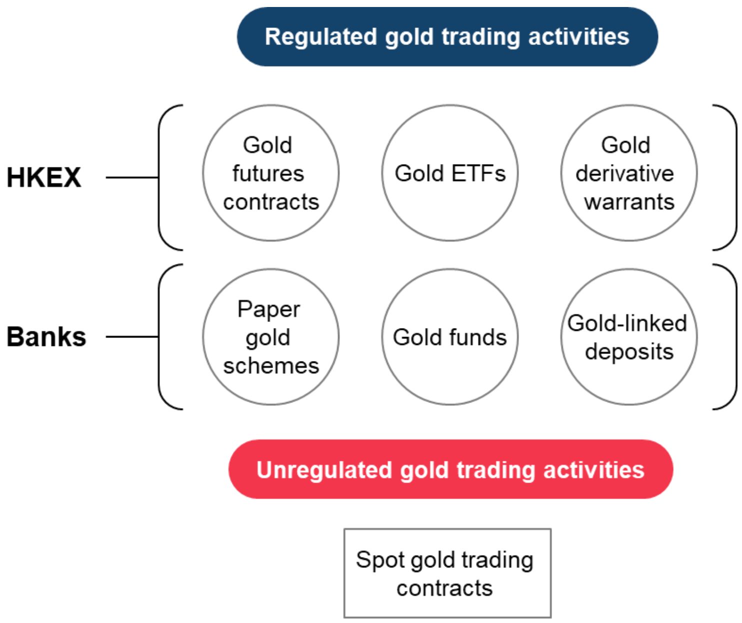
1. With 162 authorised firms operating in 2019 and insurance premiums per capita of US$8,863 in 2018. Source: "Think Finance Think Hong Kong", Financial Services Development Council's publication, September 2019.
2. With total deposits of RMB 627.8 billion as of June 2019. Source: "Think Finance Think Hong Kong", Financial Services Development Council's publication, dated September 2019.
3. Based on market statistics on the website of World Federation of Exchanges (WFE).

Figure 1. Gold trading in Hong Kong



Source: The Investor and Financial Education Council's website.

1.1 The Chinese Gold & Silver Exchange (CGSE)[4]

Founded in 1910, the CGSE is a self-regulating organisation. Its functions include providing a platform, facilities and related services for precious metals trading, as well as establishing and implementing rules and regulations, and normalising transactions for the industry.

The CGSE operates under a membership system. Its members must be registered as companies. CGSE members can use the trading platform of the CGSE for precious metals trading. London Gold is traded via an e-trading platform of the CGSE, where the recognised e-trading members can process clients' transactions (with the option to trade clients' transactions on the e-trading platform with other members, or to directly trade with clients and then declare to the CGSE). Transactions processed through the recognised e-trading member of the CGSE come with a transaction number, which can be used by investors to retrieve information about the transaction.

However, there is no legal requirement that gold dealers must join the CGSE to participate in spot gold trading, which means that current gold dealers who carry out spot gold trading are not limited to the CGSE members. As a result, there is unregulated over-the-counter (OTC) trading in gold.

1.2 Hong Kong Futures Exchange (HKFE)

HKFE is a futures exchange regulated by the Securities and Futures Commission (SFC) in Hong Kong. It was established in 1976 and has become a wholly-owned subsidiary of HKEX in 2000 under a merger scheme with the Stock Exchange of Hong Kong (SEHK) and their affiliated clearing houses. HKFE offers a variety of options and futures contracts linked to stock market indices, stocks, short-term interest rates, foreign exchange and commodities. In parallel with the physical gold market operated by CGSE in Hong Kong, the current

4 Source: The webpage, "Understanding the current protections when trading gold and its related products", on the Investor and Financial Education Council's website, dated 14 February 2018, viewed on 16 December 2019.

commodities product suite of HKFE include gold futures contracts. (See Section 2 for more details of the on-exchange commodity market on HKFE.)

As a centralised financial exchange where people can trade standardised derivative contracts trustworthily, there is a lot HKFE could do to support and facilitate Hong Kong's commodities market development.

2. THE CURRENT ON-EXCHANGE COMMODITY DERIVATIVES MARKET

Hong Kong, whose name in Chinese means "Fragrant Harbour", is renowned for its ideal location as a port in Southern China. Attributed to the financial hub's free market and tradition of entrepôt trade, Hong Kong enjoys the status as one of the major bullion markets in the world with bustling physical gold trading. In addition, being the largest offshore RMB centre, Hong Kong has a unique position in facilitating the implementation of China's plan for RMB internationalisation. With these innate advantages, HKEX is determined to serve better the commodities market by building a commodities platform in the Asian time zone that offers globally competitive products in Hong Kong.

HKEX laid out in its 2016-2018 Strategic Plan its objective to establish new price-discovery capabilities, benchmarks and risk management tools in fixed income, currency and commodities. Towards this objective, in the second half of 2017, HKEX launched a pair of gold futures contracts denominated in US dollar (USD) and offshore RMB (i.e. CNH) with settlement by physical delivery in Hong Kong (**USD and CNH Gold Futures**) and a USD-denominated cash-settled TSI Iron Ore Fines 62% Fe CFR China Futures contract (**Iron Ore Futures**).

With further vision drawn in its 2019-2021 Strategic Plan in respect of the continued expansion of the commodities product suite, the evolution of commodity pricing and commodity "Connects", HKEX introduced the USD-denominated cash-settled London Metal Mini Futures contracts (**USD London Metal Mini Futures**) in the second half of 2019, which complement the CNH-denominated London Metal Mini Futures contracts (**CNH London Metal Mini Futures**) already introduced in two batches in December 2014 and December 2015 respectively.

With the offering of futures contracts on precious metals, base metals and ferrous metals (see sub-sections below), the on-exchange market facilitates commodities' hedging and arbitrage activities in the Asian time zone. Hong Kong's on-exchange commodities platform is constituted of a network of HKFE participants with Mainland Chinese backgrounds and the liquidity from global financial market participants which connects Chinese trade in commodities with the world.

