July 2017

RESEARCH REPORT

HONG KONG IS BUILDING UP ITSELF TO BE AN ASIAN GOLD PRICING CENTRE

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SUMMARY

Hong Kong Exchanges and Clearing Limited ("HKEX") launched dual-currency (USD and RMB pricing and settlement) physical delivery Gold Futures Contracts ("Gold Contracts") through its subsidiary, the Hong Kong Futures Exchange ("HKFE"), on 10 July 2017.

HKEX acquired the London Metal Exchange ("LME") in 2012 and, consistent with the vision drawn in its 2016-2018 Group Strategic Plan, aims to transform itself into a global vertically-integrated multi-asset class exchange. Commodities are one of the core pillars of HKEX's four-pronged multi-asset strategy. The launch of the HKEX Gold Contracts is a clear demonstration of HKEX's commitment to offer attractive commodity products in Asia.

Although the Hong Kong gold market has over 100 years of history, it still lags behind other global gold trading centres such as New York and London in term of benchmarking, liquidity, and completeness of product and service offerings. However, as a global financial centre located at the gateway of the world's second largest economy and the biggest gold consumer — China — Hong Kong has the right ingredients to become an Asian gold pricing centre.

Given Hong Kong's advantages as a free market and an entrepot trade centre, Hong Kong has an active physical gold trading market and enjoys the status as one of the major bullion markets in the world. In addition, being the largest offshore RMB centre, Hong Kong has a unique position in facilitating China's RMB internationalisation. The introduction of physically delivered gold futures in Hong Kong would be a stepping stone to achieving this objective.

The fundamental market demand for gold trading in China together with the trading demand from the rest of the world, and the related risk management demand well position Hong Kong to build itself up to be an Asian gold pricing centre. In order for Hong Kong to cultivate a new gold pricing benchmark, it is necessary to form a well-functioning marketplace to link up the spot market and the futures market and to provide efficient channels to serve these markets in Hong Kong, and to complete the gold ecosystem to include other gold-related financial products and services such as gold leasing and related derivatives. The formation of the new Hong Kong Asian benchmark will be established naturally as the liquidity grows via these channels within the ecosystem.

1. THE NATURE AND USES OF GOLD

Gold is a dense, bright, orange-yellow precious metal, which is soft, malleable and ductile. Due to its relative rarity and chemical nobility, gold is highly valued for jewellery and other decorative purposes, as an investment, and historically as a form of money. It is still a major component of central bank reserves as shown in Table 1.

Table 1. Top 20 reported official gold holdings (as at March 2017)

Rank	Economy / Multilateral Organisation	Tonnes	% of central bank reserves
1	United States	8,133.5	75%
2	Germany	3,377.9	69%
3	International Monetary Fund (IMF)	2,814.0	—
4	Italy	2,451.8	68%
5	France	2,435.9	64%
6	Mainland China	1,842.6	2%
7	Russia	1,680.1	17%
8	Switzerland	1,040.0	6%
9	Japan	765.2	2%
10	Netherlands	612.5	64%
11	India	557.8	6%
12	European Central Bank (ECB)	504.8	27%
13	Turkey	427.8	16%
14	Taiwan China	423.6	4%
15	Portugal	382.5	55%
16	Saudi Arabia	322.9	2%
17	United Kingdom	310.3	9%
18	Lebanon	286.8	21%
19	Spain	281.6	17%
20	Austria	280.0	46%

Source: IMF International Financial Statistics Database, World Gold Council.

The history of human understanding of gold can be traced back to the ancient Egyptian era more than five thousand years ago. Since then, gold and human development have been inseparably intertwined.

Chemically, gold is an element with the symbol Au (from Latin aurum) and atomic number 79 — one of the highest of the naturally-occurring elements. Gold occurs most often in free elemental form as nuggets or grains in rocks and alluvial deposits; there are also significant quantities of gold in the sea. Since the 1880s, South Africa has been the major source of world gold supply, having produced about 50%[1] of cumulative production to date. However, South Africa has recently been eclipsed by other producers, especially China.

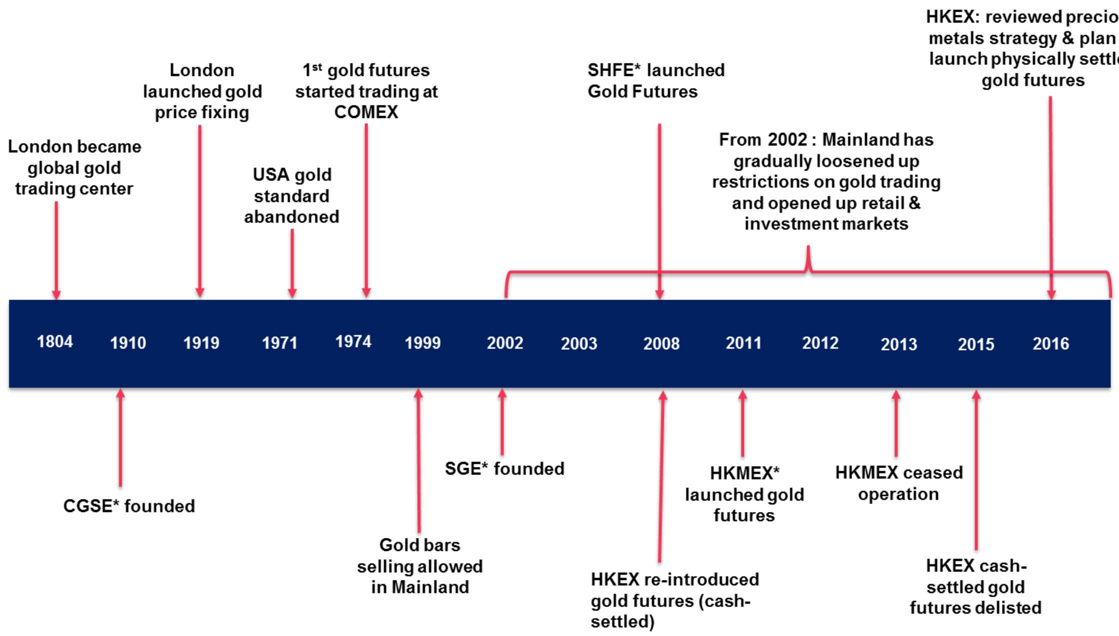
[1] World Gold Council.

