

Internationalizing the Renminbi: Weaving a Web for the Next World Currency

Commissioned by Clearstream

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GROUP

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EXECUTIVE SUMMARY

Internationalizing the Renminbi: Weaving a Web for the Next World Currency, commissioned by Clearstream and produced by Aite Group, examines the gradual liberalization of the Chinese currency and the role that the development of offshore financial centers in Europe will play in its internationalization. Based on interviews with 24 firms from both Europe and Asia, the research assesses the renminbi in three key areas: its use as a currency for trade finance, its use in the realm of investments, and its use as a reserve currency.

Key takeaways from the study include the following:

- **There has been significant growth in trade finance:** Continued growth is expected in the use of renminbi in the realm of trade finance. The percentage of total global trade value settled in renminbi rose from 1.9% in January 2012 to 8.7% in October 2013 (compare that to the U.S. dollar's decline from 85% to 81.1% during the same period), and Aite Group expects similar levels of growth during 2014.
- **There is increased appetite for dim sum bonds:** Investors are highly interested in dim sum bonds; Aite Group estimates that by year-end 2014, total issuance for the year will be RMB 554 billion, up from RMB 375 billion last year. The majority of survey respondents (87%) believe that dim sum bonds are "appealing."
- **The restricted number of renminbi-denominated products has held back progress:** The universe of financial products denominated in renminbi is not large or diverse enough at the moment; 87% of interview respondents believe that the lack of sophistication of the Chinese onshore market and the restricted number of products (offshore and onshore) has held back the renminbi's internationalization process.
- **2020 could be a key turning point for full convertibility:** Looking to the future, many industry participants believe 2020 will represent a key turning point for the renminbi as an international currency and the point at which it is likely to reach full convertibility. Its future as a reserve currency is likely to hinge on this progress.
- **Europe will play a role in increasing liquidity in renminbi:** Many expect the development of offshore centers to positively impact global liquidity for the renminbi. More than half of interview respondents believe that Europe will play a key role in the currency's internationalization process.
- **Europe's sophisticated infrastructure is its main appeal:** The highly developed infrastructure in Europe is essential to its success in clearing offshore renminbi-denominated products; 61% of interview respondents believe that this is the primary appeal of the region. Competition and cooperation among offshore centers will facilitate the internationalization of the renminbi.
- **Operational issues remain the biggest barrier to using renminbi:** Challenges remain in the trade finance and payments space due to factors such as a lack of clearing broker readiness for operating in renminbi (32%) and translation issues (32%), according to survey respondents.

INTRODUCTION

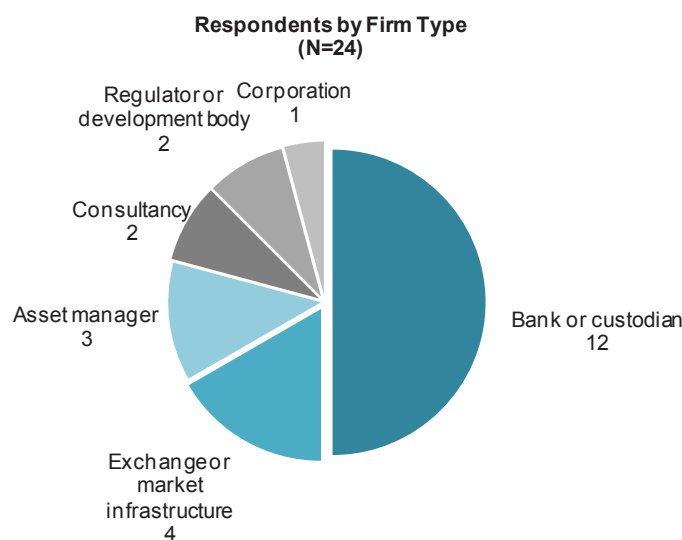
Whether you call it the renminbi, the yuan, or the redback, there is no denying the increased presence and awareness that the Chinese currency has achieved on the global economic stage over the last couple of years. The Chinese government and domestic regulators have taken some long-awaited steps toward liberalizing the currency over the last few years, and a number of offshore centers have emerged across the globe, aiming to provide access to renminbi clearing services and liquidity to foreign investors.

This paper, commissioned by Clearstream, examines the progress that the renminbi has made thus far in becoming a currency for trade finance, payments, and investment, as well as its potential as a reserve currency in the future. It assesses the views of both onshore and offshore participants in the Chinese markets about the internationalization process, including Europe's role in the development of offshore liquidity.

METHODOLOGY

This study is based on independent research and analysis conducted by Aite Group and telephone interviews with leading market participants focused on Chinese onshore and offshore markets representing banks, development bodies, market infrastructures, custodians, legal professionals, consultants, and asset managers. Half of respondents hail from banks (Figure 1). During Q1 and Q2 2014, Aite Group held interviews with market participants from 24 firms to capture their views on the internationalization of the renminbi, specifically related to the development of European offshore centers. Given the size and structure of the research sample, the data provide a directional indication of conditions in the market.

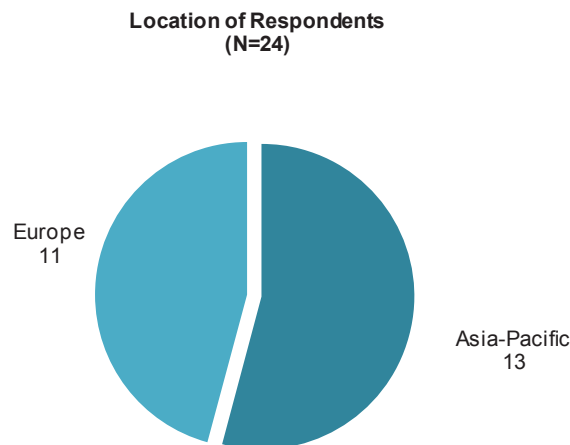
Figure 1: Type of Participating Firms



Source: Aite Group survey of 24 firms active in the Chinese market, Q1 and Q2 2014

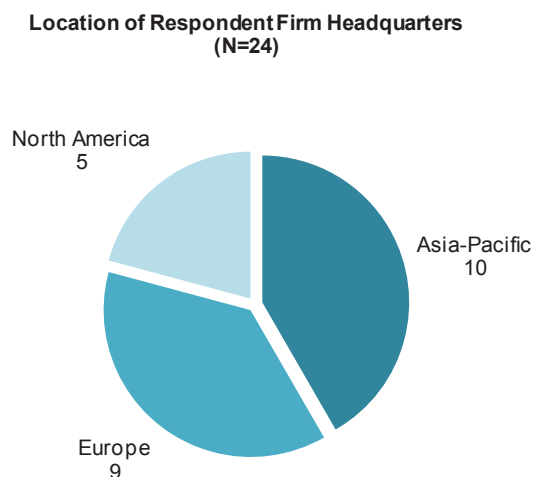
The location of respondents is almost evenly split, with just over half based in the Asia-Pacific region and the rest based in various locations across Europe (Figure 2). The location of respondents must be considered alongside the location of their firm's headquarters (Figure 3), as both factors impact the perceptions of the Chinese currency and its place in European markets.

