## Going for gold – an introduction to the Shanghai International Gold Exchange

January 2019





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#### Introduction

China is the world's top consumer, producer and importer of gold. Yet, the price of gold and other precious metals continues to be determined by the precious metals markets in London and elsewhere.

China's first attempt at creating an international price for a commodity arose through its establishment of the Shanghai International Gold Exchange (SGEI) in September 2014, long before its recent attempts to establish an international price for crude oil and iron ore in Chinese yuan (RMB). It is worth noting that while China recognises the dual nature of gold as being both a commodity and a financial product, gold is treated more as a 'financial product' than a 'commodity'.

The SGEI is registered in the China (Shanghai) Pilot Free Trade Zone (Shanghai FTZ) and is a wholly owned subsidiary of the Shanghai Gold Exchange (SGE). The SGE was itself established in October 2002 by China's central bank, the People's Bank of China (PBOC). The SGEI enables foreign institutions and individuals to access China's gold market, using free trade accounts (FT Accounts) located in the Shanghai FTZ (i.e., the FT Account system) and the preferential policies applicable to the Shanghai FTZ.

Today, the SGE is the world's largest exchange for physical gold by trading volume, and is supported by the gold futures market of the Shanghai Futures Exchange (SHFE) and the over-the-counter (OTC) gold market. Gold trading volumes on the SGE in 2017 reached approximately 54,300 tonnes, amounting to RMB 14.98 trillion, and this grew more than 24% to approximately 67,500 tonnes, amounting to RMB 18.30 trillion in 2018.

#### **Development of SGE**

The SGE has developed a diverse suite of products and services to meet market demand. Beyond physical spot trading of gold, the SGE itself offers, or facilitates through others:

- price matching trading in precious metals (including spot and deferred products);
- OTC derivative gold products such as spot, forward, swap and option contracts, and exchange traded funds (ETFs);
- a gold leasing market, allowing for bank-to-enterprise leasing as well as inter-bank lending; and
- clearing, delivery, storage and shipment services for gold.

The SGE and SGEI (together, the Exchange) are at the heart of the Chinese precious metals markets, and are a key tool in support of PBOC's internationalisation of Chinese precious metals. The SGEI was launched, with its RMB-denominated gold contracts, for trading by international participants using offshore RMB. Then in 2015, the SGE co-developed the 'Shanghai-Hong Kong Gold Connect' to connect members of the Chinese Gold & Silver Exchange Society in Hong Kong (HK CGSE) with the SGE. More recently, in 2016, the SGE launched the Shanghai Gold Benchmark Price, creating the first RMB-denominated gold benchmark price catering to Asian trading hours.

#### Interaction with SGEI

The SGEI was set up to serve three main purposes:

- i. as an information technology interface enabling international members to trade on the domestic Main Board (MB);
- ii. to implement the clearing of offshore funds using FT Accounts; and
- iii. to facilitate transhipment trades by countries in South-east Asia and East Asia, centred around Shanghai.

The SGEI offers international investors the opportunity to participate in China's gold market by creating, onshore within the Shanghai FTZ, an 'offshore' market. The SGEI oversees the International Board (IB), which lists three RMB-denominated physical gold contracts, as distinct from but in parallel to the domestic MB. However, in many ways, the SGE and the SGEI

adopt similar rules and systems, with additional rules for SGEI participants to enable the SGEI to govern the 'international context'.

A good example of the distinction that exists between the SGE and the SGEI relates to the location of the underlying gold traded on the IB. This gold is physically segregated from the domestic market, in a separate SGEI certified vault located in the Shanghai FTZ. This allows international participants to freely deal in physical gold, including the load-in, load-out, storage and delivery of physical gold within the SGEI certified vault, in accordance with the SGEI rules, guidelines and customs procedures (on delivery and management of bullion, see further below).

The MB lists a wider variety of contracts, including silver and platinum products, not all of which are available to international members and their customers. The table below summarises the list of MB and IB products currently available.