The world's first gold coins were struck in Lydia Asia Minor around 600 BC, and gold was the base for monetary systems for most of subsequent human history. The world gold standard was abandoned only in 1971, and Switzerland continued using gold to back up 40% of its currency until 1999. Today, many central banks still keep a portion of their reserves in gold. Gold remains an important investment instrument — in the form of bullion, paper gold, derivatives and exchange traded funds (ETFs) — and in turbulent times gold is viewed as a safe haven investment. Surges in the gold price tend to come at times of war, and more recently, the 2008 Global Financial Crisis. However, as the investment universe has grown, gold's relative importance has declined.

Gold resists most acids and most alkalis, while conducting electricity well. These properties lead to its continuing use for corrosion-resistant conductors in computerised devices and electrical devices, its main industrial application. A typical mobile phone may include 50mg of gold, worth around US$2.00 in today's market price. Gold is also used in infrared shielding, coloured glass production and gold leaf. Gold is harmless when ingested, and is sometimes used for food decoration; gold salts are still used medically as anti-inflammatories.

As stated above, gold has been used as money throughout human history. The global development of trading and exchange of gold has been formed since 200 years ago. Figure 1 below shows some key events of this development in modern history — most of these happened after the abandonment of the gold standard when the Bretton Woods system collapsed in 1971.

Figure 1. Gold market development history



* CGSE — The Chinese Gold & Silver Exchange Society
HKMEX — Hong Kong Mercantile Exchange
SGE — Shanghai Gold Exchange
SHFE — Shanghai Futures Exchange

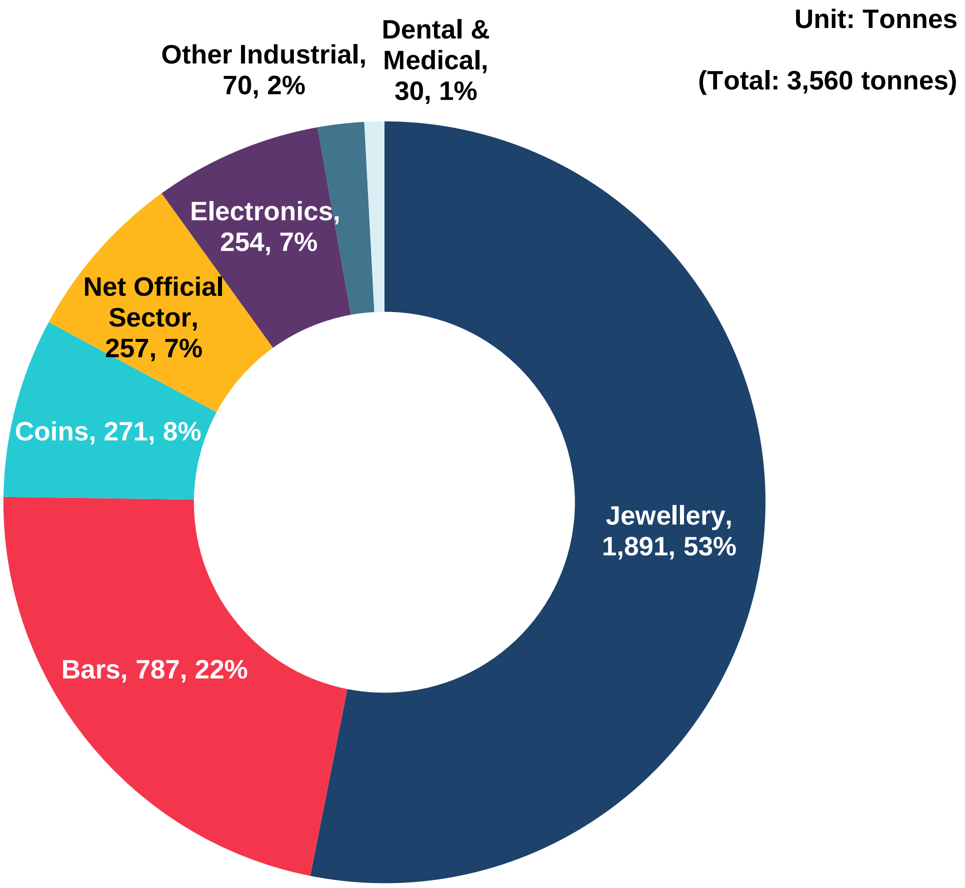
Source: HKEX, analysis on public sources of information.

2. GOLD FUNDAMENTALS

2.1 Gold supply and demand

About 53% of the world's 2016 consumption of gold is for jewellery, 37% for investments and 10% for industrial uses (see Figure 2). Since gold does not decay or easily react with other substances, most of the gold that have been mined by mankind over the millennia still exist, although a great part is likely lost, buried in graves, or (in the case of gold used for industrial purposes) embedded in junk in landfills. Nonetheless, gold scrap from existing privately-held stocks of jewellery and bullion, together with gold scrap from recycled industrial products are a significant source of annual supply alongside newly mined gold.

Figure 2. World physical demand for gold (2016)



Source: Gold Fields Mineral Services ("GFMS").

The price of gold, like that of other commodities, is driven by the balance between demand for the metal for jewellery and other purposes, and physical supply from mines and scrap. However, given the magnitude of useable above-ground stocks, physical surpluses or deficits are less important than in the case of other commodities in determining price (although they may impact lead times, premia and margins along the value chain). Because gold is still an investment instrument, monetary conditions and confidence in the economy are important drivers of its price. Throughout the history, gold has acted as a safe haven during time of uncertainties and market turmoil. As shown in Figure 3, gold prices spiked up to US$870 per troy oz during hyperinflation and energy crisis in 1980, and reached US$1,895 per tory oz in 2011 after the 2008 Global Financial Crisis.

