Information paper

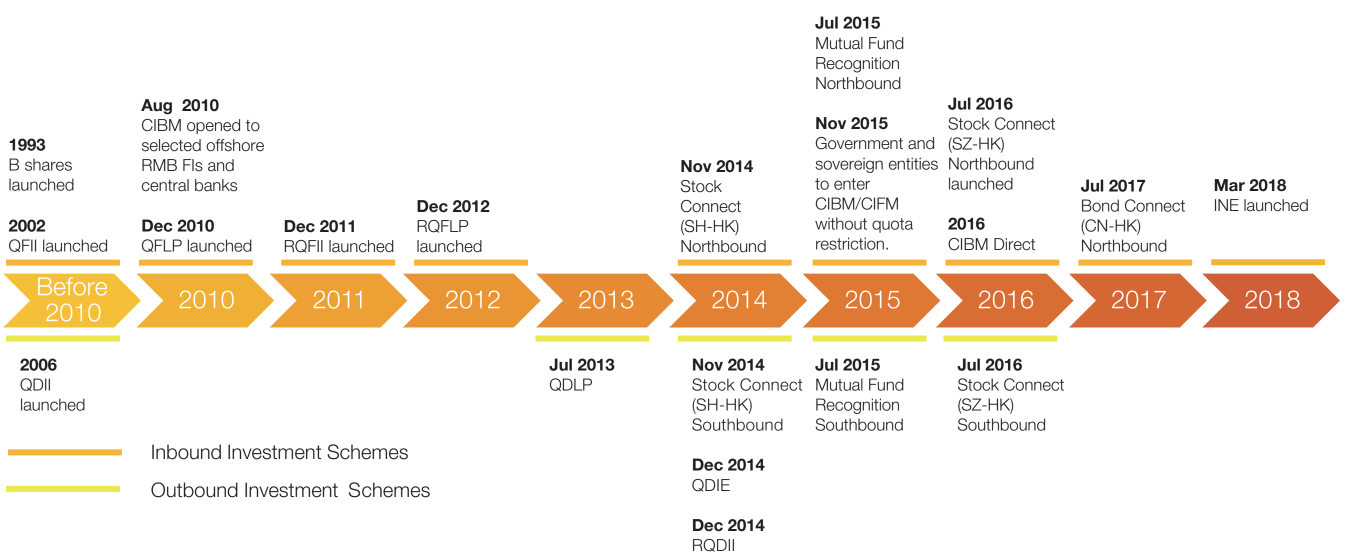
Rewiring the securities landscape in China

Contents

1 A journey of transformation for China

China's securities markets are now well advanced on a journey of transformation. Early in 1993, China took its first step to liberalise its capital market by allowing foreign investors to invest in China B shares. In recent years, China has been liberalising its capital markets and providing various market access channels to institutional investors for both inward and outward investment. Significant milestones along the way have included the introduction and gradual expansion of 'the Qs' (QFII, RQFII, QDII, RQDII, QDLP, QDIE and QFLP), Mutual Recognition of Funds (MRF) and 'the Connects' (Stock Connect and Bond Connect) – each mechanism coming with its own unique strengths and challenges.