Board venue	Product type	Product code	Certified vault for delivery	Domestic member/ customer	International member/ customer
	Spot gold products	Au99.95		Transaction and delivery allowed.	
		Au99.99			
		Au100g			<ol> <li>Transaction and</li> </ol>
		Au99.5			delivery allowed.
		Au(T+D)			2. Load-in and load-out
	Deferred gold	Au(T+N1)			prohibited.
Main Board (SGE)	products	Au(T+N2)	SGE certified vault		
		mAu(T+D)			
	Deferred silver products Ag(T+D)			Load-in and load-out allowed.	Transaction allowed.     Delivery, load-in and load-out prohibited.
	Silver	Ag99.9			Unable to transact since
		Ag99.99			physically settled and no
	Platinum	Pt99.95			dealing in physical delivery allowed.
International Board (SGEI)	Spot gold products	iAu99.99	SGEI certified vault	Transaction and delivery allowed.     Load-in and load-out prohibited.	<ol> <li>Transaction and</li> </ol>
		iAu99.95			delivery allowed.
		iAu100g			2. Load-in (only if authorised) and load-out allowed.

International members and their customers are able to transact and deliver in specified MB gold contracts, although load-in and load-out of the SGE certified vaults are prohibited. Similarly, domestic members and their customers may transact and deliver in IB contracts, but are prohibited from load-in and load-out of the SGEI certified vaults. A physical gold import licence is needed to import any of the gold into the domestic market, for subsequent trading on the MB, and this licence is granted sparingly. Any physical gold export from the domestic market is still generally prohibited at present. This restriction clearly separates domestic market gold volumes from international market gold volumes.

International members and their customers are also required to open FT Accounts with designated settlement banks, using offshore RMB (i.e., CNH) and the FT Account system in the Shanghai FTZ, in order to settle their trades. Funds can be remitted freely between an FT Account and: (i) an overseas account; (ii) an onshore non-residential account; or (iii) other FT Accounts.

#### International members and their role in the Exchange

Customers are classified by their brokerage member as 'Domestic Customers' or 'International Customers'. Customers are identified by trading codes, and brokerage members can only execute trades for each customer according to the customer's trading code. Each trading code comprises two elements: (i) the seat code of the brokerage member; and (ii) the customer code. A customer using different brokers will always have the same customer code though each broker's seat code will differ.

Brokerage services can only be offered to domestic customers through domestic 'Financial Members' or 'General Members', and to international customers through international 'Type A Members'. A brokerage agreement with the relevant member will set out the rights and obligations of the SGE, the SGEI (where relevant), the brokerage member and the customer.

Brokerage members are able to set customer margin levels, and position and trading limits, as well as force liquidation of customer positions if necessary. However, customer funds are kept separately from the brokerage member's proprietary trading funds by a settlement bank, and governed by a tripartite agreement between the customer, brokerage member and settlement bank (on the role of the settlement bank, see further below).

Qualifying market participants may also wish to consider membership of the SGE or SGEI, as applicable.

At the end of May 2018, the Exchange had 254 members, comprising 185 domestic members and 69 international members. This excludes the members of the HK CGSE linked via the Shanghai-Hong Kong Gold Connect. Domestic members are legal entities registered in the People's Republic of China (PRC), while international members are legal entities registered outside the PRC (including in Hong Kong, Macau or Taiwan) or in a region otherwise recognised by the SGE (e.g., the Shanghai FTZ). Domestic membership can be transferred (with the SGE's approval), but international membership cannot be. Iv

Members are further categorised according to their business scope, with domestic members divided into 'Financial Members', 'General Members' and 'Special Members', while international members of the SGEI are classified as 'Type A Members', 'Type B Members' or 'Special Members'.

The table below summarises the membership framework of the Exchange.