Figure 3. Historical daily gold spot prices (Jan 1971 – June 2017)

Source: Bloomberg.

Gold mine production has been increasing over the past decade to exceed 3,000 tonnes annually as shown in Table 2 below. Gold scrap supply increased in 2016 by 8% year-on-year to 1,268 tonnes, in line with the recent increase in the gold price. And this is reversing the recent decline trend as it hit the lowest point of 1,158 of scrap supply in 2014 as shown in Table 2 below.

Table 2. World gold supply and demand (tonnes)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Supply										
Mine production	2,538	2,467	2,651	2,775	2,868	2,883	3,077	3,172	3,209	3,222
Scrap	1,029	1,388	1,765	1,743	1,704	1,700	1,303	1,158	1,172	1,268
Net hedging supply	-432	-357	-234	-106	18	-40	-39	108	21	21
Total supply	**3,135**	**3,498**	**4,182**	**4,412**	**4,590**	**4,543**	**4,341**	**4,438**	**4,402**	**4,511**
Demand										
Jewellery	2,474	2,355	1,866	2,083	2,091	2,061	2,610	2,469	2,395	1,891
Industrial fabrication	492	479	427	480	471	429	421	403	366	354
Electronics	345	334	295	346	343	307	300	290	258	254
Dental & medical	58	56	53	48	43	39	36	34	32	30
Other industrial	89	89	79	86	85	83	85	79	76	70
Net official sector	-484	-235	-34	77	457	544	409	466	436	257
Retail investment	449	937	866	1263	1616	1407	1873	1164	1162	1058
Bars	238	667	562	946	1,247	1,056	1,444	886	876	787

Table 2. World gold supply and demand (tonnes)										
	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Coins	211	270	304	317	369	351	429	278	286	271
Total physical demand	**2,931**	**3,536**	**3,125**	**3,903**	**4,635**	**4,441**	**5,313**	**4,502**	**4,359**	**3,560**
Physical surplus/deficit	**204**	**-38**	**1,057**	**509**	**-45**	**102**	**-972**	**-64**	**43**	**951**
ETF inventory build	253	321	623	382	185	279	-880	-155	-125	524
Exchange inventory build	-10	34	39	54	-6	-10	-98	1	-48	86
Net balance	**-39**	**-393**	**395**	**73**	**-224**	**-167**	**6**	**90**	**216**	**341**

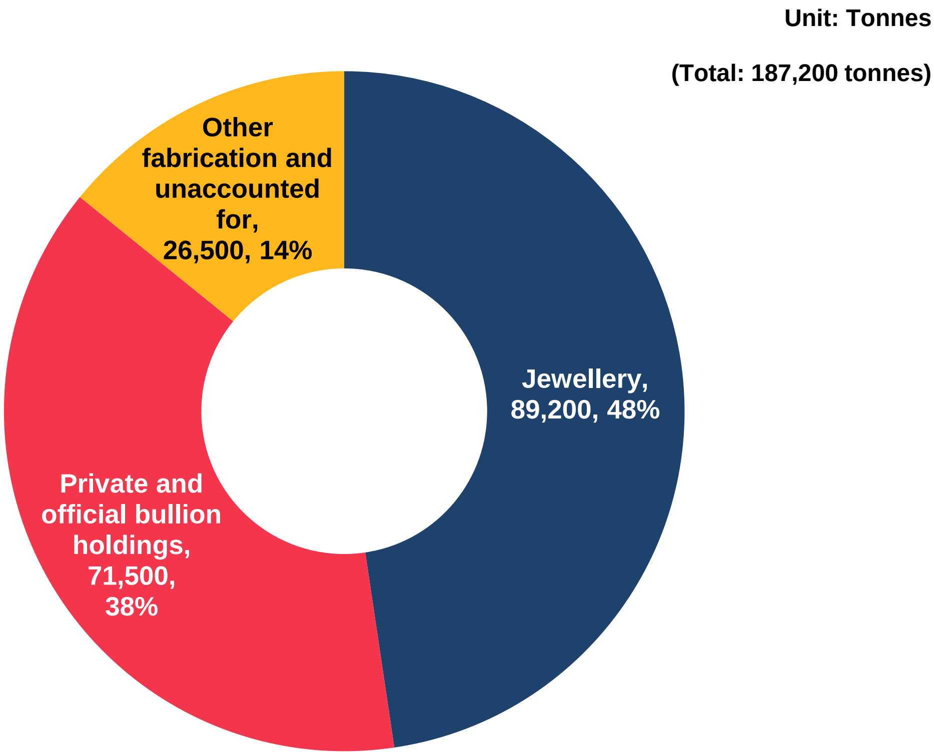
Source: GFMS.

As shown in Table 2 above, the total physical demand for gold continued to fall by 18% in 2016 to a three-year low of 3,560 tonnes, with declines in all demand areas. Jewellery remained the biggest source of demand, followed by retail investment. However, jewellery demand fell by 21%, largely because of a sharp fall in Indian and Chinese consumption[2]. Industrial fabrication continued to decline, falling by 3% to 354 tonnes, the lowest level in a decade, because of the weak demand in all major sectors, particularly in electronics (along with ongoing substitution of gold usage in the industry) and in dental and decorative uses. However, the total non-physical investment in gold increased to 610 tonnes (largely due to ETF buying in the year compared with the net sale recorded in the previous year), as investors allocating more funds to the ETF and futures trading.

According to GFMS, the total above-ground gold stocks (defined as the cumulative historical total of mine production) increased by 1% year-on-year to 187,200 tonnes in 2016. This is equivalent to a value of about US$7.6 trillion as of June 21, 2017. As shown in Figure 4, jewellery stocks were the largest component which accounted for about 48%, followed by private investment and official holdings which accounted for about 38%.

[2] World Gold Council.