Figure 2: Location of Respondents



Source: Aite Group survey of 24 firms active in the Chinese market, Q1 and Q2 2014

Figure 3: Location of Headquarters of Respondent Firms



Source: Aite Group survey of 24 firms active in the Chinese market, Q1 and Q2 2014

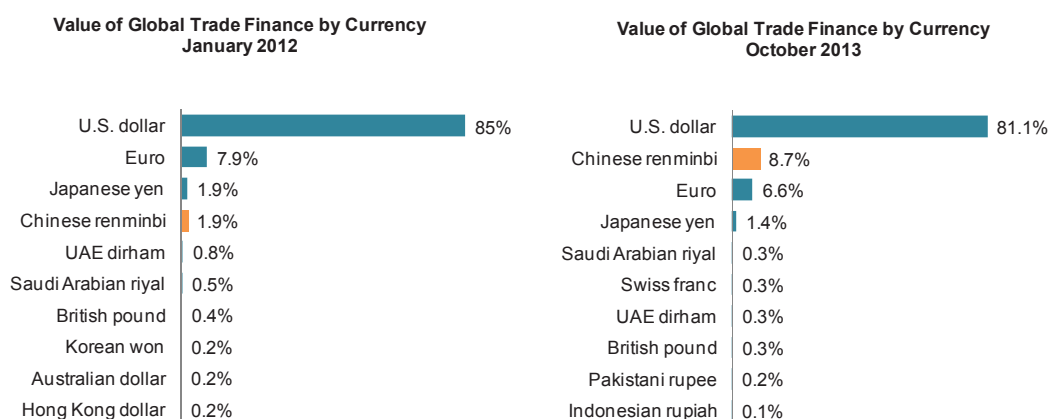
THE CURRENT LANDSCAPE

China's currency is no simple matter. Officially called the renminbi by politicians and regulators (and translated as the people's currency), frequently shortened to RMB, dubbed the yuan in everyday terms, and informally referred to as the redback, there is a distinction between how it is named in the onshore and offshore markets. The onshore yuan, denoted CNY, refers to renminbi traded in Mainland China, whereas the offshore yuan, denoted CNH ("H" because Hong Kong was the first offshore center for trading the currency), refers to renminbi traded in markets outside of the Chinese mainland. Restrictions on the cross-border activity of the currency due to China's capital controls are the reason for this distinction, and the result is that CNY and CNH have different foreign exchange rates and different interest rates, despite representing the same currency.

The CNY exchange rate is still controlled and is not internationalized, and the People's Bank of China (PBOC) plays an active role in managing its exchange rate. The CNH market is regulated jointly by the PBOC and the Hong Kong Monetary Authority (HKMA) and does not have a monetary policy tagged specifically to it; hence, it is a floating rate determined by market supply and demand factors. As a result of these two different rates, CNH and CNY are not fully fungible.

The internationalization of the renminbi can be divided into a three-step process, with it initially being used as a global trade and payments currency, then as a global investment currency, and finally achieving status as a global reserve currency—but China remains tentative about reaching that final stage. The currency has certainly made progress within the realm of trade finance, payments, and investment, especially given the gradual nature of the liberalization process from a domestic governmental perspective. It will be a long road, however, and there are still questions about whether full convertibility of the currency is a prerequisite for further significant progress to be made.

As a trade currency, the renminbi has come on by leaps and bounds in recent years and is now the second most used currency for trade finance in the world (Figure 4). The percentage of total global trade value settled in onshore and offshore renminbi rose from 1.9% in January 2012 to 8.7% in October 2013 (compare that to the U.S. dollar's decline from 85% to 81.1% during the same period), an increase influenced by the Chinese government's decision in mid-2012 to lift the remaining restrictions on importing and exporting firms regarding trade settlement in renminbi. Although this is a clear indicator of the propensity of firms worldwide to use the renminbi as a trade currency, the renminbi can still make plenty of progress in this department. In 2013, China overtook the United States to become the world's largest trading nation, but the U.S. dollar still holds a significantly larger share of trade finance than the renminbi does.

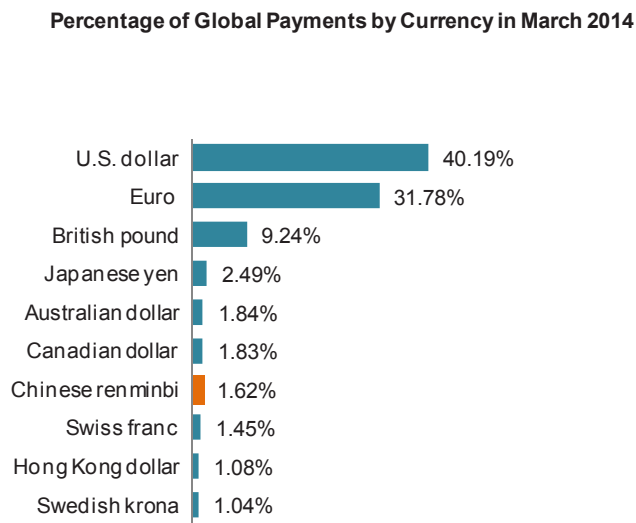
Figure 4: Use of the Renminbi in Trade Finance

Source: SWIFT, Aite Group

The Chinese government and the PBOC (see more on the regulatory structure in Appendix 1: Chinese Regulatory Structure) have acted in concert to remove legal and operational barriers to trade settlement in renminbi, including simplifying documentation requirements and launching cross-border settlement pilot schemes. These authorities intend to gradually simplify and ease access to the Chinese domestic markets and encourage greater use of the renminbi in international transactions. This, in turn, will make it easier for China to trade with the rest of the world and vice versa, enabling the country to increase its role in the global economy and to develop its domestic financial markets.

The reduced legal and operational barriers have resulted in interest from the multinational corporate community, which has the most to gain from operational efficiencies and improved transparency for intragroup trade activity. The ability to settle in renminbi grants these corporations visibility of both sides of transactions involving China. Outside of these multinationals, most of the trade finance activity in renminbi occurs in Hong Kong and Singapore, suggesting that it largely remains a regional trade currency rather than a global trade currency for the time being. It must be noted, however, that due to these Asian countries' current roles as dominant offshore hubs, some of the activity may be masked as Asian even though the underlying flows emanate from European counterparties. The PBOC has also granted permission for Frankfurt to establish itself as a renminbi clearing hub, thereby setting the ground for the currency to increase its role in global trade finance.

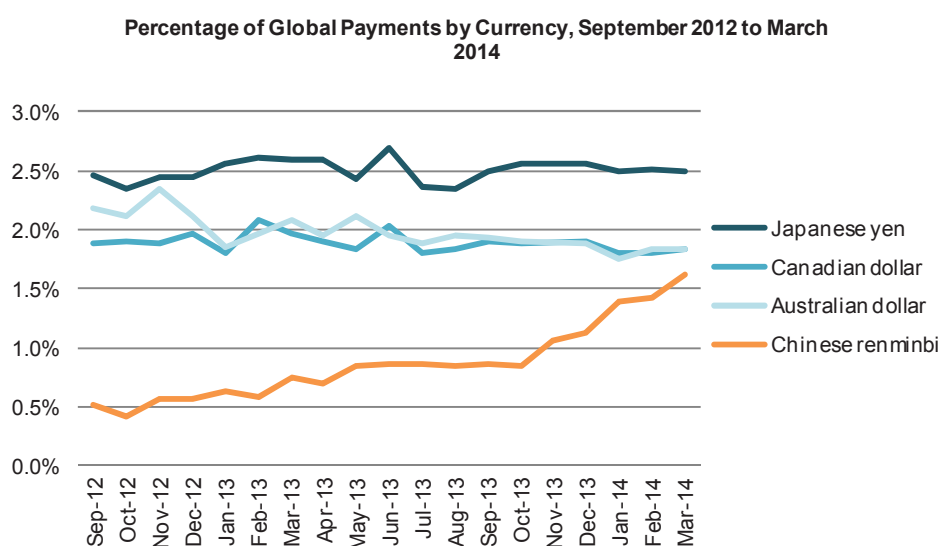
Despite the renminbi's growth as a currency for trade finance transactions, it has a long way to go before it is a primary currency for global payments transactions. In March 2014, it accounted for just 1.62% of global payments, both onshore and offshore (Figure 5), a far cry from the use of the British pound, euro, and U.S. dollar, which in that same month were used for 9.24%, 31.78%, and 40.19% of global payments, respectively.