Figure 1: China capital markets: A remarkable transformation



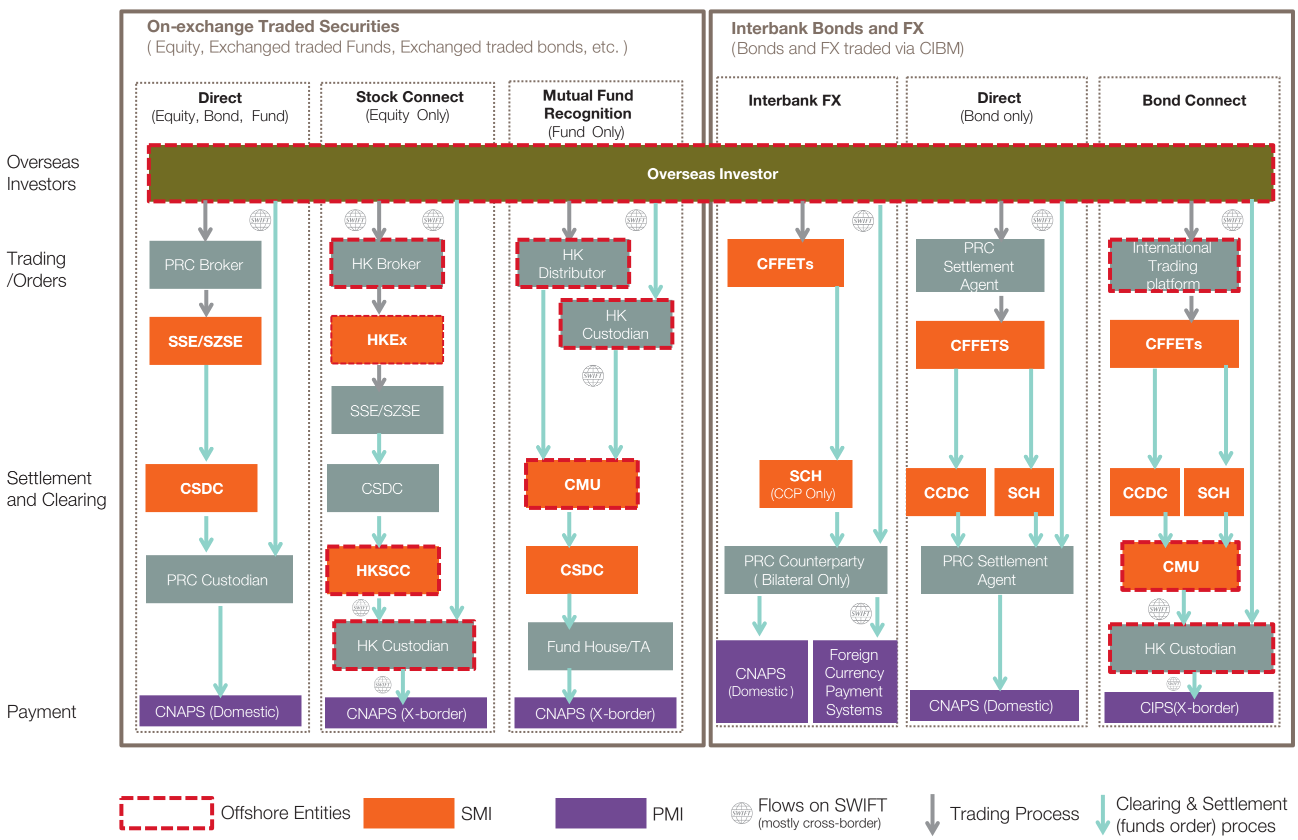
With China's continued effort to open up its capital markets, we are seeing the gradual inclusions of Chinese stocks and bonds in major global indexes, resulting in more securities investments flowing into China.

2 Market infrastructures in China

China started to build its securities markets 20 years ago. With late-mover advantage, China's domestic securities markets are operating in a secure, scriptless and highly efficient way, while being quite different from international markets. The way they manage critical tasks – such as post-trade matching by affirmation for interbank bonds, the absence of failure trades for China A shares, the lack of a need for reconciliation (given the interconnectivity of trading platforms with the CSDs), domestic settlement and asset servicing – is world-class. However, challenges have been felt in opening up to cross-border transactions, since this domestic model does not translate well into international best practice.

There is still a multiplicity of market infrastructures in China compared to other jurisdictions – and many overlaps in areas of responsibility, such as settlement of bonds. Complexity arises from different Central Counterparties (CCP), Central Securities Depositories (CSD) and other intermediaries, meaning that it is often not clear who does what and how. In addition, each infrastructure has different proprietary standards and market practices, which will only be exacerbated as these markets open up further.

Figure 2: A multiplicity of market infrastructures in China



Through the Direct Schemes, such as QFII, RQFII and CIBM Direct, local custodians play a critical role in 'normalising' local differences and, in turn, providing a globally consistent experience to overseas investors. For example, post-trade SWIFT messages received by local custodians are then converted to a proprietary standard for the CSD. Connecting with these different market infrastructures is costly and also poses a transformational risk.

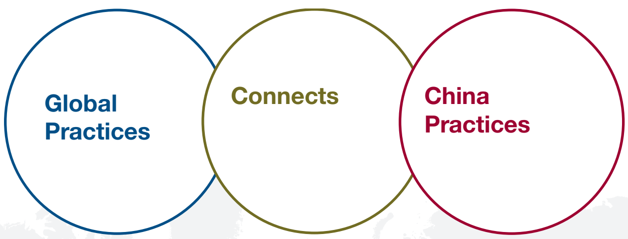
3 A new operating model – The Connects

In 2014, Stock Connect was launched. Despite some early operational challenges, uncertainties over quotas and periods of market suspension and volatility, Stock Connect is now winning market share for new inflows at lower access costs and with higher market efficiency. Stock Connect may prove to be a robust and scalable channel to invest in China A shares.