	Domestic (SGE	)		International (	SGEI)	
Category of member	Financial	General	Special	Type A	Type B	Special
Scope of business	<ul> <li>Proprietary trading</li> <li>Brokerage for institutional and individual customers</li> <li>Other businesses approved by PBOC</li> </ul>	<ul> <li>Proprietary trading</li> <li>Brokerage for institutional customers</li> </ul>	Members, typically corporations, that SGE deems important to address 'market needs'		Proprietary trading	• E.g., HK CGSE

In order to become a member, the applicant will need to satisfy the eligibility and application requirements. These differ between domestic and international members. The eligibility and application requirements for **international membership** are as follows:

To be eligible, you must	As part of your application, you must
Be a legal or business entity registered outside the PRC (including Hong Kong, Macau or Taiwan) or within a region otherwise recognised by the Exchange.	Provide reasons for the membership application.
Acknowledge and abide by the articles of association and rules of the Exchange.	Provide particulars of the principal responsible for relevant businesses, an operation plan and other information as required.
Acknowledge that the SGEI governs respective business activities and supervises activity in the Exchange.	Participate in and complete the mock trading test.
Possess competitive industry background or position.	Pay the membership fee of RMB 2.8 million for Type A Members and RMB 1.6 million for Type B Members.
Have net assets of not less than US\$10 million (or equivalent in RMB or other currency).	Pay the annual fee of RMB 50,000.
Operate in compliance with the law and have no record of a serious offence during the two years immediately preceding the application.	Open an account at a certified settlement bank, to be exclusively used for clearing purposes.
Have traders recognised by the Exchange and the trading	Participate in training courses designed for traders and obtain

facilities and networks necessary to carry out business.	relevant qualification certificates.
Meet any other requirements prescribed by the Exchange.	Meet the minimum trading volume <sup>v</sup> requirement for international members. Currently, the minimum trading volume is ten metric tons per year for Type A Members and five metric tons per year for Type B Members.

The decision for approval by the Exchange will take approximately 30 business days upon receiving completed and satisfactory application documents. Following approval, the applicant will have 30 business days to complete the approval procedures, and any applicant who fails to do so is deemed to have waived their membership request.

Unlike PRC futures brokers, who provide brokerage and clearing services on the PRC futures markets, members of the SGE or SGEI are not precluded from entering into proprietary trades.

#### Role of settlement banks

As mentioned earlier, international members and their customers must open FT Accounts with a settlement bank for purposes of clearing and settlement in offshore RMB. Brokerage members must open three FT Accounts:

- i. a Proprietary Account;
- ii. a General Settlement Account; and
- iii. a Brokerage Account.

The Proprietary Account is used for proprietary trading by the brokerage member, while the General Settlement Account is used to pay the Settlement Reserve<sup>vi</sup> and other fees owed to the Exchange. The Brokerage Account is a transitional account, to hold customers' funds temporarily before these funds are transferred into the Exchange's settlement account (SGEI Settlement Account, also held with the settlement bank).

Settlement banks aid in the transfer of funds when settlement is carried out by the Exchange. International members and their customers can currently choose from a list of eight certified settlement banks with which to open FT Accounts, including one offshore bank, being the Bank of China (Hong Kong) Limited.

#### Trading and physical settlement on or via the SGE

The Exchange has developed a number of products for centralised trade and settlement (Centralised Exchange Traded Products) on the Exchange. Centralised Exchange Traded Products should be distinguished from products that are not centrally executed on the Exchange, but are either facilitated, settled or sponsored by the Exchange. Such means of bilateral trade execution include the use of a National Association of Financial Market Institutional Investors Master Agreement (NAFMII Master Agreement), an SGE operated quotation platform or the China Foreign Exchange Trade System (CFETS).

Appendix 1 sets out in more detail the types of products available. It should be noted that not all product types or products listed on the Exchange are available for trading by all international members or their customers. For example, international members and their customers are not allowed to participate in physical delivery of platinum and silver, which precludes them from trading in platinum and silver contracts that are physically settled.