Figure 5: Global Payments by Currency in March 2014

Source: SWIFT, Aite Group

Nevertheless, these are still early days for the renminbi, and attention should be paid to the progress achieved thus far. Figure 6 shows that it has grown as a payments currency in recent years—in September 2012, it was 14th in the payments currency rankings (used for 0.5% of global payments), but by January 2014 it rose to reach a high of seventh. The renminbi dropped back down to eighth in the rankings the next month, but despite this fall in the rankings, its use for payments in percentage terms still slightly increased between January and February 2014. In March 2014 it rose to seventh again, with 1.62% of global payments.

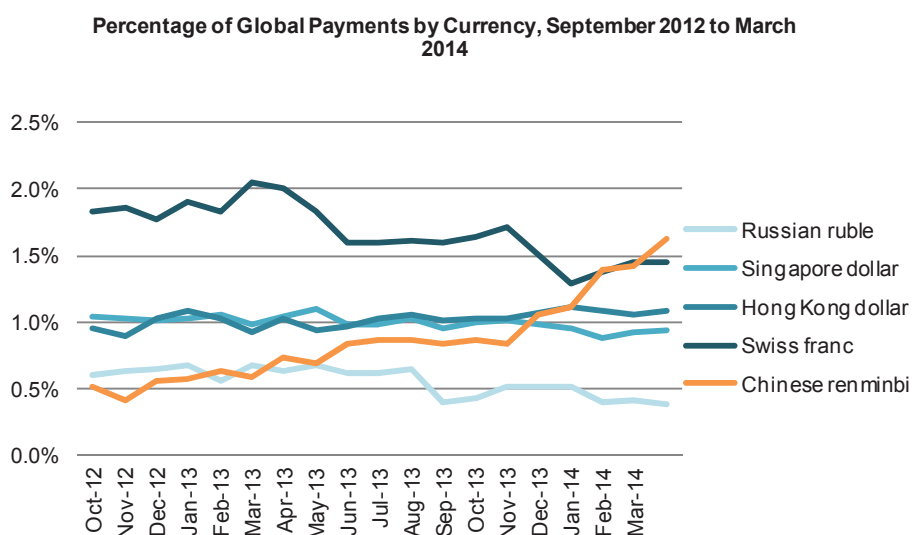
Figure 6: Percentage of Global Payments by Currency



Source: SWIFT, Aite Group

If the renminbi follows the same trend in 2014 as it did in 2013, it could potentially reach fifth in the rankings by the end of the year—to do so, it would need to overtake the Canadian dollar and the Australian dollar, which were both used for 1.8% of total global payments in March 2014. If the renminbi’s growth regarding its usage for payments continues in the same vein that it experienced at the end of 2013 and start of 2014, it may even challenge the Japanese yen (used for 2.5% of payments in March 2014) for fourth spot by the end of the year (Figure 7).

Figure 7: Percentage of Global Payments by Currency



Source: SWIFT, Aite Group

The foreign exchange (FX) markets are beginning to tell a similar story for the renminbi. According to figures from the Bank for International Settlements (BIS), in April 2013 it was the ninth most actively traded currency in the world, corresponding to 2.2% of average daily global turnover in the FX markets for that month.¹ While again it seems that the currency of the world's second-largest economy is disproportionately represented, it must be acknowledged that in April 2010 it was the 17th most actively traded currency in the world, accounting for 0.9% of average daily global turnover in the FX markets for that month. This growth is likely to continue—in March 2014, the PBOC announced its plans to set up a clearing bank in London, the global center for FX activity. This may grant the currency a further avenue for growth within the FX sphere.

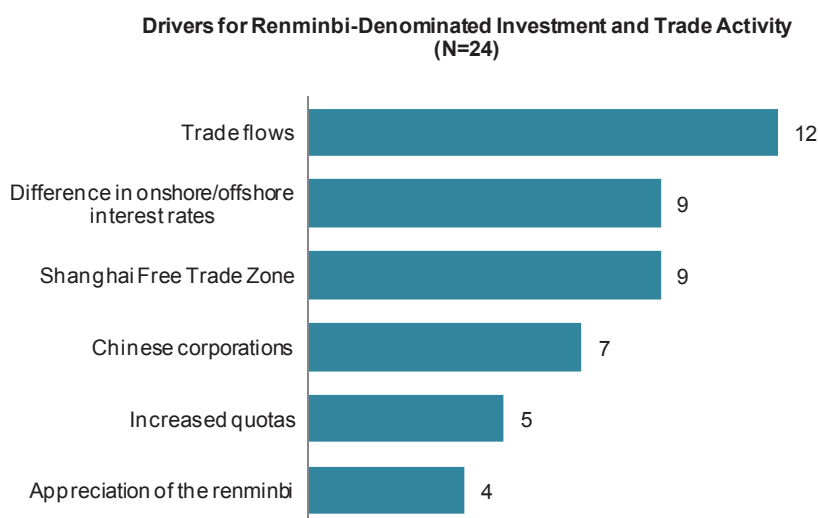
An underlying theme is emerging from these statistics. China may boast the world's second-largest economy, but its currency does not come close to sharing the equivalent status in capital markets or global trade. China is the largest exporter and trader of goods on the global stage, and according to SNL Financial² in September 2013, the country is home to three of the world's 10 largest banks (as measured by assets)—but in terms of trade finance, global payments, and FX turnover, the renminbi has a lot of ground to cover.

Figure 8 shows the respondent views on what is driving current international use of the renminbi (a multiple choice question), highlighting the perceived importance of trade finance in the global expansion of the currency. Half of respondents feel trade flows have significantly impacted the internationalization process, and seven have witnessed pressure from Chinese corporations to settle in renminbi. These corporations are keen to settle in the Chinese domestic currency and avoid the cost and risk of FX activity in converting renminbi to U.S. dollars or another currency. A European-based respondent from an Asian-headquartered bank notes that China's trading relationships with 127 countries across the globe is the primary reason why the currency will become increasingly internationalized over the next five years.

Other perceived drivers include the difference in onshore and offshore interest rates (firms are able to generate returns from arbitrage between the interest rates for CNH and CNY) and the relatively recent creation of the Shanghai Free Trade Zone (SFTZ—see the section Shanghai Free trade zone) in August 2013. The industry is hopeful that the pilot zone will facilitate a gradual liberalization of the Chinese capital markets by acting as a testing ground for the government's policies focused on opening up the market to foreign investment.

1. "Global Foreign Exchange Turnover in 2013," BIS Triennial Central Bank Survey, 2013.

2. "Largest 100 Banks in the World," SNL Financial, 2013.

Figure 8: Respondent Views on Drivers for International Use of the Renminbi

Source: Aite Group survey of 24 firms active in the Chinese market, Q1 and Q2 2014

The Chinese government is well aware of the risks that come with loosening the reins on the renminbi too quickly; hence it is likely to take a conservative approach to internationalization. Allowing the currency to float freely would pose severe exchange rate risk to Chinese firms because the renminbi is not widely held as a reserve currency and so could be subject to speculative attacks. Removing capital controls too quickly could trigger substantial flows of "hot money" (capital that regularly flows between markets as investors seek to profit from disparities in short-term interest rates), which can have severe destabilizing effects, as experienced by several of China's neighbors during the Asian Crisis of 1997. It must be remembered that, despite the ambitions of becoming a global investment currency (and perhaps even a global reserve currency), the renminbi barely circulated outside of China at all 10 years ago—in fragile post-crisis conditions, great care must be taken for the renminbi to achieve its goals.