Similar to Stock Connect, Bond Connect launched in 2017 and immediately attracted interest from overseas investors. With a simple access filing process, investors can get immediate access to China's fixed income market via their existing connectivity through a global trading platform and international custodian banks.

The Connects are well-designed and innovative frameworks, providing cross-market access that leverage the 'One-Country-Two-Systems' between Mainland China and Hong Kong's well established market infrastructures and are aligned with international standards.

The innovation under the Connects spans all areas from market entry and trading, down to custody and post-trade settlement. Essentially, they bridge differences between global and domestic market practices, improving China securities accessibility and bringing it much closer to international standards:



	Global Practices	Connects	China Practices
Market Entry	• No registration required, or simplified filing process	• Stock Connect: No registration required. • Bond Connect: Simplified filing through HK.	• QFII/RQFII: Approvals required from China regulators through PRC custodian bank • CIBM Direct: Registration to China regulators through PRC settlement agent
Account Structure	• A multi-level depository arrangement with a nominee system	• A multi-level depository arrangement with a nominee system • Trading code/investor ID is required for trading.	• A single-level depository system with investor segregation accounts opened at CSD level. • Trading code/investor ID is required for trading.
Trading	• Place trade orders through international trading platform directly or through brokers • Best execution.	• Place trade orders themselves or through its international brokers via an offshore trading platform that is linked with China trading platform.	• Equity: Only can execute trade orders through a designated PRC broker. • CIBM: Only can input trade orders through a designated bond settlement agent .
Settlement	• End-to-end STP settlement process using STP communications channels, such as SWIFT.	• Offshore settlement : Investor-HK Custodian- HK CSD. (STP route via SWIFT) • Onshore settlement : HK CSD-CN CSD (proprietary links with certain manual process.)	• Onshore settlement starts from Investor to PRC Custodian. (STP route via SWIFT) • PRC custodian further settles with CN CSD on behalf of investors which are the direct holders of PRC securities. (proprietary links with certain manual process.)

China Mainland - Hong Kong Connects: bridging differences between global and domestic market practices

While much has been achieved with the Connects, there is still some more to be done to ensure that they can be widely accepted by global investors. Although the Connects have many advantages, some outstanding operational issues are still creating operational burdens and risk for participants, including:

- **DVP.** For Stock Connect, China A share settlement mechanism is not based on a true delivery versus payment (DVP). And for Bond Connect, the absence of DVP in CCDC settlement is still an outstanding issue to be resolved.
- **Manual processes.** For Stock Connect, there is a manual process by the HKEX to enquire the investors' identity with the participants. For Bond Connect, the connectivity between CMU and CCDC/SCH still involves manual processes, such as manual affirmation, reconciliation against PDF reports and faxed corporate actions by the CMU, etc.
- **Inconsistent practices.** Overseas investors are now allowed to invest in China securities across multiple channels. Given the variety and complexity of China access channels, overseas investors are facing operational difficulties when managing different processes and compliance controls. Misalignment of processes and regulatory requirements leads to operational inefficiencies and risks.

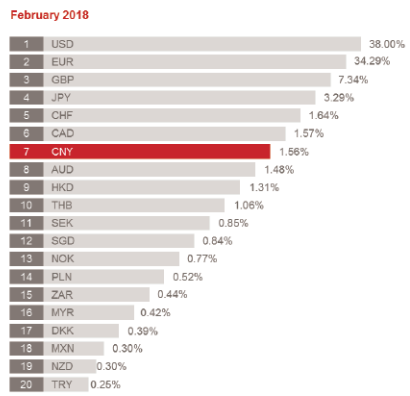
Chinese infrastructures and intermediaries are aware of these challenges and are keen to show foreign investors that they are ready to offer international best practices, such as T+2, and embrace international standards such as ISO.

4 The Way Forward: building a scalable and international infrastructure framework

There is no doubt that China has been taking significant steps to broaden market access and international connectivity. China will continue to accelerate reforms and open up its capital markets with the aim of making RMB convertible for capital accounts. In global trade, RMB is used more and more widely. While it may still only account for around 2% of international payments, its use has been growing steadily over the past few years.

In September 2016, the International Monetary Fund (IMF) announced the launch of the new Special Drawing Rights (SDR) basket, which included the RMB for the first time. Since the launch, however, take-up of the RMB internationally has been relatively low – as RMB internationalisation needs to be supported by a pervasive connectivity. Not only payments in RMB need to be simplified, but also access to bond and stock markets for international investors.

