COUNTRY BRIEFING



China Understanding Capital Account Liberalisation: Risks and Rewards





China Understanding Capital Account Liberalisation: Risks and Rewards

Nathan Chow Economist Group Research, DBS Bank (Hong Kong) nathanchow@dbs.com

Production and additional research by:
Asian Insights Office • DBS Group Research



□ asianinsights@dbs.com

Chien Yen Goh
Jonathan Gonzalez
Geraldine Tan
Martin Tacchi

Editor in Chief
Managing Editor
Editor
Art Director



- 06 Introduction
- Capital Accounts Convertible in Five Years

Initial Stage: Outflows to Dominate

<u>Bi-Directional Fluctuations of the Yuan's Exchange Rate</u>

Cross-Border Flows –
Towards Onshore/Offshore Convergence

Offshore Centres to Boost Third-Party Trades
Growing Demand From Foreign Central Banks

19 Conclusion 22 Notes











Introduction

hina's capital account convertibility strategy was first put forward in the early 1990s. The process was interrupted by the Asian Financial Crisis of 1997, but the 2008 Global Financial Crisis provided Beijing with a new window of opportunity. The shortage and increased volatility of major currencies led to a rise in the global demand for the Chinese yuan, a situation that led China to facilitate its usage in cross-border trades and investments.

Today, China recognises the many benefits of capital flow liberalisation as a key development driver. Removing restrictions on outflows not only enables companies and households to distribute their large pools of savings in overseas investments, it also allows China's financial system to channel its inflows into deeper and more diversified sources of capital for borrowers. Meanwhile, greater balance-sheet diversification strengthens the resilience of Chinese banks against system-wide shocks.

As Chinese authorities step up their liberalisation efforts, much can be learned from other countries' past experiences with the process. In Chile and Thailand, for instance, the opening of capital accounts led to exchange rate and banking crises. The two cases demonstrated that a certain number of preconditions – a stable macroeconomic environment, a sound banking system, and developed financial markets – are needed for a successful capital account liberalisation process.

These past few years, various encouraging developments have been shaping favourable preconditions. In September 2013, the State Council authorised the establishment of the China (Shanghai) Pilot Free Trade Zone (FTZ), the first of its kind in mainland China.



It was announced in April 2015 that the FTZ would be expanded to include financial, logistics, transport, and technological clusters. In April 2014, the Shanghai-Hong Kong Stock Connect was successfully launched to allow residents of mainland China to trade shares in Hong Kong and foreigners to invest in Chinese companies. The programme effectively created a single Chinese stock market – one of the world's largest by market cap and daily turnover – and is now leading to other similar connection schemes.

The continuous expansion of the "Q" programmes, the Qualified Foreign Institutional Investor (QFII) and the Renminbi Qualified Foreign Institutional Investor (RQFII), also shows Beijing's long-term commitment to the opening of the country's capital account. Most significantly, the recent institution of a nationwide deposit insurance scheme indicates that interest rates will be fully liberalised in the near term, a move that should pave the way for further reforms.

All of these promising developments point to Chinese capital accounts being "basically" open in the near future, a scenario that in all likelihood will dramatically alter both the Chinese and the global financial landscapes given China's size and influence.

This report examines the potential ramifications of such a scenario. The first part covers the potential changes in capital flows when China opens its capital accounts in the next five years. The second part assesses the impact of the increased cross-border flows on the yuan's exchange rates and interest rates, both onshore and offshore. By drawing on the experience of the eurodollar market, the report concludes with an overview of the different ways offshore yuan market activities may evolve over time.





Capital Accounts – Convertible in Five Years

istory has shown that the international acceptance of a currency goes hand in hand with its country's rising economic power. For instance, with the expansion of the US economy after World War II, the US dollar overtook the British pound as the international reserve currency. The Japanese yen was also internationalised after Japan became the second-largest economy in the 1970s.

The internationalisation of the yuan is long overdue. China's economy is currently the second largest in the world, contributes to around 12% of global GDP, and represents more than 10% of world trade. Yet China is the only one among the world's six largest economies whose currency is not a reserve currency.