There is no guarantee, though, that this road to internationalization will be the one that the renminbi continues to follow. Another economic downturn could spark China's return to market insulation. The more integrated it becomes in the global financial markets, the more susceptible it is to getting caught up in a crisis stemming from elsewhere. If there were to be a crisis similar to that of 2008, China may experience a shift in political will and try to isolate its economy (particularly the capital markets) and currency in self-defense. This, however, could be a challenging task because of the high level of global market integration that China has thus far achieved; extricating itself completely may be impossible at this point.

A WEB OF OPPORTUNITY

China has identified the development of offshore renminbi centers as a key step toward achieving capital account and exchange rate liberalization as it introduces the currency to foreign markets, creates pools of offshore liquidity, and facilitates the development of renminbi-

denominated investment products. At the same time, it will allow the onshore market to mature and expand, so that when the capital account is fully liberalized and the renminbi is fully convertible, domestic firms are prepared for international banking business. Meanwhile, a number of Chinese cross-border investment programs, such as the Qualified Domestic Institutional Investor (QDII), the Qualified Foreign Institutional Investor (QFII), the Renminbi Qualified Foreign Institutional Investor (RQFII), and the Qualified Domestic Limited Partner (QDLP), are acting as a gradual, controlled means of bringing the offshore and onshore markets to convergence.

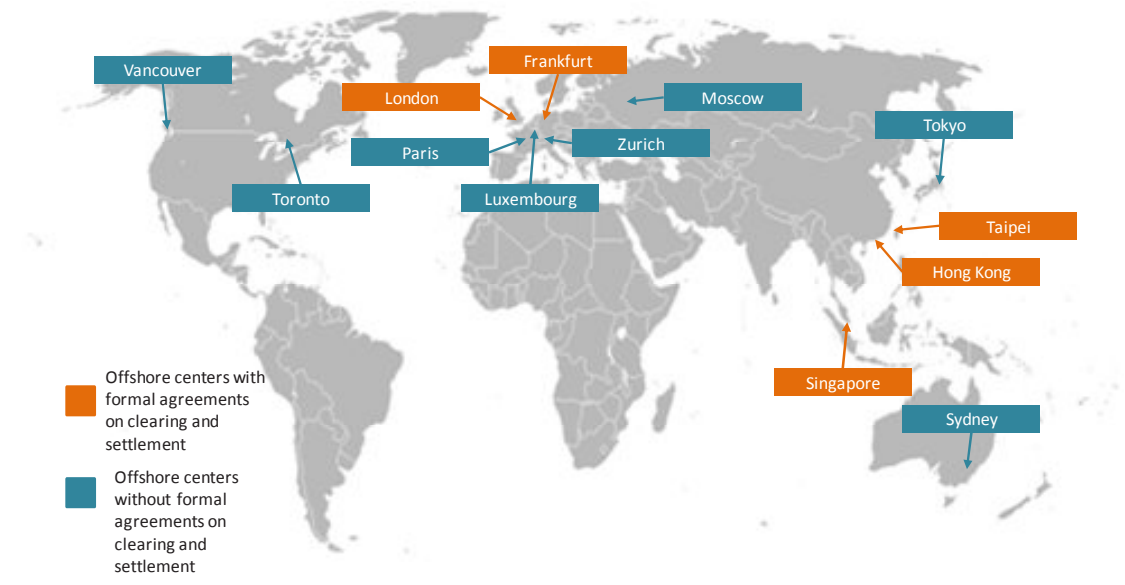
Financial centers across the globe are pulling out all the stops to gain recognition as a center for renminbi activity. This is a sure sign of confidence in the currency by both markets and governments and is indicative of the high expectations held for the role that China and the renminbi will play in global financial markets in years to come. With Frankfurt, London, Luxembourg, Paris, and Zurich all staking their claim to be a European renminbi center, and Hong Kong, Singapore, Sydney, Taipei, and Tokyo making a case in the Asia-Pacific region, it will be fascinating to see how the competitive and cooperative landscape develops both inter- and intraregionally.

In 2004, Hong Kong became the first offshore renminbi market when Beijing allowed the currency to be held in Hong Kong deposit accounts. Direct trade between the renminbi and the Japanese yen, which itself underwent internationalization in the 1980s, commenced in Tokyo and Shanghai in June 2012. The Bank of China's Taipei branch was designated as a renminbi clearing bank in December 2012, and although Taipei is not a city especially renowned for its financial services industry, it is looking to take advantage of Taiwan's extensive trade ties with China to become a major renminbi center. Singapore, regarded as an international financial center and gateway for western firms to Asian markets, first saw renminbi activity in February 2013 when the Singapore branch of the Industrial and Commercial Bank of China (ICBC) was appointed as the renminbi clearing bank of Singapore. Sydney is also looking to cash in on Australia's strong trade links with China and no longer needs to triangulate trade through the U.S. dollar after full convertibility between the Australian dollar and renminbi was introduced in April 2013.

A similar scene is developing in Europe. Zurich is looking to become a private banking center for Chinese clients and benefit from the free trade agreement signed between Switzerland and China in May 2013. In October 2013, investors in London, the leading global FX center, were granted permission to purchase up to EUR 9 billion in onshore Chinese financial securities. In the eurozone, the European Central Bank (ECB) signed a EUR 42 billion bilateral currency swap with the PBOC in the same month, underlining its intent to strengthen Europe's financial ties with China. Luxembourg, the European fund center, was chosen by three major Chinese banks—Bank of China, ICBC, and China Construction Bank (CCB)—as the location for their European headquarters. Frankfurt is looking to capitalize on Germany's status as China's leading European trade partner, and in March 2014 the Bundesbank, the German central bank, and the PBOC signed an agreement to set up a clearing bank in the city. Paris is trying to position itself as a gateway to Africa for Chinese companies and received a EUR 9 billion quota for renminbi investment in March 2014.

Figure 9 shows the location of the potential offshore renminbi centers. In addition to the aforementioned European and Asia-Pacific candidates, Moscow is also making its case after the Moscow Interbank Currency Exchange became the first regulated market to trade renminbi outside of China in December 2010. In North America, Toronto and Vancouver are both making their bids to become an offshore hub for the currency, but there is a distinct lack of activity in the United States—this has primarily been put down to political reasons, but New York’s status as a global financial center means it cannot be discounted, even if it is not currently bidding.

Figure 9: Current Offshore Renminbi Centers



Source: Aite Group (correct as of April 2014)

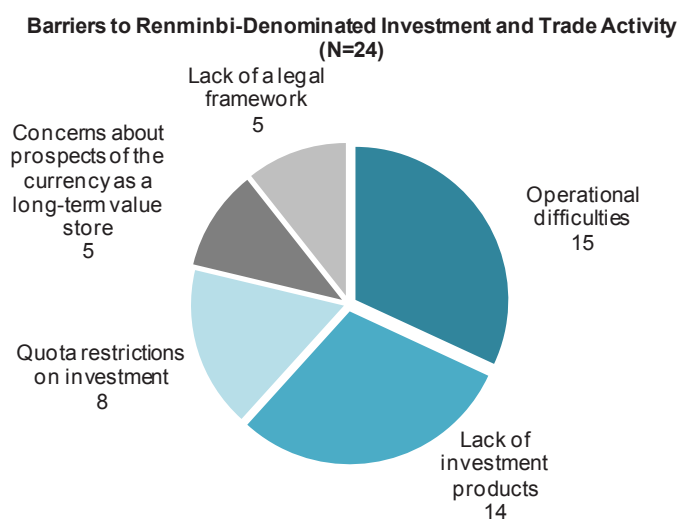
RENMINBI AS AN INVESTMENT CURRENCY

The renminbi's growing status in the trade finance and global payments spheres suggests that the currency is making good progress on the road to becoming a global trade currency. The renminbi still has plenty of ground to cover in terms of becoming a global investment currency—for the renminbi to achieve this status, it must be used in transactions where neither party is domiciled in China. A top-tier Chinese bank interview respondent explains that the major prohibiting factor for the renminbi's development as an investment currency is the lack of options available to invest in the currency offshore, meaning that it just ends up being reinvested in the onshore market. This acts as a hindrance to the development of offshore liquidity pools.