Figure 4. Total Global above-ground gold stocks (2016)

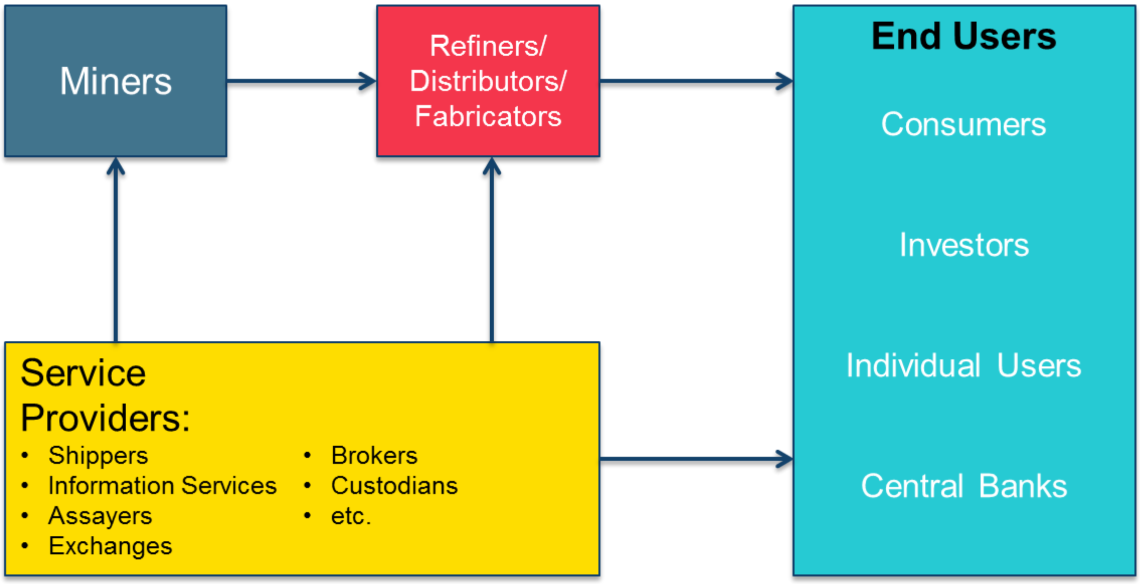


Source: GFMS.

2.2 Main players in the gold value chain

There is an ecosystem of different players in the gold value chain as shown in Figure 5 below. Miners extract and process ore to deliver raw gold to processors which further refine and distribute it to consumers which in turn fabricate the gold into products that can be distributed to end-users, namely retail consumers, investors, industrial users and central banks. The value chain is supported by numerous service providers such as assayers who certify the quality and weight of gold bars, custodians who keep gold safe in their vaults, information vendors who disseminate gold prices and exchanges providing marketplaces for their members to trade gold contracts.

Figure 5. Gold value chain



Source: HKEX.

3. GLOBAL GOLD MARKETS

The global gold market is largely distributed but dominated by London-centric over-the-counter (OTC) trading. Nevertheless, there are significant volumes as recorded in a small number of futures exchanges, principally COMEX of the CME Group and the Shanghai Futures Exchange (SHFE). Information that affects the price of gold can be generated in many places, including mines, jewellery demand, central bank transactions, and macro-economic developments. The gold market ecosystem has been well established in the western world as they are ranging from spot trading to forward trading, gold leasing, and financing and other derivatives products. Currently, the global gold prices are set in spot fixing from London and futures trading from New York. These two western markets and the eastern markets, Mainland China and Hong Kong, are described below.

3.1 Western markets

3.1.1 London-based OTC market

London gold market development history can be traced back to over 200 years ago when London overtook Amsterdam to become the centre of the world's gold trading in 1804. London Bullion Market Association ("LBMA") — a wholesale OTC market for the trading of gold and silver — began operation in 1919, and the daily market prices were set by the five major bullion merchants and banks. The London price also influenced the gold prices in New York and Hong Kong. Currently, London is still the world's largest gold spot trading market, and global bullion trades still make reference to the London gold price as the benchmark.

In 2016, LBMA clearing members transferred and cleared around 157,828[3] tonnes of gold with a value of US$6.3 trillion. The activity at LBMA, largely among commercial banks, may lead to physical movements of gold or merely paper movements. Such 157,828 tonnes of

[3] The transferred and cleared figure by the LBMA clearing members is obtained from the LBMA Website, and the figures in the rest of the paragraph are estimated by HKEX based on various of channels including gold news articles and consulting with major bullion players in the gold industry.

gold transfers by LBMA clearing members in 2016 amount to around one-eighth of London market trading volume. The contribution of London volume to the world total has dropped from 90% to 65% in 2016 because of the rise of trading centres in China, Thailand and Singapore. Total world turnover for 2016 is estimated at 1,867,000 tonnes with a value of US$75 trillion. This is equivalent to 580 times mine production. Because of such ample liquidity, gold (like most currencies) trades at full carry.

3.1.2 Zurich gold market

The gold market of Zurich is not in any formal establishment as in London. Instead, the market is mainly supported by the three major Swiss banks providing liquidity and clearing services in the OTC market. Switzerland is the world's largest gold transit hub as it hosts some of the world's most recognised gold refiners, such as PAMP and Metalor. In addition, it is also the world's largest private gold storage centre mainly due to its special legal framework which provides additional protection to gold owners.

3.1.3 CME Group's COMEX futures market

COMEX (currently under CME Group), formerly known as the Commodity Exchange Inc., was established in 1974 after the US abandoned the gold standard in favour of a flexible mechanism for the pricing of gold against the US dollar and as a result of increasing arbitrage or investment demand from the majority of legal entities in the US.

Prompted by the sharp volatility of the US dollar and other factors, the US gold futures market expanded rapidly in the years from 1978 to 1980. Today, COMEX is the world's largest gold futures trading centre by trading volumes, with tremendous influence on spot gold prices. The COMEX gold futures are monthly contracts with daily delivery mechanism during the delivery month. All of the delivery points are in New York City and the nearby State of Delaware. In 2016, COMEX had a total notional trading volume of 179,000 tonnes in gold futures[4].