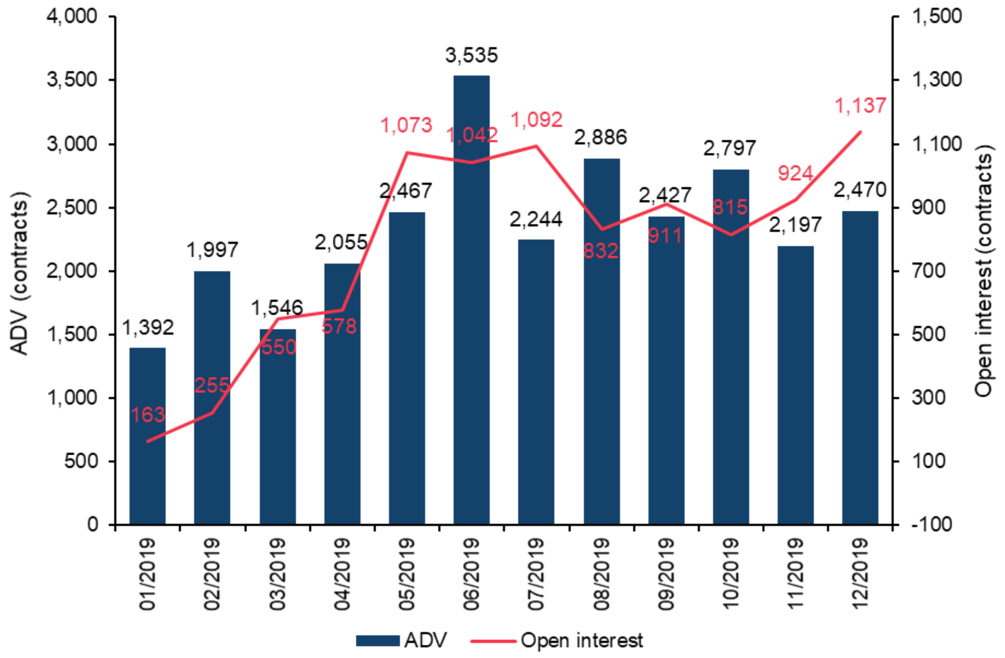
2.1 Precious metal derivatives

One of the key features of the USD and CNH Gold Futures is physical delivery which enables the convergence of futures prices and spot prices to take place in a transparent and regulated venue.

In spite of the many challenges faced in the development of a "new commodities market" in Hong Kong, concrete liquidities in the Gold Futures has been gradually building up. The average daily trading volume (ADV) increased by over 50% from about 1,300 contracts at the beginning of 2019 to more than 2,000 contracts by end of 2019 (see Figure 2). Open Interest also reached a record high of 1,272 contracts on 27 December 2019. In order to concentrate incentives provided to Liquidity Providers (LPs) and Proprietary Traders (PTs) with higher efficiency, the respective total numbers of LPs and PTs were reduced from about 30 to 20 in

2019. Bid-ask spread of USD Gold Futures has also tightened to one to two ticks for 40%-60% of the trading hours in 2019[5].

Figure 2. Monthly ADV and month-end open interest of Gold Futures in Hong Kong (2019)



Source: HKEX.

2.2 Base metal derivatives

CNH London Aluminium/Zinc/Copper Mini Futures were launched on 1 December 2014 as the first batch of RMB-traded commodity contracts in Hong Kong. They were designed to meet the hedging needs of Mainland physical market participants for their exposure to commodities priced in RMB, to ease margin financing needs for entities holding RMB and to establish RMB pricing of metals in Asian trading hours. The second batch of RMB-traded London Metal Mini Futures contracts on nickel, tin and lead were launched on 14 December 2015 to complement the first batch. These metals, along with aluminium, zinc and copper, are among the most liquid futures contracts on the London Metal Exchange (LME), a wholly-owned subsidiary of HKEX. As each of the six metals has distinctive characteristics, uses and supply-and-demand dynamics, HKEX's CNH London Metal Mini Futures can meet the various needs of base metal users, producers and investors, particularly those who are based in Asia and want to be able to buy and sell futures contracts during their business day.

Further to the RMB products, the USD London Metal Mini Futures contracts were launched on 5 August 2019. This product series consist of futures contracts on the same six base metals as the RMB products. The USD products provide additional trading opportunities for users who have exposure in the underlying USD-denominated base metals in the Asian time zone and offer new investment instruments for both retail and institutional investors who would like to take advantage of the products' monthly cash-settled features and relatively small contract sizes to gain exposure to the underlying metals. The introduction of the USD London Metal Mini Futures has simplified the base metal trading mechanism of the traditional base metal

5 Source: HKEX for all related market statistics and information.

contracts on the LME. The final settlement price is based on the LME's Official Settlement Price which is established during the 2nd Ring Close[6].

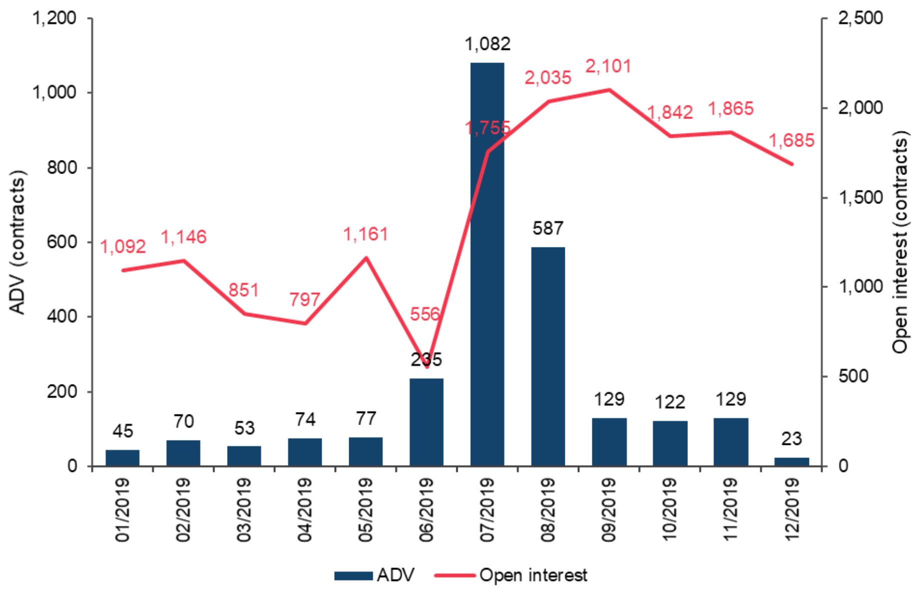
The launch of London Metal Mini Futures symbolised the first step towards the goal of establishing a full-scale connectivity platform between Hong Kong and London ("Hong Kong-London Connect")[7]. Given that the underlying commodities are the corresponding base metals traded on the LME, the commodities trading platform in Hong Kong could be developed in cooperation with the LME, bringing together both the physical and financial communities in the commodities market.