It should be noted that although China's futures market regulator is the China Securities and Regulatory Commission (CSRC), the SGE is not regulated by the CSRC but by the PBOC. Notionally, therefore, products traded on the SGE or SGEI are not futures products.

As the SGEI is authorised by the SGE to provide trading access, clearing, risk management and other services to international members, the following paragraphs and sections will refer to the SGEI in relation to conducting these activities for international members

The SGEI's margin system comprises two pools of funds, which are used to cover its obligations: (i) the Trading Margin; and (ii) Settlement Reserve. Subject to the approval of the SGEI, an international member may post marketable assets as collateral, in accordance with applicable rules, in satisfaction of their margin requirements. Collateral includes inventories, foreign currencies, bonds and other forms of collateral recognised by the SGEI. Detailed rules for administration of the margin collateral service are published, and the SGE or SGEI will announce the base price and applicable haircut for the collateral.

#### Clearing and settlement of funds

The SGE performs clearing and provides performance guarantees to its members, and the SGEI provides centralised settlement services to international members.

In the context of the SGEI, the term 'clearing' refers to the calculation, collection and remittance of currency payments, based on trading results and pursuant to the relevant rules of the Exchange. Similar to the Shanghai International Energy Exchange (INE) and other Chinese futures exchanges, the publication of the settlement price determines the gains or losses (in RMB) with respect to the existing position of the participant. As such, the SGEI shall debit or credit the relevant earnings or losses from or to the member's Settlement Reserve. The amount of any penalties or expenses incurred will also be debited from the member's Settlement Reserve. Members must restore the minimum Settlement Reserve prior to commencement of trading on the next day to avoid being declared in default.

At the end of a trading day, the SGEI will initiate a clearing process and each member will receive clearing data and settlement statements/instructions, which the member then has to promptly act upon to perform the necessary debiting or crediting from their respective settlement accounts. Any international member who wishes to dispute the clearing data or settlement statements/instructions must notify SGEI in writing 30 minutes before market opens on the next trading day at the latest, or is otherwise deemed to have accepted their accuracy.

#### Delivery and management of physical bullion

The Exchange has set up a network of SGE certified vaults and SGEI certified vaults, which provide storage, load-in and load-out of all physical bullion. Load-in and load-out processes will be managed by the certified vault subject to certain deposit and withdrawal conditions. The SGEI certified vault provides customs declaration services for international members and customers, as well as any domestic members and customers who are qualified to import and export gold.

Bullion is classified into deliverable or depositable (otherwise known as 'Safe Deposit Vaulting Service') bullion. Depositable bullion cannot be used for the delivery of trades executed on or through the Exchange, although inter-vault transfers (between deliverable and depositable bullion vaults) can be carried out upon application.

The SGEI regulates the process for the delivery of precious metals traded on the IB, and oversees the operation of the SGEI vault system for physical deliveries. 'Physical delivery' refers to the transfer of ownership of bullion in accordance with the Exchange's rules. The SGEI provides each member or customer with a unique Bullion Account (and code), which is used to conduct physical delivery transactions via transfers between Bullion Accounts. This account can be subdivided into a Load-in Inventory Account'<sup>iii</sup> and a Traded Inventory Account<sup>ix</sup> for gold.

Load-In Inventory can only be withdrawn from the same certified vault in which it was deposited. Conversely, depending on the type of product, Traded Inventory can typically be withdrawn from any certified vault. However, as there is only one SGEI certified vault at the time of writing (as compared to 56 SGE certified vaults for gold and two for silver), this is less of a concern for international participants.

For deliverable bullion traded on the IB, authorised international members and customers may deposit bullion into the SGEI certified vault only. An exception would be that authorised international members or customers may, subject to relevant approved quota, deposit deliverables for the MB into the SGEI certified vault, but never into an SGE certified vault.