3.2 Eastern markets

3.2.1 Mainland China gold market

In 1950, China prohibited private ownership of bullion and put the gold industry under state control. During the initial phase of economic reform from 1978 onwards, the gold market cautiously opened, mainly in the form of jewellery manufacturing in the Shenzhen Special Economic Zone. The central role of the People's Bank of China (PBOC) in the regulation, supervision and control of the purchase and distribution of gold and silver in China was confirmed by the 1983 Regulations on the Administration of Gold and Silver. The PBOC was also given the responsibility for managing the country's gold reserves. Following the 2001 abandonment by the PBOC of its controls on the purchase, allocation and pricing of gold, private sector demand for jewellery and, more recently, investment gold, expanded rapidly.

With the PBOC relinquishing direct control, prices were set on the Shanghai Gold Exchange (SGE), of which the PBOC was the key founder and key stakeholder. The SGE commenced trading on 20 October 2002. All refined gold was sold on the SGE, which was the only market for the purchase of gold by industry and financial institutions. All imported bullion was made available through the SGE. Further liberalisation took place in 2003 when the licensing system for running businesses in gold and silver products was abolished, and in 2004 when private persons were allowed to own and trade bullion.

[4] FIA.

The Chinese gold market remains under indirect state control. While private trade in gold has largely been liberalised, the interaction between China and international markets remains restricted which is a key element of capital account controls. The SGE's launch of an International Board for gold in the Shanghai Free Trade Zone (FTZ) in 2014, which admits international trading participants, is a further cautious liberalisation measure. However, there has been little trading to date.

Key milestones in China's gold policy and market development are shown in Table 3 below.

Table 3. Milestones in China's gold policy and key market developments

Year	Description
1950	• Gold industry under state control • Private holding of bullion prohibited
1983	• PBOC Regulations on administration of gold
1995	• Consumption tax on gold jewellery halved from 10% to 5%
1996	• New jewellery pricing structure — raw material cost separated from labour cost
1998	• PBOC Shenzhen Branch commenced gold imports from UBS, HSBC, Investco
2001	• China Gold Association established • Retail price control abolished by State Price Bureau
2002	• SGE started formal trading, trading exempt from value-added tax ("VAT")
2004	• Prohibition on gold bullion lifted
2007	• China became world's biggest gold producer
2008	• Foreign bank members admitted to SGE: HSBC, Scotia Mocatta, ANA, UBS, Standard Chartered • SHFE gold futures launched
2010	• ICBC launched Gold Accumulation Plan • Four more banks given licences to import gold
2011	• First foreign banks allowed to trade gold on SHFE: ANZ, HSBC
2012	• OTC interbank trading permitted, cleared through SGE
2013	• China world's biggest gold consumer • First China gold ETF launched in July • Foreign banks granted licences to import gold: ANZ, HSBC
2014	• Launch of SGE International Board in Shanghai FTZ
2016	• Launch of SGE Gold Fixing

Source: World Gold Council.

In 1978, China's gold production was less than 10 tonnes per annum. By 2016, production had increased to 453 tonnes. Measures taken to boost output included setting up the forerunner of China National Gold Group Corporation and the establishment of a special gold mining unit of the People's Liberation Army to prospect for gold and develop gold mines. Facilitative policies and investments were introduced in the 1981-85 and 1986-90 Five-Year Plans, bringing China's annual gold production to 100 tonnes in the early 1990s, with growth continuing strongly thereafter. China became the world's largest gold producer in 2007, and accounted for 14% of production in 2016.

Although gold supply from domestic production and recycling of gold has risen in recent years, it has been outstripped by domestic demand, with the result that China has swung from a gold surplus to a large gold deficit. Even though China does not publish figures on its gold imports, and China's gold imports have increased considerably since 2010, of which most was imported via Hong Kong[5].

China's gold trading is mainly concentrated on the SGE and the SHFE. The SGE is China's only legitimate physical spot gold trading venue, which connects gold production and consumption demands. The SHFE was launched in 2008 and is only the gold futures market place in Mainland China.

The SGE trades spot, and more recently spot-deferred contracts. Retail investors can trade gold by opening accounts with banks that are members of the exchange. Initially this was via a pilot scheme operated by ICBC, but the contract size of 1 kg was too large for retail investors. In July 2007, retail investors were allowed to start trading Au9999 and Au100g contracts via banks. According to SGE, by 2010, some 1.8 million retail investors accounted for 19% of the exchange's trading[6]. That year the SGE traded 5,715 tonnes, and in 2016 it traded over 23,000 tonnes[7]. All gold contracts on the SGE can now be traded by retail investors. The contracts are settled by physical delivery, but most are traded for speculative purposes with positions closed before settlement.

In September 2014, the SGE opened an International Board in the Shanghai FTZ with RMB-denominated futures contracts. The contract traded a modest 78 tonnes of notional gold in the period from launch to the end of 2014, rising somewhat to 50 tonnes in the first two months of 2015. In April 2016, the SGE launched a RMB gold price fixing for the first time in history.

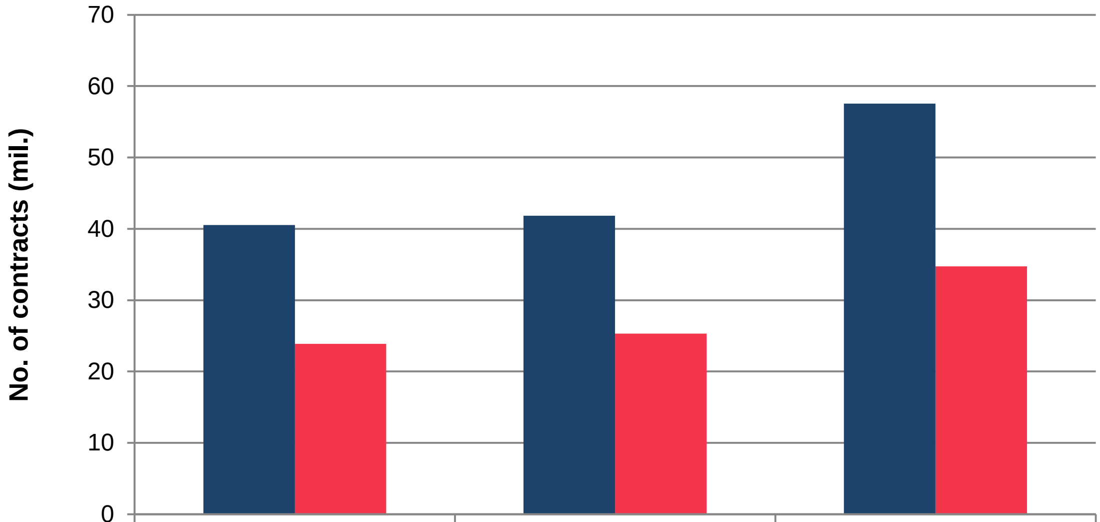
According to Futures Industry Association (FIA), the SHFE gold futures trading volume has been ranked second by number of contracts behind the COMEX gold globally since 2013, and the volume comparison in the past few years between the two exchange is shown in Figure 6 below.