The renminbi will therefore gain more traction only if sufficiently sized pools of offshore liquidity and a broad enough range of renminbi-focused products and services are developed in order to foster reinvestment of the currency. Investors will also need to gain confidence that the currency will retain its value in the long term, though volatility should be anticipated as with other international currencies.

Figure 10 shows respondent views on the main barriers to the renminbi's use within the world of trade finance and capital markets and indicates that operational difficulties are considered to be the biggest hurdle by two thirds of respondents. This could include challenges related to translating Chinese character sets into Latin character sets or navigating administrative processes related to registration with local authorities (see more in the section The Current Challenges). The lack of investment product options for foreign and Chinese domestic investors (14) and the quota restrictions on the schemes that are available (8) are other significant barriers for the renminbi's adoption within the realm of capital markets.

Figure 10: Respondent Views on Barriers to Renminbi as an Investment and Trade Currency



Source: Aite Group survey of 24 firms active in the Chinese market, Q1 and Q2 2014

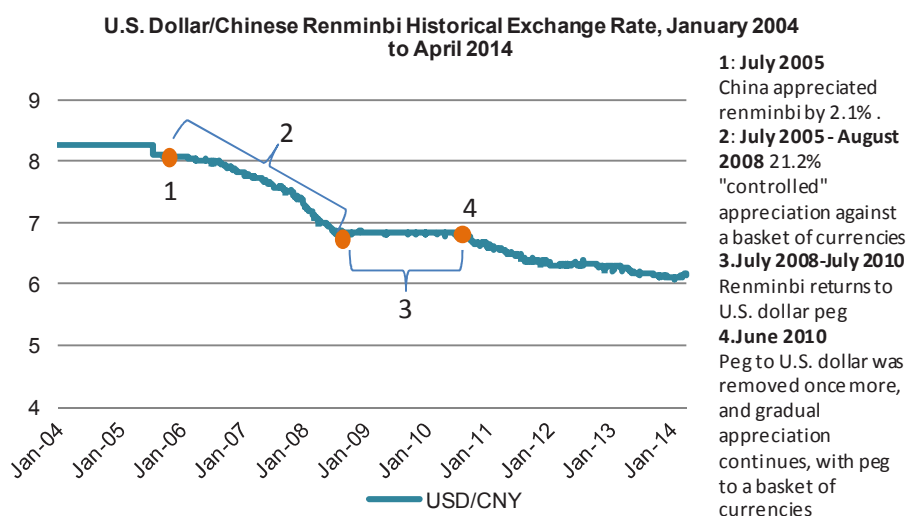
NOT JUST A ONE-WAY BET

Many observers have claimed that China's export-led economic growth over the last two decades has been facilitated by an undervalued currency resulting from the renminbi's peg to the U.S. dollar, meaning that Chinese exports were much more competitive than they would have been under a freely floating exchange rate regime. This started to change in July 2005, when the exchange rate fix was removed and a "managed float" system was introduced, whereby the exchange rate adjusted within a specified daily trading band (initially +/- 0.3% in bilateral exchange rate between the renminbi and U.S. dollar) in reference to a weighted basket of currencies. This trend further increased when the trading band was widened to +/- 2% in March 2014. Switching to a managed float meant that China could control the rate at which the renminbi appreciated, giving Chinese businesses time to adjust to the reduction in international competitiveness that they faced.

Despite the control exercised by the Chinese government, the appreciation of the renminbi was still reasonably dramatic. In the three years following the change in exchange rate policy, the renminbi saw an increase in value of 21.2% against the U.S. dollar, as can be seen in Figure 11. In fact, the appreciation was only halted in August 2008, when China returned the renminbi to its peg to the U.S. dollar at the onset of the global financial crisis. This was partly due to the fact that China hoped fixing the renminbi's exchange rate to the world's most stable and liquid currency would limit the exchange rate volatility during the crisis, and also because the U.S. Federal Reserve started printing U.S. dollars to stimulate economic growth. Inflationary pressure in the United States resulted in the depreciation of the dollar and a simultaneous relative increase in emerging market currencies.

The financial crisis led China to realize not only the size of the financial shocks that can occur in the United States, but also the severity with which these shocks could spread around the globe. So the world's second-largest economy decided that it needed to decrease its reliance and that of other countries on the U.S. dollar. In June 2010, China announced that it would continue with its exchange rate reform and returned the renminbi to its managed float against a basket of currencies consisting primarily of the dollar, euro, yen, and South Korean won.

During the periods of 2005 to 2008 and 2010 onwards, when China experienced controlled appreciation, the movement of the daily price of the yuan/dollar was restricted to a predetermined band either side of a daily reference rate published by the PBOC. On April 14, 2012, this band was extended to 1% from 0.5% and further extended to 2% on March 17, 2014. These announcements signal a change from one-way price swings of the yuan and fuel expectations of future yuan/dollar volatility.

Figure 11: Appreciation of the Renminbi

Source: Oanda, Aite Group

The problem this posed for China, however, was that giving some of the control of the currency to the market meant that participants viewed the renminbi as a "one-way bet." The continued oversight of the renminbi by the Chinese authorities led many investors to believe that the currency would simply continue to appreciate, or at least not experience any depreciation significant enough to make anyone sell the currency, so a whole host of investors started to purchase renminbi and then just hold on to it, rather than use it as a payments or investment currency.

One of the interview respondents from a top-tier Chinese bank indicates that his firm has witnessed a surge of ongoing activity related to the idea that holding onto renminbi will guarantee long-term returns. This trend damages market growth for renminbi-denominated assets and the currency's prospects overall because in order to deepen overall liquidity for the currency, it needs to be traded and investment in underlying assets needs to occur.

To fight off the speculators, who were effectively reducing the supply of the currency and driving its value up even further, and to prove that the value of the renminbi would be influenced and determined by market forces and would not be a one-way bet, China decided to widen the daily trading band to 2% against a currency basket in March 2014. This move coincided with a period of depreciation for the renminbi at the start of 2014, which in itself was an indication that China is loosening its grip on the currency.

DIM SUM BONDS

"Dim sum bonds" are bonds denominated in renminbi and issued outside of Mainland China. In July 2007, the first such bond was issued by the China Development Bank in Hong Kong. In August 2010, McDonald's became the first company outside of Greater China to issue a

renminbi-denominated bond—only Chinese or Hong Kong companies were previously permitted to do so.

Dim sum bonds, as with any financial instrument, come with a certain level of risk. In the dim sum bonds' case, part of the risk is due to the renminbi's lack of wider circulation. Issuers of dim sum bonds must have sufficient access to renminbi liquidity to deliver interest payments throughout the term of the bond—as the renminbi is still fairly scarce in a global sense, an exchange rate shock that causes the renminbi value of the interest payments to increase could lead to liquidity issues.