Figure 3: Currency activity share for domestic & international payments



Customer initiated and institutional payments.

Messages exchanged over SWIFT. Based on value. MT 103, MT 202, domestic and cross-border.

VEF flows have been excluded from the table, as the figures are distorted by the rise in domestic flows caused by volatility and hyper-inflation.

Source: SWIFT Watch

We expect that China will become much more integrated with other securities markets across the world in the following ways:

Key Trends	Initiatives
Increase of cross-border securities transactions under Direct Schemes	• **Inflow:** Index inclusions and further relaxation of existing Direct Schemes will attract huge investment inflows from overseas investors. • **Outflow:** China will continue to encourage overseas expansion, and it is likely to expand the scope of QDII, RQDII and QDLP schemes.
Expansion of cross-border links	• **Expansion of China mainland-Hong Kong Connect schemes** including ETF connect and IPO connect, Southbound leg of Bond Connect, etc. • **More direct Connects** will likely be established between China SMIs and international or other countries' CSDs. Which ones will be first remains to be seen. • **'Belt and Road initiative':** o China will allow domestic and foreign companies to issue 'Belt and Road' bonds via domestic exchanges. o Shanghai-London Connect: China-listed companies will be able to issue Depository Receipts (DRs) on the London Stock Exchange and vice versa. o Chinese cooperation in securities market infrastructures with other countries: ■ In 2015, China Europe International Exchange AG (CEINEX) was established by Shanghai Stock Exchange (SSE), Deutsche Börse Group and China Financial Futures Exchange (CFFEX) to bring China's financial markets closer to the international investor community. ■ In 2016, CFFEX, SSE and the Shenzhen Stock Exchange (SZSE) acquired 30 percent of the Pakistan Stock Exchange. ■ In 2018, SSE and SZSE secured a 25 percent stake in the Dhaka Stock Exchange in Bangladesh. ■ Chinese SMIs are also exploring cooperation opportunities with other 'Belt and Road' countries, including the UK and Russia. • **China Depository Receipts (CDRs):** China now allows home-grown, high-tech and overseas-listed companies to issue CDRs on domestic exchanges.
Multilateral domestic links among different onshore SMIs	• There could be more domestic links among different CSDs and Exchanges to facilitate the development of derivatives transactions and collateral management.

To achieve the above initiatives, China SMIs will face challenges in controlling operational risk, streamlining processes and managing costs when facing so many different infrastructures and market practices. SWIFT's view is that the ultimate adoption by China's regulators, clearing houses and institutions of ISO standards for clearing and settlement – and the globally established market practices that have been developed around them – would be hugely beneficial both for China's investors establishing a global presence and for international investors moving into the country.

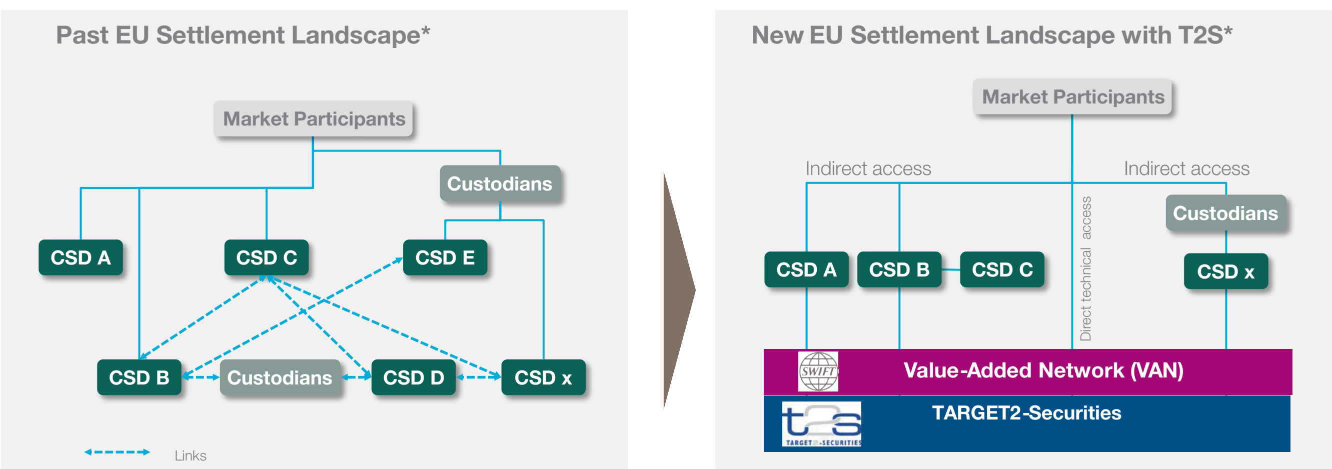
5 Lessons from other post-trade market transformations

Post-trade in China today is somewhat similar to post-trade in Europe prior to the creation of ESMA and the launch of T2S. There are different regulators, many different Clearing Houses and Central Securities Depositories, and different standards and market practices. Key challenges include:

- Inefficient cross-border post-trade processes.
- Different SMIs across the market with different requirements.
- Different market practices.