2.3 Ferrous metal derivatives

The cash-settled TSI Iron Ore Fines 62% Fe CFR China Futures (Iron Ore Futures) was the first ferrous metal product launched by HKEX on 13 November 2017. The product aims to provide maximum price transparency and equal access to all market participants. By improving the price discovery process in the iron ore derivatives market, the contract has the potential to lower the cost of trading. The final settlement price for a contract is based on the arithmetic average of all TSI 62% Fe CFR China index values published in that contract month. The last trading day is the last Hong Kong business day of a calendar month that is not a Singapore public holiday. Both monthly and quarterly contracts are available to enhance exposure.

2019 was a refreshing year for the Iron Ore Futures. With an incentive program in place, coupled with marketing efforts, market participation in the product improved. Both daily trading volume and open interest reached record high levels in the same year (see Figure 3).

Figure 3. Monthly ADV and month-end open interest of Iron Ore Futures (2019)



Source: HKEX.

6 On the LME, trading activities take place in designated five-minute periods known as "rings" during which traders and floor brokers are engaged in open outcry trading that takes place in a six-metre ring-shaped trading pit. Ring sessions are different for trading different instruments. 2nd Ring trading at the LME occurs during 12:30 p.m. to 1.15 p.m.. LME Official Prices, used as a reference in physical contracts, are established during the 2nd Ring. The LME Official Price is the last bid and offer price quoted during the 2nd Ring session and the LME Official Settlement Price is the last cash offer price.

7 See more in another HKEX Research Report, "The connectivity platform offered by the HKEX commodities market for the Mainland and the world", published on the HKEX website, 24 March 2020.

2.4 Market operations

It is relatively easy to get started trading commodity products on HKFE.

(1) Open a futures account

An investor has to firstly open an account with a futures broker who is a Participant of HKFE ("Exchange Participant" or "EP") that supports trading in HKFE products. The futures broker will determine the amount of risk it allows the investor to take on, in terms of margin and positions, based on the investor's experience, income and net worth. Different brokers may offer different channels for investors to place orders for futures contracts, e.g. online trading systems or futures trading hotline.

(2) Deposit initial margin

Prior to placing an order, the investor must have enough funds deposited into its account to cover the initial margin — a small percentage of the contract value. HKFE determines and sets futures margin rates based on the risk of market volatility. An additional initial margin on top of such minimum requirement may be required by the broker depending on the price volatility of the contract type. In general, the initial margin varies by product and is subject to change from time to time.

(3) Investor eligibility and related risks

The risk of loss in commodity futures trading can be substantial, as financing a transaction by a deposit of collateral can be significant. Investors may sustain losses in excess of the initial margin funds, cash and other assets deposited as collateral with the futures broker and may be called upon at short notice to deposit additional margin deposits or interest payments if the contract price moves against one's position. If the required margin deposits or interest payments are not provided within the prescribed time, the investor's position or collateral may be liquidated without prior consent of the investor. Moreover, the investor will remain liable for any resulting deficit and interest charged on the futures account. An investor should therefore carefully consider whether such trading is suitable in light of its own financial position and investment objectives. There are several risk factors to bear in mind, including geopolitical risks, speculative risks, delivery risk and corporate governance risks.

(4) Place an order with a futures broker

When placing an order with a futures broker, the investor should specify the following information:

- Side — The buy or sell indication;
- Quantity — The number of contracts;
- Contract information — Which product and maturity;
- Order type — Instruction to the broker on how to handle the order (common order types are "Market"[8], "Limit"[9], and "Stop"[10];
- Price — The price at which the order should be executed;

[8] Market order is an order type to buy/sell a contract at the current market price.

[9] Limit order is an order type to buy/sell a contract at a specified or a better price.

[10] Stop order is an order type to buy a contract at a price above or sell at a price below a specified price.

- Time in force — How long the order stays open (common times in force include "Day"[11] and "Good Till Cancelled"[12])
- Account number — the investor's account identification number in the broker's tracking system.

The order will be passed to the Order Management System (OMS) controlled by the broker and connected to HKFE. Before the order is submitted to HKFE, the broker will perform pre-trade risk check to ensure the order meets approved sizing controls. If the order passes these checks, it is then sent on to HKFE's trading system; orders that fail the checks will be rejected by the OMS.

(5) Trading process

HKATS, the trading system for HKEX's derivatives market, is an electronic system that automatically matches orders in real-time based on price and time priority. This means that the best price is used to match orders and that an order entered earlier into the open order book has a higher priority than orders entered later at the same price. This can easily be thought of as "First-In, First Out" at each price level. Orders are placed in the Central Orderbook. As soon as a trade is executed, the trade information will be reported to the EP via OMS. At the same time, the trade information is transmitted to the HKFE Clearing Corporation Limited "HKCC" for registration and clearing.

(6) Mark to market

Marking to market is a procedure conducted by the clearing house on a daily basis, which determines the value for the asset covered by each futures contract, and profit and loss is then settled between the long and the short positions. The clearing house uses margin as the main tool to mitigate its future credit exposure to its counterparty. Margin requirement is calculated based on the assessment of the maximum potential losses of a futures or an option contract or a portfolio of futures and option contracts over a one-day period under 16 simulated scenarios and a defined confidence level. The clearing houses monitor the margin levels on a daily basis in order to ensure that they are at adequate levels.