The 2008 Global Financial Crisis led to the shortage and increased volatility of major currencies and also triggered an increased demand for the yuan, thus multiplying the opportunities for it to be used abroad. Capitalising on the situation, the Chinese government began to facilitate the usage of the yuan in cross-border trades and investments. In particular, investment quotas for existing schemes governing foreign currency portfolio inflows and outflows were raised, while new channels for the inward yuan portfolio investment were introduced. Meanwhile, offshore yuan clearing banks and bilateral swap agreements were established to facilitate overseas liquidity.

These efforts allowed the yuan to now rank fifth and second in terms of most used currency for international payments and trade finance, respectively. At present, 35 out of the 40 items on the International Monetary Fund's (IMF) classification of capital account transactions¹ are fully or partly convertible in China. The remaining five items mainly concern individual cross-border investments, the issuance of shares, and other financial instruments by non-residents in domestic markets. Therefore, China is not far from achieving its goal of yuan capital account convertibility.

The controls on the inconvertible items are expected to be gradually loosened and we envision China's capital account to be "basically" open in around five years. This, however, does not imply that the movement of capital across borders will be 100% free or systematic. China will continue to manage capital account transactions, but it will do so with a different approach, one that includes macro-prudential measures to limit risks from cross-border capital flows and to stabilise the yuan. For instance, short-term speculative flows will be controlled during times of stress in order to minimise the impact of spill-over effects on bank liquidity and solvency.





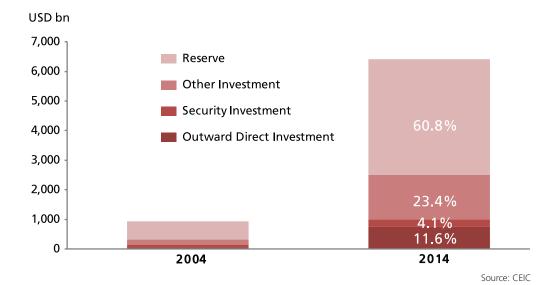
China's cautious approach mirrors a number of other countries with open capital accounts (Malaysia and Indonesia) that have re-introduced regulations on the inflow and outflow of capital in the wake of the 2008 financial crisis.

Initial Stage: Outflows to Dominate

The impact of the removal of restrictions is always dependent on prevailing macroeconomic conditions, both in China and in the rest of the world. It is likely that in its initial stages, outward investment flows will increase at a faster pace than inward flows, thus allowing Beijing to achieve a more balanced international investment position (IIP).

Evidenced by a five-fold surge in IIP, China's financial integration into the world economy has progressed rapidly over the past decade. However, the country's external assets are still heavily skewed towards official reserves that currently account for 60.8% of total assets. In stark contrast, portfolio investment and outward direct investment (ODI) are still underdeveloped with tiny shares of 4.1% and 11.6%, respectively (Diagram 1).

Diagram 1: Security Investment and ODI Still Underdeveloped, 2004/2014



At present, the mainland has a current account surplus (i.e. excess savings) and the low accumulation of external assets is an indicator of "trapped" savings in the domestic economy. The excess savings could cause large speculative flows into real estate or other assets. In fact, to some extent, the on-going disinflation suggests that much of China's liquidity is being spent speculatively on existing assets. Since these assets already exist,

they are purchased (and repurchased) without contributing directly to the GDP.

DBS

An effective way to resolve this situation is to increase the international diversification of the mainland's private capital. According to the latest statistics, the financial assets of Chinese households exceeded 100 trillion yuan, of which 40% were parked in cash and deposits with low yields in real terms. US households' deposits, meanwhile, only account for 15% of financial assets. Given the size of the country's wealth, the removal of restrictions on outflows would allow Chinese households to diversify their large pool of savings by investing in overseas assets. The Qualified Domestic Individual Investor (QDII2) pilot scheme, soon to be launched in six Chinese cities (Shanghai, Tianjin, Chongqing, Wuhan, Shenzhen, and Wenzhou), caters to this purpose. Individuals with at least 1 million yuan of financial assets will be eligible to participate. QDII2 would be wider in scope than the Shanghai-Hong Kong Stock Connect programme, which is mainly focused on guiding mainland investors into stocks related to China. In contrast, QDII2 will allow investors to invest directly in overseas property, stock, and bond markets.