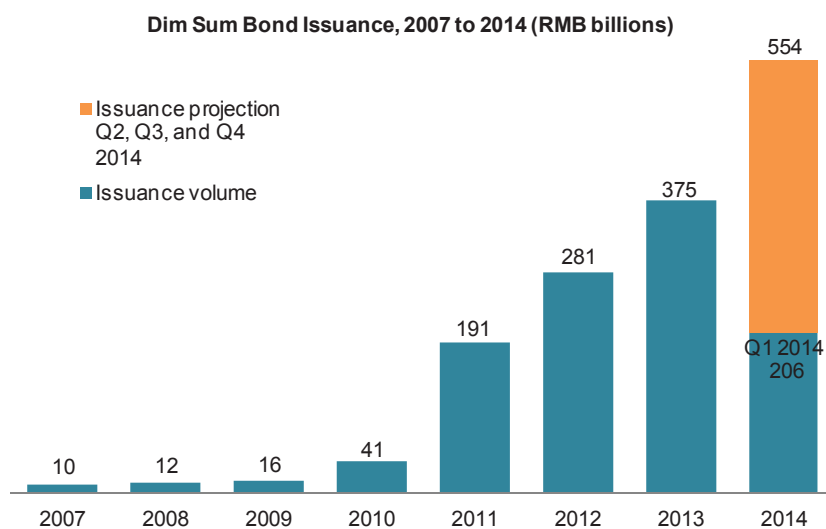
There is also a degree of exchange rate risk when dealing with dim sum bonds. Although investors remain confident about the short-term prospects of the currency (in spite of its depreciation at the start of 2014), most dim sum bonds have a tenor of three years or shorter at issuance, showing that there is still uncertainty around the longer-term prospects of the renminbi. According to figures from Standard Chartered,³ the weighted-average tenor of dim sum bond primary issuance in 2013 was 1.8 years, which again points to a lack of confidence in the currency in the long term but also highlights investors' preference to purchase and hold the bonds rather than trade them in the secondary market.

Market observers point to this lack of secondary market activity, which partly stems from a lack of offshore investment opportunities, as a key challenge for dim sum bonds to overcome. In order for the market to grow, primary and secondary markets must deepen and broaden; this, in turn, will improve their attractiveness for offshore investors. A European-based investment bank respondent notes that foreign investors have been more attracted to the RQFII market due to the lack of dim sum bond availability compared to the size of the offshore deposit base.

The issuance of dim sum bonds initially saw little change, as issuance rose from RMB 10 billion in 2007 to RMB 16 billion in 2009 (Figure 12). Once the dim sum bonds were made more widely accessible and it became easier to issue offshore in 2010, issuance rose sharply—by 2011 it had reached RMB 191 billion and by 2013, RMB 375 billion. One of the key drivers for overseas dim sum bond issuance has been the view of the renminbi as a currency that will continue to appreciate, increasing the returns from the bonds. The first quarter of 2014 has seen issuance of RMB 206 billion, and Aite Group estimates that total issuance by year-end will be around RMB 554 billion.

3. "Offshore Renminbi Bonds—Outlook for 2014," Standard Chartered, 2014.

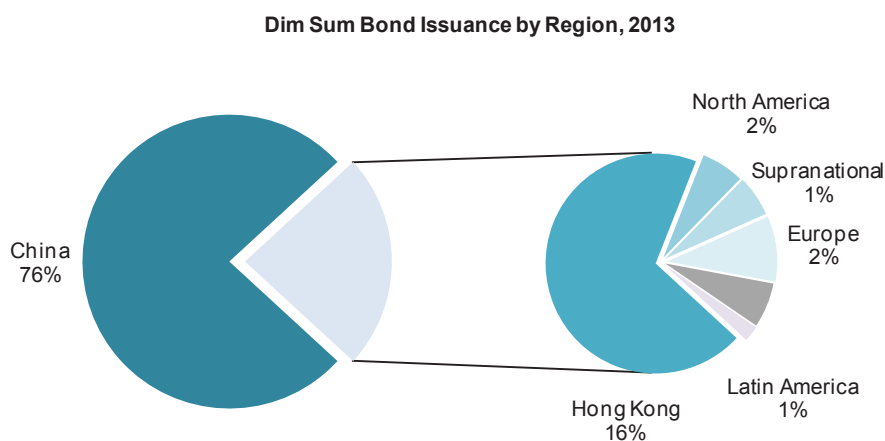
Figure 12: Value of Dim Sum Bond Issuance and 2014 Estimate



Source: Bloomberg, Aite Group estimates

Figure 13 shows the breakdown of dim sum bond issuance according to the domicile of the issuer in the full year 2013. A large proportion of the issuers were either China- (76%) or Hong Kong-based (16%), as they have the most access to renminbi liquidity and renminbi investment products and have the most optimistic views about the long-term prospects of the currency.

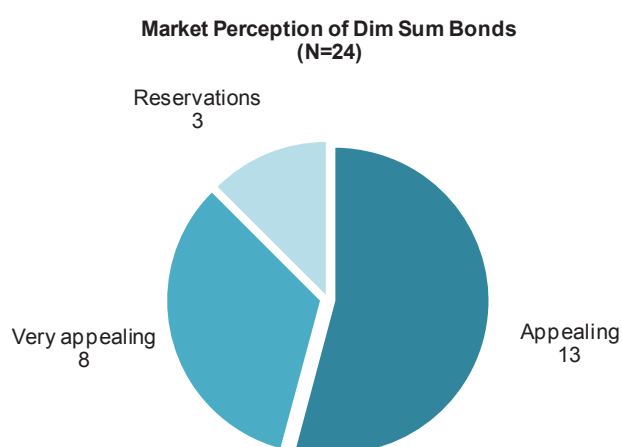
Figure 13: Dim Sum Bond Issuance by Region



Source: Bloomberg, Aite Group

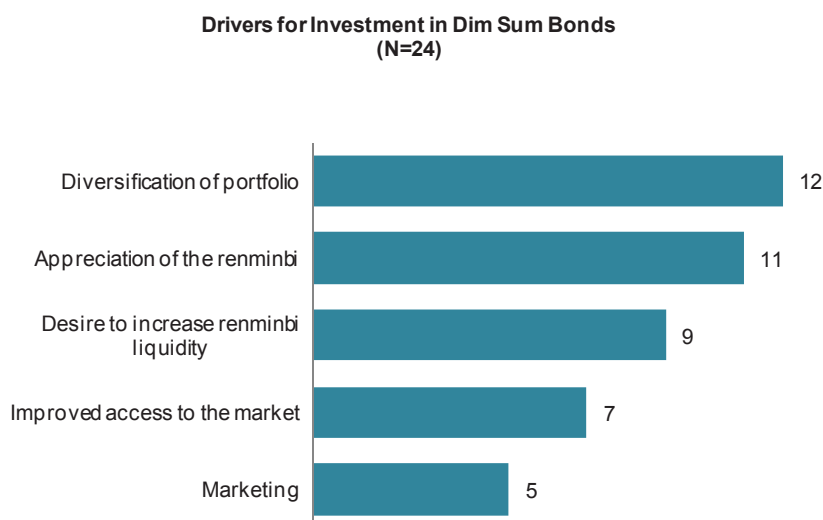
Figure 14 indicates that the vast majority (21) of respondents believe dim sum bonds are perceived by the market to be "appealing" or "very appealing" as a vehicle for investment in renminbi, though a minority has "reservations" about their appeal in the short term as a result of the slow pace of liberalization. To this end, a European-based respondent from an Asian-headquartered bank believes that the lack of liquidity is still a major concern for investors in dim sum bonds, as there is not enough of a secondary market for these instruments at the moment.

Figure 14: Respondent Attitudes Toward Dim Sum Bonds



Source: Aite Group survey of 24 firms active in the Chinese market, Q1 and Q2 2014

Figure 15 shows respondent views on the drivers for investor interest in dim sum bonds, the strongest of which, identified by half of respondents, is portfolio diversification. The addition of dim sum bonds to a wider portfolio of Asian instruments has become a key trend within the capital markets community as a result of the bonds' perceived value, which is tied to the appreciation of the renminbi itself and the notion of getting a "foot in the door" in China ahead of full liberalization. Some firms are picking up dim sum bonds because of a wish to be early adopters and raise their visibility in offshore market activity rather than because of the bonds' market value or short-term investment potential. Others are also holding these bonds as a means of achieving exposure to the currency and as an exchange rate bet owing to the appreciation of the renminbi.