At HKCC, Portfolio Risk Margining System (PRiME) is the margining methodology adopted in Derivatives Clearing And Settlement System (DCASS) to calculate the margin requirements of futures and option products. EPs can make use of the clearing house's Risk Parameter File (RPF) distributed by HKEX for calculation of clearing house margins. If funds in the margin account drops below the required level, the broker will ask the investor to replenish the funds back to the initial margin level. This process is known as "Margin Call".

(7) Position limits

Any EP holding positions in excess of a given Reporting Level for its own account or for any client shall file a report (i.e. the Large Open Position or "LOP" report) with HKFE no later than 12:00 noon of the next business day after the positions are opened or accumulated, and continue to file a LOP report for as long as the EP holds positions in excess of the Reporting Level. The SFC's "Guidance Note on Position Limits and Large Open Position Reporting Requirements" specifies the requirements on the aggregation of

[11] A Day order is valid until the close of the trading day the order is entered — the order is automatically purged from the system at the end of the current trading day.

[12] A Good Till Canceled (GTC) order is valid until the order is cancelled, and is not automatically cancelled by the system. The trader must cancel their outstanding GTC orders if they are not filled in order to remove them from the system.

positions held or controlled by different persons, the positions held or controlled at multiple firms, and the reporting for omnibus accounts.

(8) Cash settlement of futures contracts

When a contract is cash-settled, settlement takes place in the form of a credit or debit made for the value of the contract at the time of contract expiration. The HKFE cash-settled commodity products include USD and CNH London Metal Mini Futures and the monthly and quarterly USD TSI Iron Ore Futures. Buyers and sellers of these futures contracts who hold their positions up to final settlement time will have their accounts credited the difference, in cash, between the initial price and the final settlement price if there is a profit; if there is a loss, their accounts will be debited the difference in cash. Clearing house and the broker will ensure trader accounts are debited or credited accordingly and that cash settlements are made in a timely and accurate fashion.

(9) Physical settlement of futures contracts

HKFE USD and CNH Gold Futures are physically-settled contracts which involve, upon settlement, the change-hands of gold bars from the seller to the buyer who then makes full payment. Brokers who plan to physically settle the Gold Futures Contracts are required to maintain accounts with all Approved Depositories designated by HKCC for gold delivery, or have in place the necessary arrangement with another HKCC Participant who maintains accounts with all Approved Depositories for the delivery of the underlying gold in the final settlement of the Gold Futures contracts (“Physical Delivery Participants”). Upon final settlement, the underlying gold will be earmarked on the business day after the Last Trading Day, and will then be transferred from the selling HKCC Participant’s account to the buying HKCC Participant’s account with the Approved Depository on the Final Settlement Day. Detailed arrangements on final settlement are given in the HKFE’s documents for related market operations — “Derivatives Settlement Services”, "List of Recognised Depositories, Refiners, Forwarders and Assayers" and "List of HKFE EPs Offering Physical Delivery Services for Gold Futures".

(10) Risk management process

HKCC has certain powers which it uses to assist in the risk management process and to ensure smooth settlement and delivery. Where necessary, HKCC may require its participants to provide additional deposits or replenish the depleted funds; HKCC may request a participant to provide evidence of its holding of such amount of the underlying commodity or instrument as may be required to satisfy its settlement obligations. It has also the power to require a Non-delivery HKCC Participant to close out and/or transfer any open positions by such time as shall be specified by HKCC from time to time. The risk management process is governed by the "Rules and Procedures of HKFE Clearing Corporation Limited".

(11) Liquidity Provider / Proprietary Trader system

HKFE commodity futures operate under a market-making system. Registered traders supply market liquidity by providing continuous quotes onto the trading system upon request. Such traders are known as Liquidity Providers (LP). Proprietary Trader (PT) is an EP trading through its House Account. It can also be a client represented by an EP trading through an Individual Client Account who commits to meeting the minimum monthly clearing volume in the Eligible Products assigned. HKFE offers LP/PT Program for its commodity products. LP/PT Program is a commercial arrangement for HKFE to appoint LPs to provide liquidity for new products that require more flexibility in terms of LP obligations and LP incentives which are not stipulated in the exchange rules and procedures. LPs/PTs receive both financial and non-financial benefits for fulfilling certain market making obligations and providing market liquidity in commodity derivatives.

3. POSSIBLE INTEGRATED EFFORTS FOR FUTURE DEVELOPMENT

The low participation in commodities trading and limited development in related financial products in Hong Kong are often ascribed to its insufficient commodity trading infrastructure. Hong Kong lacks the logistics and warehousing arrangements to facilitate the physical trading of commodities. As a matter of fact, commodity futures contracts were originally invented to help users of the underlying physical assets to hedge against price fluctuations.

Take base metals as an example, opinions have been revealed by brokers in Hong Kong that Mainland metal users want to have physical delivery as they need the metals for their production. Market participants also commented on the need for warehousing in Hong Kong to enable physical delivery[13]. In other words, the metal derivatives traded in Hong Kong need an associated physical delivery mechanism in order to attract users in Mainland China to trade in Hong Kong. However, physical delivery means setting up warehouses for the metals and this could be challenging. In a sense, a commodity through-train scheme would be helpful, yet hard to achieve. An alternative might be to list Mainland commodity products in Hong Kong under licence agreements from the Mainland exchanges or to jointly develop new products with the Mainland exchanges which could be offered in Hong Kong to international market participants and approved Mainland entities. HKEX could also plan for greater market integration of its HKFE market with the LME market, and further leverage on the LME platform to collaborate with Mainland commodity exchanges, as well as to develop the essential logistics and warehousing infrastructure to facilitate the physical trading of commodities.