Past experiences could shed some light on what such a development could mean for global markets. From 1979 to 1980, all capital account restrictions on capital flows were removed in Japan. Over the following five years, net foreign assets increased by an equivalent of 10% of GDP. Similarly, the UK experienced a net portfolio investment outflow equivalent to 13% of GDP after restrictions were lifted in the late 1970s. The abolition of capital controls in China could trigger a great redistribution of assets for households and generate notable repercussions for global asset prices. A recent IMF study² estimates that an accumulation of 9–25% of GDP in international portfolio assets by Chinese residents would account for up to 3% of global financial markets, or up to a quarter of financial markets in emerging market economies (Diagram 2).

Diagram 2: Potential Impact of Chinese Capital Account Liberalisation on Global Financial Markets

	Equivalents of 9.4-24.5 percent of Chinese GDP, 2010					
	Equity impact in % of stock market capitalisation	Portfolio debt impact in % of outstanding portfolio debt	Total impact in % of stock and debt market size	Total impact (trillions of U.S. dollars)		
MSCI global	0-1	0-1	0-1	0.6-1.5		
United States	0-2	1-3	1-2	0.4-1		
United Kingdom	0-1	1-3	1-2	0.1-0.2		
Japan	0-1	0-1	0-1	0.1-0.2		
Canada	0-1	1-3	1-2	0-0.1		
France	0-1	0-1	0-1	0-0.1		
EM excl. China	1-5	7-23	4-10	0.6-1.5		

Source: GFSR April 2012 for 2010 market sizes; MSCI factsheet 2013 for shares, rescaled to exclude an unspecified "Other".



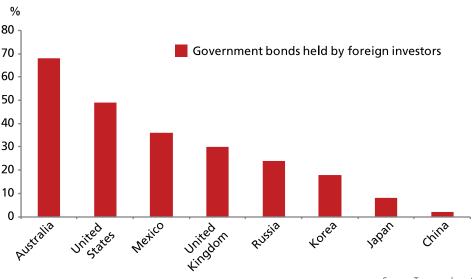
Bi-Directional Fluctuations of the Yuan's Exchange Rate

The aforementioned capital outflows may temporarily overwhelm the current account and net foreign direct investment (FDI) inflows, thereby leading to depreciation pressures on the yuan. However, this does not necessarily mean that the currency will begin to depreciate on a trend basis, as the longer-term exchange rate movement is likely to be subject to changes in the macroeconomic environment.

These changes include: Fluctuations in interest rates domestically and abroad, structural changes in financial markets, and institutional reforms. For example, China recently issued approvals to 32 foreign institutions, allowing them to invest US\$5.9 trillion in its domestic bond market via the QFII and RQFII schemes. QFII and RQFII are now two major channels that foreign institutions can use to access the onshore capital market. However, as of March 2015, offshore institutions only held US\$93 billion worth of China's interbank bonds, equivalent to roughly 2% of domestic bond outstanding.

This outcome contrasts starkly with the situations of most major currencies and some of the major emerging markets. In comparison, foreigners' bond holdings in Australia, the US, and Russia account for 65%, 50%, and 25% of domestic bonds outstanding, respectively (Diagram 3). So for the yuan to continue growing as a reserve currency, further access to domestic markets is needed. The resulting capital inflows, together with other balance of payments inflows such as current account surpluses, could partially offset the outflow pressures due to external assets accumulation by Chinese households.

Diagram 3: Foreign Holdings of Chinese Government Bonds Still Too Low, 2014



Source: Treasury departments



Another key variable that should be included in the analysis of real exchange rate dynamics is relative per capita GDP. For instance, the wealth effect from the rising income of Chinese households can push up the relative price of non-tradable factors, thus leading to a real appreciation in the yuan. Rising income could also reflect the higher productivity of Chinese tradable sectors relative to trading partners, once again causing a real appreciation of the currency. The terms of trade can also affect the real exchange rate via multiple channels. In particular, an improvement in the terms of trade would boost the real value of domestic income and drive up domestic prices relative to foreign prices, resulting in a real yuan appreciation.

Taking into consideration the aforementioned factors, the yuan's exchange rate would not be particularly sensitive to capital account liberalisation.