For physical contract trades executed on the Exchange, physical delivery takes place at the time of trade execution, and members or customers may submit an application to take delivery immediately after trade execution. For trades in other types of contracts, delivery timing might differ. The SGEI processes day-end physical delivery in the following order: spot contracts, deferred contracts, benchmark price contracts and then OTC contracts. This order matters as gold received in a particular Bullion Account from spot contracts can be used for physical delivery of, for example, OTC contracts.

Before the settlement process at the end of any trading day, all buyers and sellers should have the necessary physical gold or funds agreed to in the trade, as failure to do so will result in the declaration of a default, and the imposition of a penalty. The deduction of precious metal from a seller will take place in its Load-In Inventory Account followed by its Traded Inventory Account, according to the order of the trade, with deductions made from accounts holding the lowest to the highest stock.

International members and customers must report any bullion withdrawn from the SGEI certified vault to the Exchange, inform customs authorities of the destinations for such bullion, and comply with the various exit procedures in place for withdrawn bullion.

Other services offered to members and customers by the Exchange are pledging and leasing services, inventory swaps, non-trading transfers and the creation or redemption of gold ETF shares, subject to requisite qualifications.

#### Risk management system

The Exchange has implemented mechanisms to manage the risks associated with the trading activities of international members and their customers. These mechanisms include:

- · margin requirements;
- price limits;
- fees (e.g., deferred fees and extended position fees);
- position and trading limits:

- · large position reporting;
- forced liquidation;
- risk warnings; and
- market surveillance.

Margin requirements and price limits are discussed briefly. The Settlement Reserve and Risk Management Fund, as well as a waterfall model for distributing losses, also help in risk management.

Margin requirements are applied by the Exchange to provide protection against market risk exposures. There is a minimum Trading Margin, which is a percentage of the notional value of each deferred product, amounting to no less than 6 per cent for gold deferred products. However, the level may be adjusted in view of market risks, such as when open interest has hit a certain threshold, or a price limit is hit. International members must collect from their customers no less Trading Margin than that collected by the SGEI from the member.

The SGEI sets out price limits, which are typically based on a percentage of the settlement price of each product on the previous trading day, but are subject to adjustments where necessary to account for potential market risk exposures. If triggered, the price limit will apply again on the following trading day. In the event that trading continues to be one-sided at price limits, the SGEI has broad powers to intervene, including by liquidating positions or suspending the market.

#### Conclusion

Alongside the 'Belt and Road' initiative, China will be looking to strengthen cooperation and interconnectivity in gold trading, investment and financing with the markets of 'Belt and Road' countries in the years to come. The SGE, together with the SGEI, is striving to become a world-class comprehensive gold exchange, and the platform of choice for end-to-end trade in precious metals. Chinese commodity futures markets, such as the INE, have looked to the SGEI for inspiration when establishing rules for international access. There are many similarities between the PRC futures exchanges and the SGE. However, it would be wrong to assume the similarities between the two markets outweigh the very many differences.

<sup>&</sup>lt;sup>1</sup> Transhipment is the shipment of goods to an intermediate destination, prior to their final intended destination. Transhipment may be used as a means to change the mode of transportation, or for consolidation or deconsolidation of cargo.

<sup>&</sup>quot;Xu, Luode, "The Development and Opening of China's Gold Market". Speech presented at the LBMA Bullion Market Forum in Singapore on 25 June 2014. Retrieved from http://www.lbma.org.uk/assets/blog/alchemist\_articles/Alch75Luode.pdf

The HK CGSE as a whole is classified as a special international member. The list of members may be accessed at: https://www.cgse.com.hk/en/member\_01.php

iv However, international membership can be withdrawn and the membership fee will be refunded.

<sup>&</sup>lt;sup>v</sup> The minimum aggregate trading volume of each member is based on the member's total gold trading volume, including the volume purchased and volume sold.