As for the Hong Kong gold market, with much of the physical gold being transported into Mainland China from Europe and elsewhere routed via Hong Kong, it is one of the most active physical gold trading markets in the world[14]. Hong Kong is strategically positioned as a gateway to China, the world's biggest importer of gold. With local operations of international bullion banks, refineries, vaults and transport providers, Hong Kong as a gold trade entrepôt has the intrinsic potential to become the gold price setter in Asia, at par with the developed markets of New York and London in the west, helping China and Asia not to be just a price taker. Further cooperation between the CGSE, HKFE and the OTC gold market could be explored to make the best of Hong Kong's existing precious metals network.

Feedback from some participants reflected that they appreciated the physical delivery feature of HKFE's gold futures but the current minimum delivery size of 1 kilogram could be too much for retail clients. They advised HKFE to consider smaller contract size and minimum delivery size.

The CGSE has accredited a list of refineries in Hong Kong as approved refineries for its various deliverable gold contracts. Most of these refineries are locally owned and are accredited to produce the 999.9 kilobars. The CGSE also fully owns and operates the "Hong Kong Precious Metals Assay Centre". Some EPs and CGSE members suggested to HKFE that HKFE could consider recognising gold bars manufactured by some of these local refineries as acceptable delivery bars for its gold futures contracts, and approving the "Hong Kong Precious Metals Assay Centre" as its recognised assayer. This could help home-grown commodity firms go abroad, and bring in regional commodity counterparts as they internationalise. To the on-exchange market, this could mean improved liquidity and more diversified participants in its gold contracts. To participants in the physical market, trading cost

13 "Hong Kong 'not ready to be a commodities trading centre'", *South China Morning Post*, 26 June 2013.

14 In 2018, Hong Kong has the highest consumer demand per capita of 7.0 grams in the world. Source: "Gold Demand Trends Q3 2019 Statistics", World Gold Council, 5 November 2019.

would be reduced and supply security would be increased if better risk-hedging instruments are made available. Such a win-win situation would add value for every party in the market.

Similar to the foreign exchange market, the gold market trades around the clock. Gold price responds instantly to important political events and other breaking news such as a hike in the US interest rates. HKFE could look into extending its gold futures' trading hours as Mainland China and international investors are likely to need 24-hour servicing which is also the most often heard comment from the market participants. HKFE could also consider expanding the current metal product offerings to further develop and include products which are highly differentiated and based on regional and China pricing to build up a commodities platform with a more comprehensive product range.

Asia's share of global commodity production and consumption has been rising and more commodities are being traded in the Asian time zone[15]. Key financial centres in the region like Singapore and Shanghai, have conducted strategic reviews and come up with initiatives aiming at remaining competitive and ahead of the game. Hong Kong should leverage on its current strengths, including world-class business infrastructure, sound regulatory environment, and its unique mutual access platform between Mainland China and the world for grasping market opportunities and develop itself into a commodity trading hub in Asia. It is critical for Hong Kong to define a holistic strategy in commodity market development in order to maintain and preserve its status as one of the most important international financial centres in the world.

To realise the vision and benefit from the market opportunities described above, it is crucial for the government, the industry, the regulators, and the community to work together for the long-term interests of Hong Kong. It is also important to enhance efforts at the government-to-government level.

4. CONCLUSION

Hong Kong is well recognised by the world as a leading financial centre for capital raising, offshore RMB pricing and risk management. Notwithstanding this, it is still relatively weak in the commodities sector compared to other global financial venues.

To build Hong Kong into a global commodity trading centre, active initiatives have been taken by HKEX, the parent company of the only local futures exchange, HKFE. Sixteen exchange-traded commodity futures contracts under the umbrella of precious, ferrous and base metals and six non-tradeable gold indices have been rolled out to the market in the past decade, together with the acquisition of LME and the establishment of QME by HKEX. Consequently, Hong Kong's commodity derivatives market is steadily gaining momentum. However, its potential is yet to be fully realised. Hong Kong's commodities sector is mainly faced with two key challenges: to provide highly differentiated products based on regional and China pricing, and to develop a matching trading mechanism with high efficiency.

Given Hong Kong's weakness in physical delivery capacity, prospective product development can focus on the construction of cross-border product listings and licensing arrangements with domestic exchanges in the Mainland. This can be followed by building a trading mechanism that expands the through-train between Hong Kong and the Mainland to include commodities and allows cross-border commodity trading. Such initiatives would require close collaboration between HKEX and the Mainland and Hong Kong regulatory bodies to explore possible areas

[15] In 2018, consumer demand for gold in Asia countries was 2,176.3 tonnes, which was over 65% of world total demand, compared to 1,942.9 tonnes in 2010 which was less than 60% of world total demand. Source: "Gold Demand Trends Q3 2019 Statistics", World Gold Council, 5 November 2019.

of new policy enforcement and compliance, as well as wide consultation with market participants to determine suitable products and trading routes that can bring deep liquidity.

The feedback from HKFE Participants also revealed that the market desires further enhancements on existing products including the reduction of the tick size for gold contracts and more flexible contracts duration. Likewise, trading mechanism reforms such as extended trading hours, expedited physical delivery process, recognition of local refineries and assayers would enhance the appeal and competitiveness of Hong Kong’s commodity derivatives market. HKEX would also continue its active research on new underlying assets and contract types to address the rapidly changing industrial development and the growing demand of the Hong Kong market.

Despite the fact that the Hong Kong commodities market sits relatively behind other global trading centres in terms of liquidity and comprehensive product and service offerings, Hong Kong still has the right ingredients to become Asia’s commodities pricing centre, backed by its unique position as a gateway to one of the world’s largest commodities consumers — Mainland China. The product development and market infrastructure enhancement initiatives would not only help transform Hong Kong into an all-round financial centre with multi-asset class capabilities, but also give investors a unique access to liquidity in both China and global markets.