[5] Metals Focus.

[6] Shanghai Gold Exchange.

[7] Shanghai Gold Exchange.

Figure 6. Trading volume of COMEX and SHFE gold futures



	2014	2015	2016
COMEX	40.5	41.8	57.6
SHFE	23.9	25.3	34.8

Source: FIA and SHFE.

3.2.2 Hong Kong gold market

Hong Kong, with its proximity to the national gold fabrication centre of Shenzhen, is the main source of China's gold imports, recording 867[8] tonnes in 2016, accounting for about 86% of the China's total gold imports.

Hong Kong has been a significant centre for gold trading for over a century. As the Mainland China market opens up, Hong Kong also has a significant role as a centre for physical gold trading between China and the world.

The formation of the gold market in Hong Kong emerged upon the establishment of the Chinese Gold and Silver Exchange Society (CGSE) in 1910. Since the Hong Kong Government revoked its controls over gold imports and exports in 1974, the Hong Kong gold market has boomed. The Hong Kong gold market has now become an important gold investment and trading hub in Asia, connecting with the other time zones in Europe and the Americas. Given Hong Kong's significance in global gold trading, the five major gold merchants from London and the three major banks from Switzerland have set up trading desks and branches in Hong Kong. With the strong participation from the foreign major bullion players, gold pricing in the Hong Kong market has made reference to the London benchmark ever since.

4. FEASIBILITY OF BUILDING A HONG KONG BENCHMARK

4.1 Is Hong Kong ready for physical delivery gold futures?

Although the Hong Kong gold market has over 100 years of history, it still lags behind other global gold trading centres such as New York and London in terms of benchmarking, liquidity, and completeness of offering in related products and services. However, as a global financial centre located at the gateway of China, the world's second largest economy and the biggest gold consumer, Hong Kong has the right ingredients to become the Asian gold pricing centre.

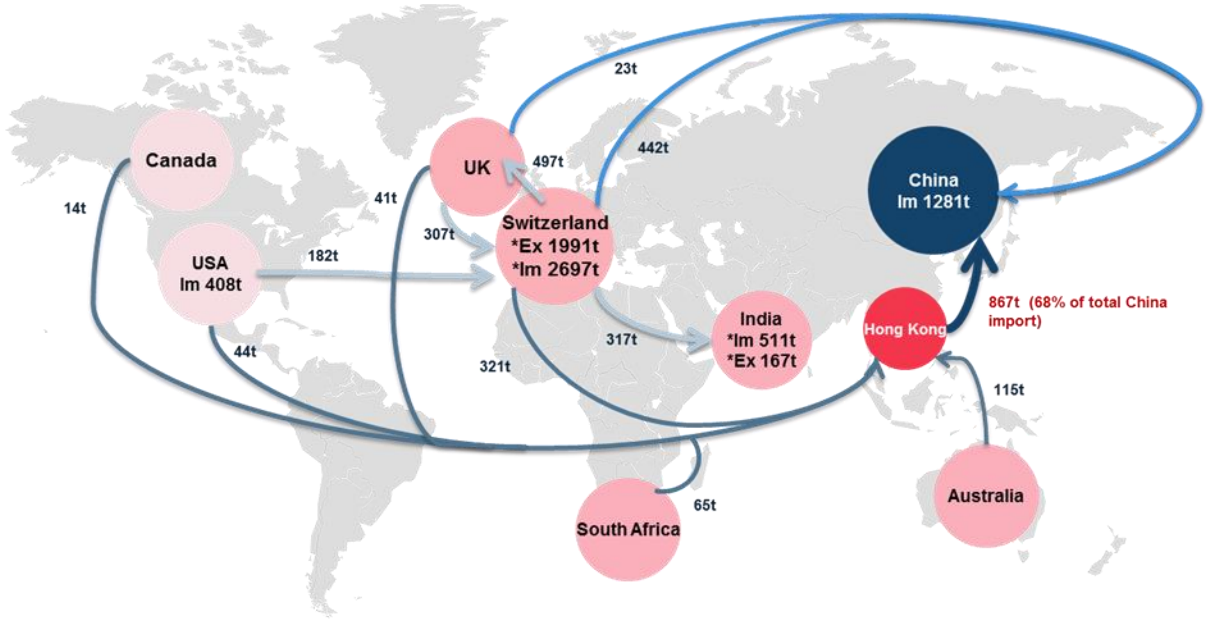
[8] Metal Focus.

Backed by the city's well established financial market, this special mission can be accomplished by HKEX and the major financial institutions as well as relevant regulators working together to meet the needs of the market, to ride on the international gold market trends, and gradually increase the Hong Kong gold market's pricing power outside the European and the American trading hours. With reference to the history development of the world's major commodity markets' pricing, the formation of a new pricing centre should meet two basic conditions as explained below.

(1) High fundamental market demand for trading and risk management

One of the key natural factors in forming a price benchmark is the need for large-scale physical trading activities. As shown in Figure 7, China imports about one-quarter of the world's supply, and there is about 70% of such imports go through Hong Kong.

Figure 7. Global flows of physical gold (2016)



Note: Unit in tonnes (t).

Source: HKEX, analysis based on Metals Focus data.

With such high volume, it is fundamentally sound to develop related derivatives market to serve the risk management needs as these markets developed in New York and London previously.