Figure 15: Respondent Drivers for Investment in Dim Sum Bonds

Source: Aite Group survey of 24 firms active in the Chinese market, Q1 and Q2 2014

Investor interest is only one side of the coin, however, as the issuance of these bonds is determined by the bank and corporate community. A European-based bank respondent notes that there would be more interest in dim sum bonds from the issuer side if issuance wasn't so expensive—it is currently much cheaper to issue bonds denominated in U.S. dollars or euros. The administrative costs of issuing dim sum bonds in various markets can therefore be a detractor for issuers.

There has, however, been significant growth in issuance since dim bonds were first issued in 2007. In terms of the future, a China-based respondent from a European-headquartered bank believes that dim sum bonds could prove to be a bridge for offshore and onshore markets in future, but not until greater levels of liberalization are achieved. The dim sum bond market is therefore one to watch closely over the coming years.

CROSS-BORDER INVESTMENT PROGRAMS

According to figures from the World Bank, Mainland China represented 12% of global gross domestic product (GDP) at the end of 2012.⁴ In addition to this, figures from the World Federation of Exchanges state that China had an 11% share of global market capitalization in December 2013.⁵ The MSCI All Country World Index, which serves as a proxy for global equity investors' asset allocation by region, shows that in December 2013 investment in China

4. Aite Group analysis of "World Development Indicators Database," World Bank, 2013.

5. Aite Group analysis of "World Federation of Exchanges Annual Statistics," World Federation of Exchanges, 2013.

(including Taiwan and Hong Kong) represented 4.4% of total portfolio allocation⁶ (Mainland China alone represented 2.1%). This disparity between the size of China's markets and the amount of foreign investment in them highlights the lack of viable investment channels for international parties looking to invest in China. As a result, and given China's commitment to making the renminbi a more internationally relevant currency, the PBOC launched a number of pilot schemes to promote increased cross-border capital flows.

Table A shows the PBOC's different schemes to encourage cross-border investment. The QDII, QFII, and RQFII programs (see more details on these schemes in Appendix 2: Investment vehicles) have been introduced for investment by institutions, while the Qualified Domestic Individual Investor (QDII2), Qualified Foreign Individual Investor (QFII2), and Renminbi Qualified Foreign Institutional Investor (RQFII2) programs will be introduced to create cross-border investment by individuals. The QDLP program allows foreign hedge funds to invest on behalf of both individual and institutional Chinese investors.

Table A: Cross-Border Chinese Investment Programs

Scheme	Eligibility	Year of implementation	Most recent quota	Investment scope
QFII	Institutional investors based outside of China	2002	US\$150 billion	A-shares, close-ended funds, open-ended funds, long-only funds, exchange-traded funds (ETFs), fixed income, warrants, index futures
QDII	Institutional investors based in China	2006	No capped total quota	Overseas money market, bonds, derivatives, public funds
RQFII	Hong Kong subsidiaries of Chinese asset managers, Chinese commercial banks, Chinese insurance companies; also financial institutions registered in Hong Kong and fund managers based in London, Paris, Singapore, and Taipei	2011	RMB 350 billion	Same as QFII
QDLP	Chinese institutional investors and high-net-worth individuals	2013	US\$5 billion	Hedge fund
QDII2	Retail investors based in China with at least three years of experience in stock investment and financial assets equivalent to	Expected 2014	N/A	Expected to initially be securities listed in Hong Kong

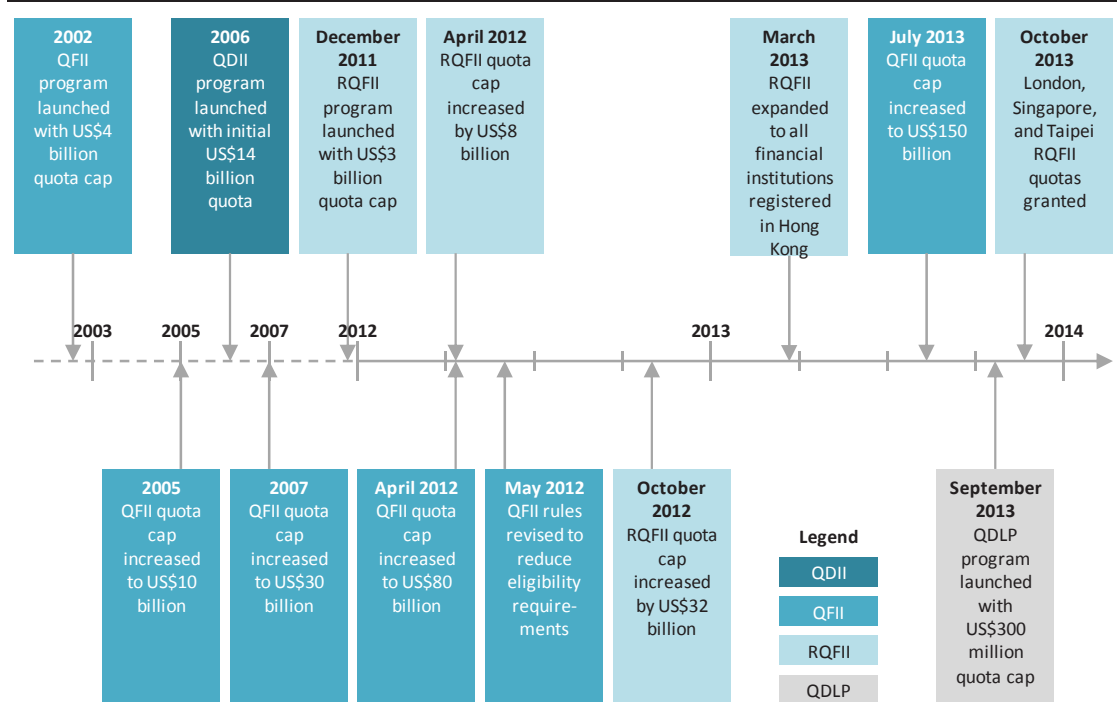
6. Aite Group analysis of "MSCI All Country World Index," MSCI, December 2013.

Scheme	Eligibility	Year of implementation	Most recent quota	Investment scope
	US\$244,000			
QFII2	Retail investors based outside of China	Plans	N/A	Expected to initially be A-shares
RQFII2	Retail investors based outside of China	Plans	N/A	Expected to initially be A-shares

Source: Aite Group

Figure 16 shows the key milestones for the Chinese cross-border investment programs. The QFII scheme was the first to be introduced in 2002, before the QDII scheme was implemented in 2006. Unlike the QFII scheme, however, the QDII scheme has not seen many milestones since its inception, due to a lack of demand for the program by domestic investors. Also unlike the QFII scheme, the QDII scheme does not have a quota limit. The RQFII scheme was introduced in December 2011, and the quota was filled so quickly that it had been increased by a factor of 10 by October 2012. The QDLP scheme is the most recent of the four programs, with an initial US\$5 billion quota created in September 2013.

Figure 16: Key Milestones for Chinese Cross-Border Investment Programs



Source: Aite Group

On the subject of the cross-border investment programs, a lower-tier European asset manager interview respondent says a key barrier for smaller and midsize firms looking to invest in the

schemes is the volume and complexity of the tax documentation, whereas it is easier for larger firms to absorb the costs that arise from this. He adds that with each update of the programs, they become larger and more accessible, so it makes sense for smaller firms to wait.

Nine of the bank and asset management respondents indicate that they have seen a strong appetite from international investors for the RQFII scheme and, to a lesser extent, the QFII scheme. One of the Asian-based global bank respondents believes that though interest in QFII has "gone off the boil" in recent months due to the weaker performance of the Chinese equity markets, the scheme has seen fairly consistent interest over the last five years. RQFII is much more popular with investors because it is newer and more flexible than QFII, but it has a much smaller quota available for foreign investors because it is still relatively early days for the pilot scheme.