APPENDIX. CONTRACT SPECIFICATIONS OF COMMODITY PRODUCTS ON THE HKEX DERIVATIVES MARKET

(a) USD Gold Futures

Feature	Details
Underlying	1 kilogram gold of not less than0.9999 fineness bearing a serial number and identifying stamp of a Recognised Refiner
HKATS Code	GDU
Contract Size	1 kilogram
Trading Currency	USD
Contract Months	Spot Month and the next eleven calendar months
Minimum Fluctuation	USD 0.01 per gram
Last Trading Day (LTD)	The third Monday of the Contract Month Postponed to the next business day if it is a Hong Kong public holiday
Trading Hours[(1)] (Hong Kong Time) (other than on LTD)	Day trading session: 8:30 a.m. to 4:30 p.m. After-hours trading (AHT) session: 5:15 p.m. to 3:00 a.m. the next morning
Trading Hours[(2)] on LTD (Hong Kong Time)	8:30 a.m. to 4:30p.m.
Final Settlement Day	The second Hong Kong Business Day after the LTD
Settlement Method	Physical settlement
Settlement Currency	USD
Final Settlement Price	Volume weighted average price of all trades[(3)] in the expiring Contract Month during the last thirty minutes of trading on the LTD
Delivery Site	An Approved Depository
Minimum Delivery Size	1 kilogram
Holiday Schedule	Follow HKFE holiday schedule
Trading Fee[(4)] (per contract per side)	USD 1.00
Settlement Fee[(4)] (per contract per side)	USD 2.00
SFC Levy[(5)] (per contract per side)	USD 0.07
Commission Rate	Negotiable

Notes:

(1) There is no trading after 12:30 p.m. on the eves of Christmas, New Year and Lunar New Year. The trading hours on those three days shall be 8:30 a.m. – 12:30 p.m.. There is no AHT session if it is a bank holiday in the United Kingdom, the United States and the People's Republic of China.

(2) There shall be no trading after 12:30 p.m. on the eves of Christmas, New Year and Lunar New Year. The trading hours on those three days shall be 8:30 a.m. – 12:30 p.m.

(3) All trades other than Block Trades in the expiring Contract Month that result from the matching on the trading system of (i) two orders in the individual market series; or (ii) a standard combination order and an order in the individual market series, and executed during the last thirty minutes of trading on the LTD.

(4) The amount indicated is subject to change by the HKFE from time to time.

(5) The USD equivalent of HKD0.54 per contract at the exchange rate determined by the HKFE from time to time.

(b) CNH Gold Futures

Feature	Details
Underlying	1 kilogram gold of not less than 0. 9999 fineness bearing a serial number and identifying stamp of a Recognised Refiner
HKATS Code	GDR
Contract Size	1 kilogram
Trading Currency	RMB
Contract Months	Spot Month and the next eleven calendar months
Minimum Fluctuation	RMB 0.05 per gram
Last Trading Day (LTD)	The third Monday of the Contract Month Postponed to the next business day if it is a Hong Kong public holiday
Trading Hours(1) (Hong Kong Time) (other than on LTD)	Day trading session: 8:30 a.m. to 4:30 p.m. After-hours trading (AHT) session: 5:15 p.m. to 3:00 a.m. the next morning
Trading Hours(2) on LTD (Hong Kong Time)	8:30a.m. to 4:30p.m.
Final Settlement Day	The second Hong Kong Business Day after the LTD
Settlement Method	Physical settlement
Settlement Currency	RMB
Final Settlement Price	Volume weighted average price of all trades(3) in the expiring Contract Month during the last thirty minutes of trading on the LTD
Delivery Site	An Approved Depository
Minimum Delivery Size	1 kilogram
Holiday Schedule	Follow HKFE holiday schedule
Trading Fee(4) (per contract per side)	RMB 6.00
Settlement Fee(4) (per contract per side)	RMB 12.00
SFC Levy(5) (per contract per side)	RMB 0.50
Commission Rate	Negotiable

Notes:

(1) There is no trading after 12:30 p.m. on the eves of Christmas, New Year and Lunar New Year. The trading hours on those three days shall be 8:30 a.m. – 12:30 p.m. There is no AHT session if it is a bank holiday in the United Kingdom, the United States and the People's Republic of China.

(2) There shall be no trading after 12:30 p.m. on the eves of Christmas, New Year and Lunar New Year. The trading hours on those three days shall be 8:30 a.m. – 12:30 p.m.

(3) All trades other than Block Trades in the expiring Contract Month that result from the matching on the trading system of (i) two orders in the individual market series; or (ii) a standard combination order and an order in the individual market series, and executed during the last thirty minutes of trading on the LTD.

(4) The amount indicated is subject to change by the HKFE from time to time.

(5) The RMB equivalent of HKD0.54 per contract at the exchange rate determined by the HKFE from time to time.