For the yuan to continue growing as a reserve currency, further access to domestic markets is needed



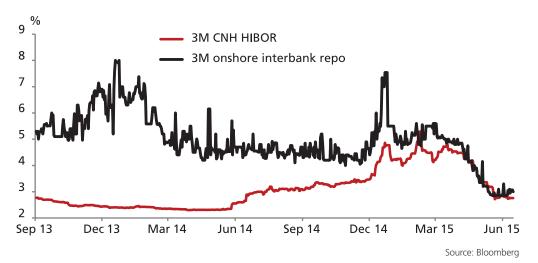
Cross-Border Flows – Towards Onshore/Offshore Convergence

hile the impact of capital account capitalisation on the yuan's exchange rates is ambiguous, onshore and offshore yuan exchange rates as well as interest rates will broadly converge due to increased cross-border flows.

Corporates will exert the strongest force on rate differentials thanks to their ability to choose between onshore and offshore markets to settle trade-related transactions. For instance, since the implementation of the free-trade account (FTA) system in mid-2014, companies registered in the Shanghai FTZ have been allowed to conduct transactions in yuan for current account businesses, foreign direct investments, and cross-border borrowing.

In fact, the system has become more flexible with the adjustments made in early 2015, where corporates are now able to borrow a maximum of twice their capital. Borrowing entities are allowed to raise both yuan and foreign currencies funds under the FTA. This policy, along with other financial innovations including the two-way yuan sweeping facility, has facilitated the convergence of onshore and offshore rates (Diagram 4). Apart from corporate trading strategies, investors' arbitrage will also bring onshore and offshore asset valuations closer to each other.

Diagram 4: Onshore/Offshore Chinese Yuan Rates Converge, 2013-2015



Equally important is the increased flexibility of cross-border yuan transactions, which enables the partial fungibility of banks' onshore and offshore funding. This can then lead to the gradual convergence of banks' yuan funding costs in the two markets, which would in turn pave the way for the further pricing convergence of other assets. It is, however, noteworthy that rates can still vary slightly at times, amidst the oscillations in flows and market shocks.



Offshore Centres to Boost Third-Party Trades

Convergence will also take place at the macro level – the functions of the onshore and offshore markets. With the liberalisation of China's capital account, Shanghai and other mainland cities are expected to carry out more cross-border and international financial activities. But the development of offshore RMB markets will not be undermined. Rather, it will move on to a new phase over time. Specifically, it will evolve from a conduit of fund between mainland and abroad to mainly intermediate among non-Chinese residents.

Such an evolution would be akin to the development of the eurodollar market. In the 1960s, changes to US regulations such as interest rate restrictions and borrowing limits made offshore banking more attractive to domestic banks. As a result, US dollar liquidity migrated to London, where non-US banks were not subject to regulation by the US Federal Reserve. This situation helped the eurodollar market to grow rapidly.

Although most of the regulations were eliminated in the early 1990s, the share of the eurodollar in global dollar banking still grew from just 10% in the 1970s to 30% in the mid-2000s. Non-US residents continued to hold most of their US dollars offshore, as did the official holders of the US dollar reserves (mostly overseas central banks). During the 2000s, more than 70% of official dollar reserves were placed outside the US (Diagram 5).

USD bn US Offshore 300 250 268.2 269.4 200 150 100 73.0 50 59.7 US Offshore US Offshore 2004 2008

Diagram 5: Official US Dollar Deposit by Location (Overseas), 2004/2008

The sustainable growth of the eurodollar market can be attributed to a number of factors. Most notably, it has served as an efficient intermediary between non-US lenders and non-US borrowers of US dollars (also known as third-party intermediation). As of June 2010, of the total US\$4.9 trillion claims booked offshore, US\$2.7 trillion (or 55%) were claims on non-US residents (Diagram 6). Convenience factors such as the regulatory environment, accounting

Source: BIS



standards, and the time zone difference may account for the market participants' preferences for offshore transactions. Also, there is always a demand for separating currency risk from country risk.

Diagram 6: Consolidated Global US Dollar Bank Balance Sheet, June 2010

Banks outside the United States vis-à-vis non-banks						
Assets		Liabilities				
Loans	2,246	Deposits	2,588			
Of which: to US residents	1,086	Of which: from US residents	1,465			
Other claims	2,621	Other liabilities	1,519			
Total claims offshore	4,867	Total liabilities offshore	4,108			
Of which: on US residents	2,143	Of which: to US residents	1,491			

(USD bn) Source: BIS

The offshore market in Hong Kong (and other financial centres) can be expected to evolve along the same path as its eurodollar counterpart. There are, for instance, concerns over the concentration of infrastructure or operational risk in one single jurisdiction, which is particularly applicable to China. Shanghai has made considerable progress in many areas, but compared with cities such as Hong Kong, Singapore, and London, the municipality has yet to become a world-class city in terms of business activity, human capital, and information exchange. Foreign investors are also highly weary of changes or disruptions to political situations, an element that is closely monitored in China as President Xi Jinping's anti-graft drive brings to light more and more corruption cases.