(2) A sound marketplace with effective usage of spot and derivatives market

In order for Hong Kong to cultivate a new gold pricing benchmark, it is necessary to form a well-functioning marketplace to link up the spot market and the futures market and to provide efficient channels to serve these markets in Hong Kong, needless to say the offering of other gold-related financial products and services such as gold leasing and related derivatives as the London and New York markets provide currently.

4.2 The golden opportunity for Hong Kong

During the past century, Hong Kong's spot gold market has been very active, from refining, processing, inspection, to wholesale and retail, to trading and hedging. These constitute an impetus to Hong Kong's gold import and re-export trade. However, the Hong Kong gold market has been opaque and retroactive, in which the physical trading volume has been traditionally linked to London gold as the basis for pricing benchmark due to the dominance of the London benchmark globally.

Even though the SGE and SHFE have dominated activities in the Mainland Chinese gold onshore market, due to differences in the laws and regulations between the onshore market and the offshore market, and the capital and gold import/export control, and the Mainland gold benchmarks cannot be referenced commercially from Hong Kong. Therefore, the HKEX has a unique timeframe and geographical advantage to develop the right products to serve the market needs.

It is the time for Hong Kong to act to gain the pricing power in one way or another. One of the effective ways is the launch of the dual-currency (USD and RMB pricing and physical settlement) physical-delivery gold futures products by HKEX. With the launch of the HKEX gold futures market, the picture of spot and futures trading in gold will be completed in Hong Kong. The ecosystem built up can be extended to connect Mainland China with the developed western markets in both spot and derivatives trading in gold by the major bullion players via various channels as they see trading opportunities across the market. The result of which would be the formation of the new Hong Kong Asian benchmark as the liquidity grows and as world recognition is being established.

In addition, LME, the London entity of the HKEX Group, also launched gold futures (along with silver futures contracts) on London on 10 July 2017. This will provide round-the-clock, dual-location coverage for gold futures trading to meet the commercial needs of the HKEX Group clients. This can enhance London gold trading via “financialising” and “futurising” the spot trading activities into the LME liquidity pool.

As the gold futures (priced in both USD and RMB) market grows, more effective interactions between other related areas supporting the gold-trading ecosystem can be promoted. These areas include the interest rates, foreign exchange (FX) rates and gold-leasing markets. As the gold market ecosystem matures, along with an active gold futures market, this will offer fundamental support to the offshore RMB interest rate market, and ultimately RMB internationalisation. In the end, a new Asian gold benchmark can be formed naturally.

5. HKEX GOLD FUTURES: PRODUCT DESIGN AND KEY TECHNICAL POINTS

5.1 New market landscape

HKEX acquired LME in 2012 and, as the vision drawn in its 2016-2018 Group Strategic Plan, aims to transform itself into a global vertically-integrated multi-asset class exchange. Commodities is one of the core pillars of HKEX’s four-pronged multi-asset strategy. The launch of the HKEX Gold Contracts is a clear demonstration of HKEX’s commitment to offer attractive commodity products in Asia.

As stated above, given Hong Kong’s advantages as a free market and an entrepot trade centre, Hong Kong has an active physical gold trading market and enjoys the status as one of the major bullion markets in the world.

In addition, being the largest offshore RMB centre, Hong Kong has a unique position in facilitating the Mainland’s RMB internationalisation. The introduction of the physically delivered gold futures in Hong Kong is a stepping stone to achieving this objective as physical gold can be used as a “backing” for a fiat currency via an interest rate of RMB and leasing interest rate of gold mechanism similar to the current USD and gold relationship.

5.2 Product design and key factors for consideration

In order to meet customers' needs, the following key factors were considered when the contracts were designed:

(a) ***Underlying and contract size*** — Gold not less than 0.9999 fineness and 1 kilogram is commonly traded by Asian customers, especially in Greater China; the physical delivery mechanism ensures market price converging to the real physical spot market to establish the new benchmark in Hong Kong, providing a robust risk management tool for the end users.

(b) ***Trading and settlement currency*** — The trading and settlement currency in USD and CNH will attract both USD- and CNH-based investors. The dual-currency Gold Contracts will generate an implied USD/CNH FX rate as the Gold Contracts have the same underlying. There will be arbitrage opportunities between this rate and other rates in the FX market, hence increasing the overall liquidity of USD/CNH while improving and smoothing out the forward curves among these markets.

(c) ***Contract months*** — The spot plus 11 following consecutive calendar months will cover the most liquid trading months in both international and Mainland futures markets and will provide the physical market with more hedging tools.

5.3 Product applications and users of HKEX gold futures

The value proposition of introducing the Gold Contracts for investors include but are not limited to the following:

(a) To facilitate the Mainland and international investors' access to the gold market via a robust trading hub at HKEX in an Asian time zone;

(b) To provide hedging and risk management options for investors and end users;

(c) To provide more investment options for the growing offshore RMB deposits; and

(d) To attract investors who prefer gold exposure in their portfolio.

The potential users and customers of the Gold Contracts are:

(a) Physical players such as gold refiners, fabricators and jewellers who need to hedge gold price risk;

(b) Financial players such as banks and funds who utilise the futures market to link with their gold-related investment products, and arbitrageurs who trade price disparity between onshore and offshore markets i.e. between New York, London, Shanghai and Hong Kong markets and deploy other trading strategies for FX and interest rate disparity; and

(c) Other investors and traders who have an appetite for gold exposure.