(c) USD London Aluminium/Zinc/Copper/Lead/Nickel/Tin Mini Futures

Feature	Details					
	USD London Aluminium Mini	**USD London Zinc Mini**	**USD London Copper Mini**	**USD London Lead Mini**	**USD London Nickel Mini**	**USD London Tin Mini**
Underlying Commodity	High Grade Primary Aluminium as defined in the rules and regulations of the LME from time to time	Special High Grade Zinc as defined in the rules and regulations of the LME from time to time	Copper – Grade A as defined in the rules and regulations of the LME from time to time	Standard Lead as defined in the rules and regulations of the LME from time to time	Primary Nickel as defined in the rules and regulations of the LME from time to time	Tin as defined in the rules and regulations of the LME from time to time
Trading Symbol	LUA	LUZ	LUC	LUP	LUN	LUS
Contract Size	5 tonnes / contract				1 tonne / contract	
Trading Currency	USD					
Settlement Currency	USD					
Contract Months	Spot month and the next eleven calendar months					
Trading Fee(1)	USD 0.50 per contract per side					
Settlement Fee(1)	USD 0.20 per lot					
SFC Levy(2)	USD 0.07 per contract per side					
Last Trading Day (LTD)	The LTD determined by the LME for the Aluminium/Zin/Copper/Lead/Nickel/Tin Futures Contract, which is two London business days before the third Wednesday of the Spot Month. If it is not a HK Business Day, the LTD shall be the immediately preceding HK Business Day.					
Trading Hours (Hong Kong Time) (other than on LTD)	Day trading session: 9:00 a.m. to 4:30 p.m. After-hours trading (AHT) session: 5:15 p.m. to 3:00 a.m. the next morning There is no trading after 12:30 p.m. on the eves of Christmas, New Year and Lunar New Year. The trading hours on those three days shall be 9:00 a.m. – 12:30 p.m. There is no after-hours trading session if it is a bank holiday in the United Kingdom, the United States and the People's Republic of China.					
Trading hours on LTD	Day trading session: 9:00 a.m. – 4:30 p.m.; AHT session: 5:15 p.m.- 8:00 p.m. (British Summer Time) / 9:00 p.m. (outside British Summer Time)	Day trading session: 9:00 a.m. – 4:30 p.m.; AHT session: 5:15 p.m.- 7:55 p.m. (British Summer Time) / 8:55 p.m. (outside British Summer Time)	Day trading session: 9:00 a.m. – 4:30 p.m.; AHT session: 5:15 p.m.- 7:35 p.m. (British Summer Time) / 8:35 p.m. (outside British Summer Time)	Day trading session: 9:00 a.m. – 4:30 p.m.; AHT session: 5:15 p.m.- 7:50 p.m. (British Summer Time) / 8:50 p.m. (outside British Summer Time)	Day trading session: 9:00 a.m. – 4:30 p.m.; AHT session: 5:15 p.m.- 8:05 p.m. (British Summer Time) / 9:05 p.m. (outside British Summer Time)	Day trading session: 9:00 a.m. – 4:30 p.m.; AHT session: 5:15 p.m.- 7:45 p.m. (British Summer Time) / 8:45 p.m. (outside British Summer Time)
Minimum Fluctuation	USD 0.5 / tonne				USD 1 / tonne	

Feature	Details					
	USD London Aluminium Mini	**USD London Zinc Mini**	**USD London Copper Mini**	**USD London Lead Mini**	**USD London Nickel Mini**	**USD London Tin Mini**
Final Settlement Date (FSD)	The second HK Business Day after the LTD					
Final Settlement Price (FSP)	Shall be determined by the Clearing House, and shall be the Official Settlement Price determined and published by the LME two London Business Days before the third Wednesday of the Spot Month					
Settlement Method	Cash-settled					
Holiday Schedule	Follow HKFE holiday schedule					
Combined Position Limits (USD and CNH contracts)	25,000	25,000	50,000	25,000	50,000	15,000

Notes:

(1) The amount indicated is subject to change by the HKFE from time to time.

(2) The USD equivalent of HKD0.54 per contract at the exchange rate determined by the HKFE from time to time.

(d) CNH London Aluminium/Zinc/Copper/Lead/Nickel/Tin Mini Futures

Feature	Details					
	CNH London Aluminium Mini	CNH London Zinc Mini	CNH London Copper Mini	CNH London Lead Mini	CNH London Nickel Mini	CNH London Tin Mini
Underlying Commodity	High Grade Primary Aluminium as defined in the rules and regulations of the LME from time to time	Special High Grade Zinc as defined in the rules and regulations of the LME from time to time	Copper – Grade A as defined in the rules and regulations of the LME from time to time	Standard Lead as defined in the rules and regulations of the LME from time to time	Primary Nickel as defined in the rules and regulations of the LME from time to time	Tin as defined in the rules and regulations of the LME from time to time
Trading Symbol	LRA	LRZ	LRC	LRP	LRN	LRS
Contract Size	5 tonnes / contract				1 tonne / contract	
Trading Currency	RMB					
Settlement Currency	RMB					
Contract Months	Spot month and the next eleven calendar months					
Trading Fee[(1)]	RMB 3.00 per contract per side					
Settlement Fee[(1)]	RMB 1.20 per lot					
SFC Levy[(2)]	RMB 0.44 per contract per side					
Last Trading Day (LTD)	The LTD determined by the LME for the Aluminium/Zin/Copper/Lead/Nickel/Tin Futures Contract, which is two London business days before the third Wednesday of the Spot Month. If it is not a HK Business Day, the LTD shall be the immediately preceding HK Business Day.					
Trading Hours (Hong Kong Time) (other than on LTD)	Day trading session: 9:00 a.m. to 4:30 p.m. After-hours trading (AHT) session: 5:15 p.m. to 3:00 a.m. the next morning There is no trading after 12:30 p.m. on the eves of Christmas, New Year and Lunar New Year. The trading hours on those three days shall be 9:00 a.m. – 12:30 p.m. There is no after-hours trading session if it is a bank holiday in the United Kingdom, the United States and the People's Republic of China.					
Trading hours on LTD	Day trading session: 9:00 a.m. – 4:30 p.m.; AHT session: 5:15 p.m.- 8:00 p.m. (British Summer Time) / 9:00 p.m. (outside British Summer Time)	Day trading session: 9:00 a.m. – 4:30 p.m.; AHT session: 5:15 p.m.- 7:55 p.m. (British Summer Time) / 8:55 p.m. (outside British Summer Time)	Day trading session: 9:00 a.m. – 4:30 p.m.; AHT session: 5:15 p.m.- 7:35 p.m. (British Summer Time) / 8:35 p.m. (outside British Summer Time)	Day trading session: 9:00 a.m. – 4:30 p.m.; AHT session: 5:15 p.m.- 7:50 p.m. (British Summer Time) / 8:50 p.m. (outside British Summer Time)	Day trading session: 9:00 a.m. – 4:30 p.m.; AHT session: 5:15 p.m.- 8:05 p.m. (British Summer Time) / 9:05 p.m. (outside British Summer Time)	Day trading session: 9:00 a.m. – 4:30 p.m.; AHT session: 5:15 p.m.- 7:45 p.m. (British Summer Time) / 8:45 p.m. (outside British Summer Time)

Feature	Details					
	CNH London Aluminium Mini	CNH London Zinc Mini	CNH London Copper Mini	CNH London Lead Mini	CNH London Nickel Mini	CNH London Tin Mini
Minimum Fluctuation	RMB 5 / tonne		RMB 10 / tonne	RMB 5 / tonne	RMB 10 / tonne	
Final Settlement Date (FSD)	The second HK Business Day after the LTD					
Final Settlement Price (FSP)	Shall be a whole number, determined by the Clearing House, and shall be the Official Settlement Price determined and published by the LME for its Aluminium/Zinc/Copper/ Lead/Nickel/Tin Futures, and converted to RMB equivalent using the USD/CNY(HK) Spot Rate published by the Treasury Markets Association in Hong Kong at or around 11:30 a.m. Hong Kong time on the LTD. It is rounded up if the figure in the first decimal place is 5 or above and rounded down if it is below 5.					
Settlement Method	Cash-settled					
Holiday Schedule	Follow HKFE holiday schedule					
Combined Position Limits (USD and CNH contracts)	25,000	25,000	50,000	25,000	50,000	15,000

Notes:

(1) The amount indicated is subject to change by the HKFE from time to time

(2) The RMB equivalent of HKD0.54 per contract at the exchange rate determined by the HKFE from time to time.