After market consultations and a decision by the ECB's Governing Council, the T2S project was launched in 2008, with the platform becoming operational on 22 June 2015. T2S is a single, pan-European platform for securities settlement in central bank funds. The single platform is operated by the European Central Bank (ECB) and it enables CSDs in Europe to outsource their settlement operations to the ECB. The implementation of T2S was really the starting point for the standardisation of securities post-trade in the European Union. This large scale post-trade initiative was implemented with the objective of harmonising settlement processes and reducing intermediate costs, while increasing competition and improving risk management.

Figure 4: Past vs. New: EU Settlement Landscape



* Graphic source: European Central Bank presentationT2S

Similar outcomes can be expected from standardisation and automation in China's cross-border transactions. A similar recipe to that applied in Europe could be considered in China to bring operational efficiency to the level expected for cross-border flows.

Adoption of the same international standards and harmonised market practices by all securities market infrastructures involved in equity and fixed income clearing and settlement will allow for better inter-operability and tighter settlement timelines for Chinese markets with their international counterparts going forward.

ISO 20022 business standards and other ISO data standards, such as ISIN (International Securities Identification Number) implementation, need to be at the core of this harmonisation effort, following the adoption trends taking place in most major market infrastructures globally. The adoption by all securities infrastructures in China of ISO 20022 – as is already the case with CNAPS and CIPS for payments – will help promote a common language, so that market infrastructures inside and outside China can interact. This will require the establishment by an all-encompassing body of harmonised market practices for all infrastructures and their participants. We believe that the National Market Practice Group (NMPG) can be that body, benefitting as it does from the expertise of the global Securities Market Practice Group (SMPG).

The leveraging of international communication platforms, such as SWIFT, will provide the rails to exchange ISO 20022 standardised information between Mainland infrastructures and their cross-border counterparts in Hong Kong and elsewhere. The same will apply between the infrastructures and their market participants, many of whom are eager to re-use the secure, reliable, resilient and standardised platforms that they are using today for their cross-border interactions and, often, their domestic flows in other markets.

6 Conclusions

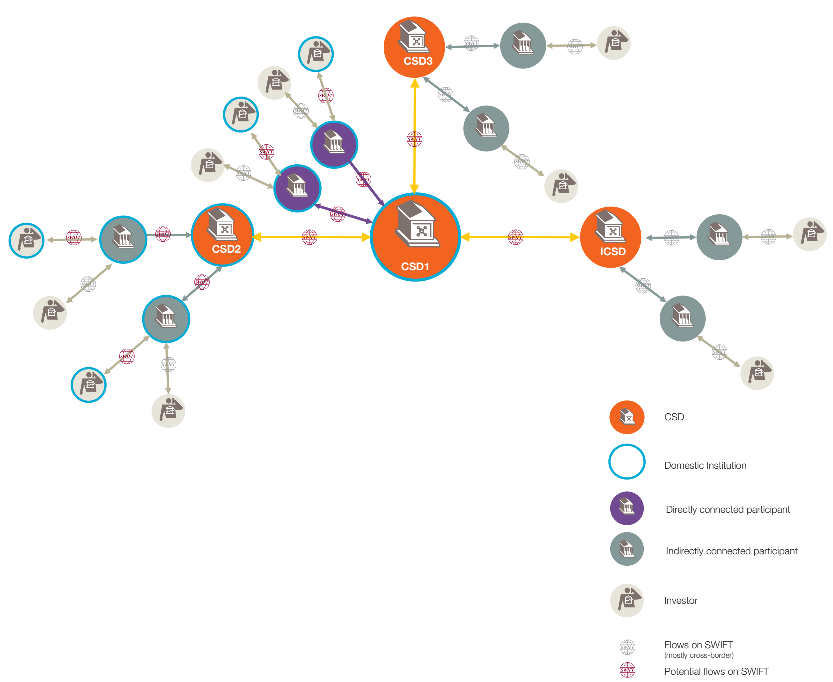
More coordination among China SMIs and offshore SMIs will be required in order to improve cross-border investments in the long term. Through harmonisation of market practices to facilitate access and interoperability, China can further improve its market access and reduce operational risks and costs for both overseas and domestic investors.