This backdrop makes it necessary for investors to find alternative venues to diversify their yuan exposures. Such a risk-diversification approach is best reflected in overseas institutional investors' (including central banks) growing appetite for "dim sum bonds", despite some of them already having direct access to the onshore bond markets. Dim sum bonds are not only being issued by mainland entities, but also multilateral companies and international institutions, such as the World Bank, Asian Development Bank, British energy giant BP, and German carmaker Volkswagen. This shows that the offshore yuan market is, to an increasing extent, functioning as a platform for the usage of yuan in financial activities conducted among non-Chinese residents.

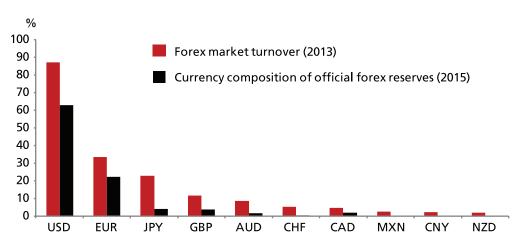
The other offshore yuan centres also possess long-term advantages. Singapore, as a gateway to ASEAN and a commodities hub, could facilitate yuan-denominated trade across the region. For instance, an Indonesian mining company may settle its trade with a Malaysian customer in yuan as long as doing so brings lower transaction costs or better managed currency risks. Likewise, London – one of the largest handlers of the world's yuan payments outside of China and Hong Kong – can serve as a "Western yuan hub" by facilitating third-party usage in the pan-European region.



Growing Demand From Foreign Central Banks

Third-party usage is an important factor in establishing a currency as an international currency. The US dollar, for instance, is largely used between North American Free Trade Agreement (NAFTA) partners, as well as in the Latin America region and commodities markets. By funding most of the activities in the international financial and trading system, the US dollar constitutes the largest pool of currency in the world and has the highest trading volume (Diagram 7).

Diagram 7: Correlation Between Actively Traded Currencies and Major Official Reserve Currencies, 2013/2015



Source: BIS, IMF

To date, around 60 central banks, sovereign institutions, and supranationals have invested in the yuan It is no coincidence that the top seven most actively traded currencies are the same as the seven major official reserve currencies. This reality is a reflection of network externalities, whereby the transaction costs and risk of incurring large capital losses of using a particular currency are reduced as the market size grows.

Based on this perspective, the yuan is gathering steam as it rose to become the ninth most traded currency in 2013 from 17th in 2010. The on-going capital account liberalisation has lifted the popularity of the yuan among central banks, as evidenced by the UK raising 3 billion yuan last year via a landmark issuance of an offshore sovereign yuan bond. The proceeds were held as foreign reserves, not converted into US dollars or euros.

The European Central Bank has also laid the groundwork to add the yuan to its foreign exchange reserves and the Reserve Bank of Australia has acknowledged that it will allocate 3% of its foreign exchange reserves to the yuan. To date, around 60 central banks, sovereign institutions, and supranationals have invested in the yuan, either through the China Interbank Bond Market (CIBM), the QFII scheme, or offshore yuan markets. In addition, foreign central





We project that the yuan will account for 3% of global reserves by the end of 2015



banks have also accessed yuan liquidities worth around 3 trillion yuan via bilateral foreign exchange swaps that have been set up with more than 30 countries so far.

These developments are increasing the yuan's chances of being included in the IMF's special drawing rights (SDR) basket.

While information on the actual percentage of reserves held in yuan is not available for the time being, we project that the yuan will account for 3% of global reserves by the end of 2015. Global reserves stood at US\$11.6 trillion at the end of 2014. Assuming that there is no change in the reserves over the course of the year, this would mean a total of US\$336 billion of global reserves will be allocated in yuan-denominated assets at the end of 2015. This might have little impact on the US dollar and euro, which are enjoying a near-duopoly as settlement and invoicing currencies in international trade. However, in the longer term, the growing weight of the yuan could exert constraints on the US and Eurozone's economic and financial flexibility.