(e) Iron Ore Monthly Futures

Features	Details
HKATS Code	FEM
Underlying	TSI Iron Ore Fines 62% Fe CFR China Index
Contract Size	100 tonnes
Trading Currency	USD
Price Quotation	USD and cents per tonne
Contract Months	Spot Month and the next 23 calendar months
Minimum Fluctuation	USD 0. 01 per tonne
Maximum Fluctuation	Nil
Last Trading Day (LTD)	The last Hong Kong Business Day of a calendar month that is not a Singapore public holiday
Trading Hours(1) **(Hong Kong Time)** **(other than on LTD)**	Day trading session: 9:00 a.m. to 4:30 p.m. After-hours trading (AHT) session: 5:15 p.m. to 3:00 a.m.
Trading Hours on LTD(2) **(Hong Kong Time)**	Day trading session: 9:00 a.m. – 4:30 p.m. AHT session: 5:15 p.m. – 6:30 p.m.
Final Settlement Day	The second Hong Kong Business Day after the LTD, provided that if (i) the LTD is on the last Hong Kong Business Day before New Year's Day or the Lunar New Year, (ii) the Trading Hours of the Spot Month Contract and the Spot Quarter Contract end at 12:30 p. m. , and (iii) the day trading session of other Contract Months ends at 4:30 p. m. , the Final Settlement Day shall be the first Hong Kong Business Day after the LTD.
Final Settlement Price	Arithmetic average of all TSI Iron Ore Fines 62% Fe CFR China Index values published in that Contract Month, rounded to 2 decimal places
Settlement Method	Cash settled
Holiday Schedule	Follow HKFE holiday schedule
Trading Fee(3) **(per contract per side)**	USD 1.00
Settlement Fee(3) **(per contract per side)**	USD 1.00
Levies(4) **(per contract per side)**	USD 0.07
Commission Rate	Negotiable

Notes:

(1) There is no trading after 12:30 p.m. on the eves of Christmas, New Year and Lunar New Year. The trading hours on those three days shall be 9:00 a.m. – 12:30 p.m.

(2) There is no trading after 12:30 p.m. on the LTD that is the last Hong Kong Business Day before New Year's Day or the Lunar New Year, and which is also the last day before New Year's Day or the Lunar New Year on which the TSI Iron Ore Fines 62% Fe CFR China Index is published. The trading hours on those two days shall be 9:00 a.m. – 12: 30 p.m.

(3) The amount indicated is subject to change by the HKFE from time to time.

(4) The current rate is set at HK$ 0.54 per contract, for which the USD equivalent will be determined by the HKFE from time to time.

(f) Iron Ore Quarterly Futures

Features	Details
HKATS Code	FEQ
Underlying	TSI Iron Ore Fines 62% Fe CFR China Index
Contract Size	100 tonnes
Trading Currency	USD
Price Quotation	USD and cents per tonne
Contract Months	Spot Quarter and the next seven calendar quarters (i.e. calendar quarters are January to March, April to June, July to September and October to December)
Minimum Fluctuation	USD 0.01 per tonne
Maximum Fluctuation	Nil
Last Trading Day (LTD)	The LTD of the last Monthly Contract in the calendar quarter
Trading Hours(1) (Hong Kong Time) (other than on LTD)	Day trading session: 9:00 a.m. to 4:30 p.m. After-hours trading (AHT) session: 5:15 p.m. to 3:00 a.m.
Trading Hours on LDT(2) (Hong Kong Time)	Day trading session: 9:00 a.m. – 4:30 p.m. AHT session: 5:15 p.m. – 6:30 p.m.
Final Settlement Day	The second Hong Kong Business Day after the LTD, provided that if (i) the LTD is on the last Hong Kong Business Day before New Year's Day or the Lunar New Year, (ii) the Trading Hours of the Spot Month Contract and the Spot Quarter Contract end at 12:30 p.m., and (iii) the day trading session of other Contract Months ends at 4:30 p.m., the Final Settlement Day shall be the first Hong Kong Business Day after the LTD.
Final Settlement Price	Arithmetic average of the Final Settlement Prices of the three corresponding Monthly Contracts in that Contract Quarter, rounded to 2 decimal places
Settlement Method	Cash settled
Holiday Schedule	Follow HKFE holiday schedule
Trading Fee(3) (per contract per side)	USD 1.00
Settlement Fee(3) (per contract per side)	USD 1.00
Levies(4) (per contract per side)	USD 0.07
Commission Rate	Negotiable

Notes:

(1) There is no trading after 12:30 p.m. on the eves of Christmas, New Year and Lunar New Year. The trading hours on those three days shall be 9:00 a.m. – 12:30 p.m..

(2) There is no trading after 12:30 p.m. on the LTD that is the last Hong Kong Business Day before New Year's Day or the Lunar New Year, and which is also the last day before New Year's Day or the Lunar New Year on which the TSI Iron Ore Fines 62% Fe CFR China Index is published. The trading hours on those two days shall be 9:00 a.m. – 12: 30 p.m..

(3) The amount indicated is subject to change by the HKFE from time to time.

(4) The current rate is set at HK$ 0.54 per contract, for which the USD equivalent will be determined by the HKFE from time to time.