In order to implement the multilateral cross-border settlement links, standardisation of message flows and data is essential. Standardisation of message formats is key to maintaining a low initial cost for all involved parties.

The implementation of a neutral cross-border and domestic network such as SWIFT would further strengthen the operating model through the automation of processes and systems, and allow it to deliver the full potential of China's capital markets to the rest of the world in a cost-efficient and operationally risk-free way.

SWIFT is working with all market infrastructures and intermediaries involved today and tomorrow in the opening of China's capital markets in order to deliver that vision of standardised, automated and efficient access to Chinese equities, bonds, funds and currency.

Figure 5: China Domestic and Cross-Border market infrastructure links and SWIFT



What is the SMPG?
The SMPG was created in July 1998 and, since its inception, has established a local presence in more than 35 countries through National Market Practice Groups (NMPG). These groups are comprised of broker/dealers, investment managers, custodian banks, central securities depositories and regulators. The SMPG has been extremely successful in creating globally agreed, harmonised market practices which – integrated with ISO standards – have brought the securities industry closer to achieving Straight Through Processing (STP).

The SMPG is focused on enhancing current securities industry practices. The group realizes the benefit of industry utilities and of other industry groups in dictating conformity to standards and market practices. As such, there is active dialogue between the SMPG and other industry groups/organizations (i.e. SWIFT, ECSDA, ACSDA, ISITC, ISSA, ASIFMA, etc.)

China SMPG
The 1st China SMPG meeting was held in 2008. The China SMPG has developed into a well-functioning and effective platform. Through the platform, important Chinese securities participants have been working together to address the industry requirements for higher STP benefits and to align best practices in the Chinese market.

What is ISO 20022?
First published in 2004, ISO 20022 is a single standard that covers all business domains and end-to-end business processes. A global and open standard, ISO 20022 is not controlled by a single interest: it can be used by anyone in the industry and implemented on any network. It has fully established processes for its maintenance, evolution and governance.

ISO 20022 remains the choice of Chinese market infrastructures due to the richness of its financial messaging. It allows, for example, longer beneficiary fields and the transmission of Chinese and other double-byte characters.

7 Reference

Glossary

CCP	Central Counter Party
CDR	China Depository Receipt
CEINEX	China Europe International Exchange AG
CFFEX	China Financial Futures Exchange
CIBM	China Inter-bank Bond Market
CIFM	China Inter-bank Foreign Exchange Market
CIPS	the RMB Cross-border Interbank Payment System
CNAPS	The China National Advanced Payments System
CSD	Central Securities Depository
DR	Depository Receipt
DVP	Delivery versus payment
ECB	European Central Bank
INE	Shanghai International Energy Exchange
MRF	Mainland-Hong Kong Mutual Recognition of Funds
QDIE	Qualified Domestic Investment Entity
QDII	Qualified Domestic Institutional Investors regime
QDLP	Qualified Domestic Limited Partner
QFII	Qualified Foreign Institutional Investors regime
QFLP	Qualified Foreign Limited Partner
RQDII	RMB Qualified Domestic Institutional Investors regime
RQFII	RMB Qualified Foreign Institutional Investors regime
SDR	Special Drawing Right
SMI	Securities Market Infrastructure
SMPG	Securities Market Practice Group
SSE	Shanghai Stock Exchange
STP	Straight Through Processing
SZSE	Shenzhen Stock Exchange

About SWIFT

SWIFT is a global member-owned cooperative and the world's leading provider of secure financial messaging services. We provide our community with a platform for messaging, standards for communicating and we offer products and services to facilitate access and integration; identification, analysis and financial crime compliance. Our messaging platform, products and services connect more than 11,000 banking and securities organisations, market infrastructures and corporate customers in more than 200 countries and territories, enabling them to communicate securely and exchange standardised financial messages in a reliable way. As their trusted provider, we facilitate global and local financial flows, support trade and commerce all around the world; we relentlessly pursue operational excellence and continually seek ways to lower costs, reduce risks and eliminate operational inefficiencies. Headquartered in Belgium, SWIFT's international governance and oversight reinforces the neutral, global character of its cooperative structure. SWIFT's global office network ensures an active presence in all the major financial centres.

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