APPENDIX 1. HKEX GOLD FUTURES CONTRACT SPECIFICATIONS[9]

Contract	USD Gold Futures	CNH Gold Futures
Underlying	1 kilogram gold of not less than 0.9999 fineness, bearing a serial number and identifying stamp of a Recognised Refiner	
Contract Size	1 kilogram	
Trading Currency	US dollars	RMB
Contract Months	Spot Month and the next eleven calendar months	
Minimum Fluctuation / Tick Size	USD0.01 per gram	RMB0.05 per gram
Trading Hours (Hong Kong Time)	8:30 am to 4:30 pm (day trading session), and 5:15 pm to 1:00 am the next morning (after-hours trading session)	
Last Trading Day	The third Monday of the Contract Month (postponed to the next business day if it is a Hong Kong public holiday)	
Final Settlement Day	The second Hong Kong Business Day after the Last Trading Day	
Settlement Type	Physical settlement	
Exchange Fees[10]	Trading Fee: USD1.00 per contract per side Settlement Fee: USD2.00 per contract per side	Trading Fee: RMB6.00 per contract per side Settlement Fee: RMB12.00 per contract per side

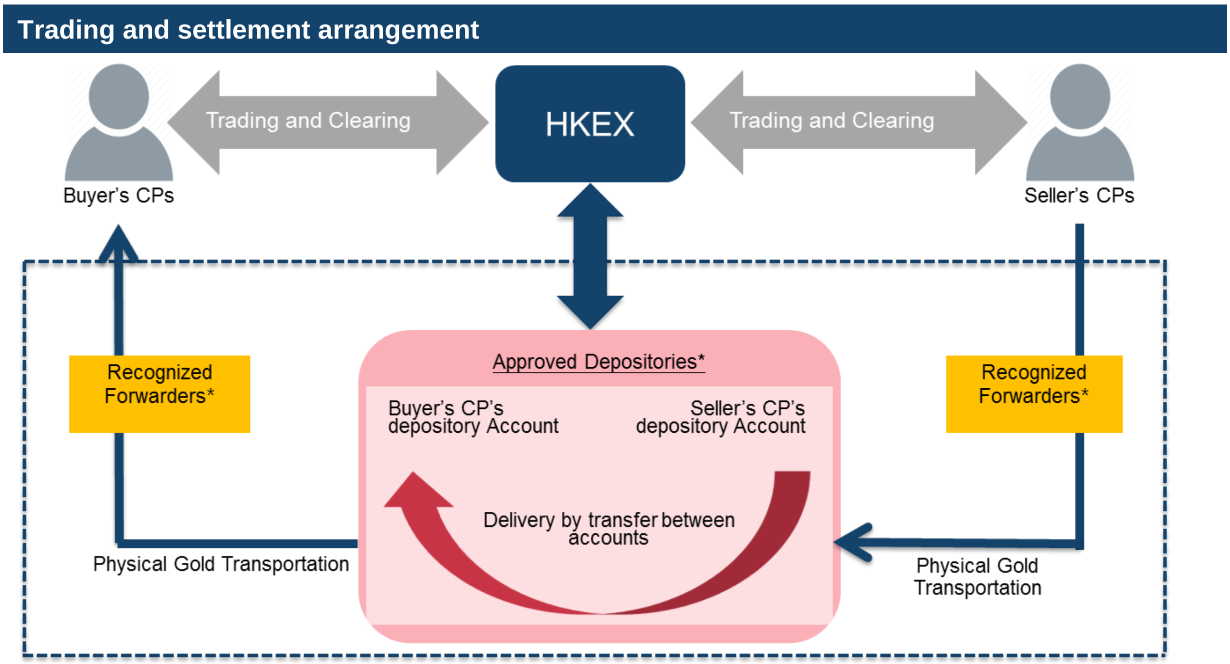
[9] All first-letter capitalized terms are defined in following Links for trading and clearing rules amendments for the gold products.
http://www.hkex.com.hk/eng/rulesreg/traderules/traderuleupdate-hkfe/Documents/49-17-HKFE-Star_e.pdf
http://www.hkex.com.hk/eng/rulesreg/clearrules/clrruleupdate_hkcc/Documents/50-17-HKCC-Star_e.pdf

[10] The amount indicated above is subject to change by the Exchange from time to time.

APPENDIX 2. TRADING AND SETTLEMENT ARRANGEMENT AND REQUIREMENTS[11]

1. Trading and settlement arrangement

The trading and settlement arrangement is shown as in the chart below.



Source: HKEX;

Note: *: List of Approved Depositories, Recognised Forwarders will be published on the HKEX website and updated from time to time.

2. Trading and settlement requirements

An HKFE Clearing Corporation Limited ("HKCC") Participant who wants to take/make physical delivery needs to have: USD and/or CNH settlement account(s) with Settlement Banks; and opened accounts with each of the Approved Depositories or signed Delivery Agreement with another Clearing Participants with delivery capability.

[11] All first-letter capitalized terms are defined in following Links for trading and clearing rules amendments for the gold products.
http://www.hkex.com.hk/eng/rulesreg/traderules/traderuleupdate-hkfe/Documents/49-17-HKFE-Star_e.pdf
http://www.hkex.com.hk/eng/rulesreg/clearrules/clrruleupdate_hkcc/Documents/50-17-HKCC-Star_e.pdf

APPENDIX 3. CHAIN OF INTEGRITY[12]

In order to build and maintain a robust and sound mechanism for the quality of the gold bars delivered into the HKEX market, a chain of integrity which is vital in the bullion market globally is formed as below to protect the Exchange and its members.

HKEX requires all Deliverable Metals to be certified by a Recognized Refiner and must be accompanied by documentation issued by the HKCC Participant or its Recognized Forwarder, evidencing that the Deliverable Metals have been shipped or transported to an Approved Depository by a Recognized Forwarder from another Approved Depository, a Recognized Assayer, Recognized Refiner or a Recognized Depository.

Brink's Hong Kong Limited ("Brink's") is appointed as the first Approved Depository to support physical settlement of the gold futures contracts. All HKCC Participant who wants to take/make physical delivery are required to open storage accounts with Brink's.

The latest lists of the Recognized Forwarder, Recognized Assayer, Recognized Refiner and Recognized Depository will be published on HKEX Website.

[12] All first-letter capitalized terms are defined in following Links for trading and clearing rules amendments for the gold products.
http://www.hkex.com.hk/eng/rulesreg/traderules/traderuleupdate-hkfe/Documents/49-17-HKFE-Star_e.pdf
http://www.hkex.com.hk/eng/rulesreg/clearrules/clrruleupdate_hkcc/Documents/50-17-HKCC-Star_e.pdf