Make It Official

An SDR is a foreign exchange reserve asset defined and maintained by the International Monetary Fund (IMF). It represents a claim to currency held by IMF member countries for which they may be exchanged. Member countries are expected to use the SDR for their balance of payments, reserve position, or development in reserve. The weight of individual currencies in the basket reflects their relative importance in the world's trading and financial system. Today, it consists of the US dollar (41.9%), euro (37.4%), British pound (11.3%), and Japanese yen (9.5%). To reflect the relative importance of currencies in the world's trading and financial systems, the basket composition is reviewed every five years by the IMF. The next review will take place later this year.

In accordance with the IMF's criteria, the composition of the SDR basket needs to reflect the following criteria:

The SDR basket comprises currencies that are issued by Fund members (or by monetary unions that include Fund members), whose exports of goods and services during the five-year period ending 12 months before the effective date of the revision had the largest value, and that have been determined by the Fund to be freely usable currencies.

The yuan meets the first criterion. As early as the 2005 review, the IMF already took notice of China's rapid economic development. During the 2005-2009 review period, China became the third largest exporter of goods and services; just behind the



European Union and the US. As China has become one of the leading exporters over the past few years, it will easily pass the first test.

It is then necessary to consider whether the yuan meets the second criterion – free usability. The definition of "free usability", based on the IMF's Article of Agreement (Article XXX³), is as follows:

A freely usable currency means a member's currency that the Fund determines (i) is, in fact, widely used to make payments for international transactions, and (ii) is widely traded in the principal exchange markets.

It is notable that the concept of a freely usable currency concerns the actual use and trading of currencies in international transactions, which is distinct from whether a currency is freely floating or fully convertible. The yen, for instance, was not fully convertible when it was included in the SDR basket. The main reason for the exclusion of the yuan in the 2010 review was due to the limited cross-border dissemination of the currency – only 0.06% of international bonds and notes were denominated in yuan at the end of 2009. Moreover, yuan transactions accounted for only 0.1% of the total global foreign exchange market turnover during the 2007–2010 period.

International usage of the yuan has, however, risen considerably since then. The proportion of China's trade settled in yuan has surged to 25% today from 3% in 2010 (Diagram 8). Inward and outward direct investments that are settled in yuan have ballooned by 850% and 830%, respectively, over the past three years. The offshore yuan bond market has doubled in size each year since 2008. Its outstanding volume (including Certificates of Deposit) reached approximately 700 billion yuan as of May 2015. More importantly, many reserves managers have shown an increased appetite for the currency. All this increases the likelihood of the yuan's SDR inclusion.





Conclusion

vidence suggests that Beijing is in favour of greater capital account openness as the country transitions to a new model of growth. Basic convertibility will likely be achieved in five years should the current pace of liberalisation continue. But policymakers need to remain vigilant, putting in place macro-prudential measures to contain risks from cross-border capital flows, which may occur in the event of a financial crisis.

China's financial integration into the world economy will have a tangible impact on the existing financial landscape, from fund flow patterns to the role of offshore yuan markets. We anticipate capital account liberalisation in China to trigger net portfolio outflows, as has happened in the past. In the late 1970s, liberalisation in the UK and Japan was followed by a build-up of net international assets that amounted to 10-13% of the countries' GDP over the subsequent years. A more notable impact is expected for China as the large pool of domestic savings diversifies abroad. From a macro perspective, China can achieve a more balanced international investment position through external assets accumulation.

Such an evolution of capital flows will also have implications on the yuan's exchange rates. Capital outflows may temporarily overwhelm current account and net FDI inflows, leading to depreciation pressures on the yuan. However, its exchange rate should not be sensitive to capital account openness over the longer term as it would be subject to changes in interest rates domestically and abroad, as well as structural changes in financial markets, among other factors in the macroeconomic environment.

Onshore and offshore exchange/interest rates will increasingly behave as one homogenous unit. Banks, corporates, and investors will all play distinct roles in the convergence process. As more market participants are able to access the onshore capital markets due to greater flexibility, their ability to arbitrage valuation and funding cost differences will drive rates closer over time.