Settlement Reserve refers to the cash funds and collateralisation quota maintained by an international member under the SGEI Settlement Account for settling trades that may be executed in the future. It is the portion of the cash funds and collateralisation quota not yet used as a margin for contracts. The minimum Settlement Reserve balance for an international member is RMB 500,000 per seat, subject to adjustment by the SGEI based on market conditions as well as the scale of the international member and the type of business it plans to engage in at the Exchange. The international member must use its own cash funds to meet the minimum Settlement Reserve.

vii Trading Margins refers to the funds and collateralisation quota maintained by an international member under the SGEI Settlement Account to guarantee the performance of its trades, and is tied to the international members' existing trade.

viii The Load-in Inventory Account records the physical bullion deposited into a certified vault.

ix The Traded Inventory Account records the precious metal purchased by a member or a customer.

## Appendix 1

#### **Centralised Exchange Traded Products**

#### A. Price matching trading (bid/ask trading on a central order book)

Туре	Features		
Physical contracts	<ul> <li>Full funds and bullion must be available at order submission</li> <li>Immediate settlement upon transaction (i.e., seller can immediately use funds, and buyer can immediately sell bullion or apply for withdrawal)</li> </ul>		
Spot Contracts (silver only)	<ul><li>Traded on margin at T</li><li>Settlement and delivery of bullion on T+2</li></ul>		
Deferred contracts	<ul> <li>Traded on margin at T</li> <li>When tendered for delivery, settlement and delivery of bullion on specified delivery date</li> <li>'Delivery equalizer' mechanism used to balance unequal long and short positions tendered for delivery</li> </ul>		

#### B. Benchmark price trading (tendering volumes based on the Shanghai Gold Benchmark Price)

Туре	Features
	<ul><li>Used to fix the Shanghai Gold Benchmark Price</li><li>AM session and PM session</li></ul>
	<ul> <li>Fixing members and reference price members provide initial price</li> </ul>
Shanghai Gold Benchmark Price	<ul> <li>Members and customers tender for intended volume at stated initial price</li> </ul>
	<ul> <li>Based on size of volume imbalance between buy and sell orders, session is either terminated or repeated with an adjusted price</li> </ul>
	<ul> <li>Settlement and delivery of bullion on T+2</li> </ul>

#### **Exchange registered products**

### C. Price asking trading (trades registered on the SGE but negotiated bilaterally, such as through a NAFMII Master Agreement, or executed through designated quotation platforms, such as CFETS)

Туре	Features
Spot contract	<ul> <li>Settlement and delivery on T+2</li> </ul>
•	<ul> <li>Physical or cash settlement available</li> </ul>
Forward contract	<ul> <li>Settlement and delivery on specified delivery date</li> </ul>
	<ul> <li>Physical or cash settlement available</li> </ul>
Swap contract	<ul> <li>Completed in two legs – positions in opposite direction</li> <li>Settlement and delivery on two different trading days but in the same quantity</li> <li>Physical or cash settlement available</li> </ul>
Option contract	<ul> <li>Option buyer pays premium for option to buy or sell agreed quantity at agreed time and price from option seller</li> <li>European and American options available</li> <li>Physical or cash settlement available</li> </ul>

	Generally only available for proprietary seats of financial institutions
Lending contract	<ul> <li>Institutions approved for CFETS transactions can participate</li> </ul>
	<ul> <li>Bullion is borrowed, at a jointly determined</li> </ul>
	interest rate, and returned at a later date

#### **Exchange settled products**

#### D. Gold leasing

Туре	Features
Financial institution to enterprise	<ul> <li>Lender must be a financial institution or other such institution recognised by SGE</li> <li>Borrower enterprise must be in the business of precious metals, such as mining, refining or use of gold in production process</li> </ul>
Financial institution to financial institution	<ul> <li>Lender must be an approved financial institution or a gold ETF</li> <li>Parties are subject to the relevant regulatory requirements</li> </ul>
Intergroup leasing	Lending from headquarters to a branch

#### E. Gold ETFs (physical contract subscription, creation and redemption)

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