With the liberalisation of China's capital account, the number of cross-border financial activities conducted onshore will increase. Offshore yuan markets will have to position themselves as an efficient intermediary between non-Chinese residents in order to maintain their competitiveness. Such an advantageous positioning can only be achieved through the enhancement of market efficiency via innovative solutions and the active participation of different market players. Given that third-party usage is an important criterion for an international and reserve currency, offshore markets will play an essential role in increasing the global recognition and acceptance of the yuan.





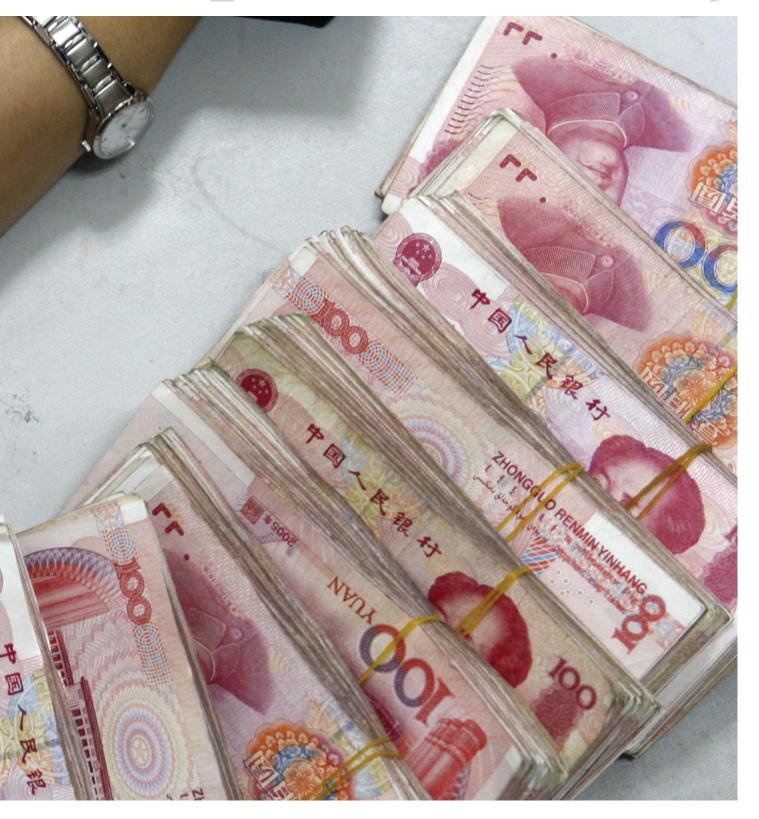






Onshore and offshore exchange/interest rates will increasingly behave as one homogenous unit







Notes

- [1] IMFC Statement by Zhou Xiaochuan, https://www.imf.org/External/spring/2015/imfc/statement/eng/chn.pdf
- [2] Tamim Bayoumi and Franziska Ohnsorge, *Do Inflows or Outflows Dominate? Global Implications of Capital Account Liberalization in China*, https://www.imf.org/external/pubs/ft/wp/2013/wp13189.pdf
- [3] International Monetary Fund (IMF), Articles of Agreement, https://www.imf.org/external/pubs/ft/aa/



Disclaimers and Important Notices

The information herein is published by DBS Bank Ltd (the "Company"). It is based on information obtained from sources believed to be reliable, but the Company does not make any representation or warranty, express or implied, as to its accuracy, completeness, timeliness or correctness for any particular purpose. Opinions expressed are subject to change without notice. Any recommendation contained herein does not have regard to the specific investment objectives, financial situation and the particular needs of any specific

The information herein is published for the information of addressees only and is not to be taken in substitution for the exercise of judgement by addressees, who should obtain separate legal or financial advice. The Company, or any of its related companies or any individuals connected with the group accepts no liability for any direct, special, indirect, consequential, incidental damages or any other loss or damages of any kind arising from any use of the information herein (including any error, omission or misstatement herein, negligent or otherwise) or further communication thereof, even if the Company or any other person has been advised of the possibility thereof.

The information herein is not to be construed as an offer or a solicitation of an offer to buy or sell any securities, futures, options or other financial instruments or to provide any investment advice or services. The Company and its associates, their directors, officers and/or employees may have positions or other interests in, and may effect transactions in securities mentioned herein and may also perform or seek to perform broking, investment banking and other banking or financial services for these companies

The information herein is not intended for distribution to, or use by, any person or entity in any jurisdiction or country where such distribution or use would be contrary to law or regulation.