ONSHORE MARKET

The insulation of China's financial sector during the 20th century meant it did not feel the wave of globalization that facilitated the development and growth of financial markets in North America, Europe, and parts of Asia in the 1980s and 1990s. Now, China is beginning to foster the development of its domestic markets in order to bring it into line with the rest of the world and into line with the other Chinese industrial sectors, which are at much more developed stages than its financial markets. China's capital markets are not necessarily lacking in scale—both its bond markets and stock markets are among the largest globally—but they are lacking in sophistication (for example, there is only one stock market index). Enhancing the attractiveness of the onshore market will be vital to the process of capital account liberalization, because there needs to be a balance between the onshore and offshore flows of investment.

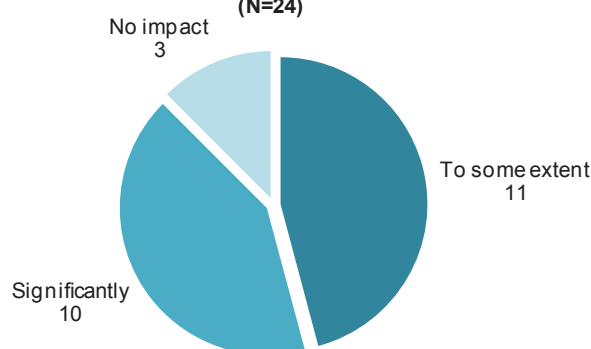
DOMESTIC CAPITAL MARKETS

The evolution of China's capital markets will be crucial to the renminbi's progress toward becoming an international investment currency, as one of the key barriers to investment and trading in renminbi is the lack of investment products. Providing overseas entities with a broad range of investment avenues in a range of onshore markets would allow investors to diversify their portfolios and should increase the use of renminbi for investment.

The majority of interview respondents (21) believe that the lack of a sophisticated onshore capital markets environment in China could hold back the internationalization process of the renminbi in the future (Figure 17), though only 10 believe the impact will be significant.

Figure 17: Respondent Attitudes Toward China's Onshore Capital Markets

Q. To what extent does the nascency of China's capital markets impact the renminbi's chances of becoming an international investment currency? (N=24)



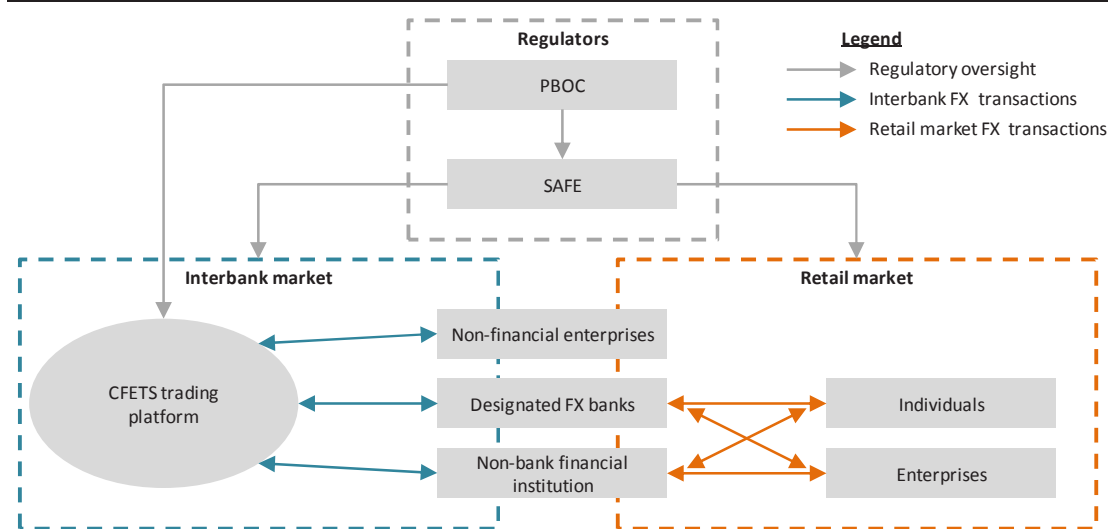
Source: Aite Group survey of 24 firms active in the Chinese market, Q1 and Q2 2014

Interview respondents anticipate gradual progress toward capital markets development. A European-based respondent who works for an Asian-headquartered banking group believes that the reform process will continue to proceed at a slow pace because of the cautious approach of the central bank and the fragmented nature of the Chinese markets. Each market has its own regulatory body, which means that each of these bodies must cooperate with one another and the PBOC in order to adopt international standards across the capital markets.

FX MARKET

The China Foreign Exchange Trading System (CFETS) is the core of China's FX market, functioning as a trading platform, clearing service, and market information provider. In the interbank market, CFETS operates as a real-time electronic trading platform that automatically matches both exchange-based and over-the-counter (OTC) orders, with an integrated clearing function that provides two-way netting. The retail market consists of OTC transactions between retail customers and the designated FX banks—the FX banks use the interbank market to settle their FX positions beyond the allowed FX working position as approved by the State Administration of Foreign Exchange (SAFE). Figure 18 shows the structure of the Chinese FX market, including the regulatory bodies.

Figure 18: Chinese FX Market Structure

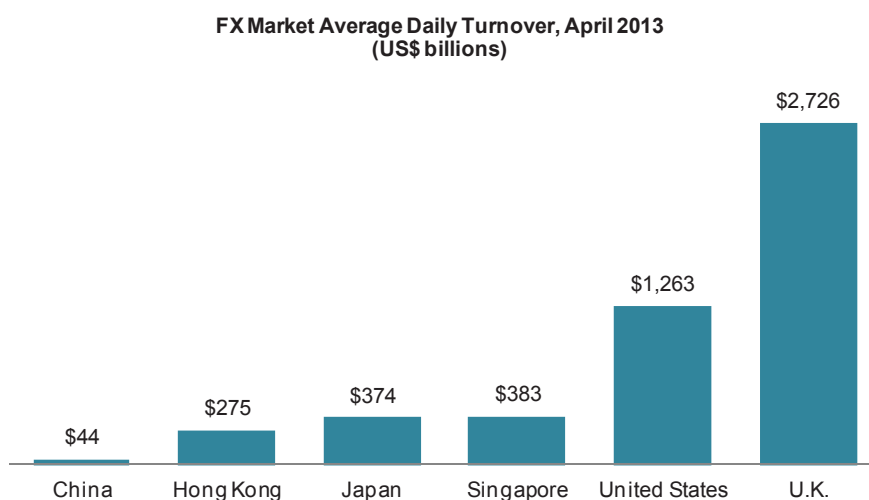


Source: Aite Group

As private wealth, Internet usage, and knowledge of exchange rates have all increased in China over the last decade, retail FX traders have found themselves increasingly frustrated with the small variety of available FX products. To access FX markets in China, they must become clients of a licensed FX bank, but these can be difficult to access and have high costs of entry. So instead, retail traders have been using foreign FX brokers (the existing domestic FX brokers are not regulated and so essentially illegal, and the ones that do operate provide lack of transparency) to carry out their FX transactions. As the renminbi internationalization process continues and the exchange rate regime changes, more and more foreign FX brokers have been targeting Chinese clients, many of them setting up offices in Hong Kong.

Compared with other major markets, the Chinese FX market is incredibly small. In April 2013, average daily turnover was US\$44 billion, significantly lower than the U.K., which was highest with US\$2.7 trillion in international FX (Figure 19). It is important, however, to note that China's FX market is growing—in April 2004, the average daily turnover of China's FX market was US\$1 billion; in April 2007, it stood at US\$9 billion; and in April 2010, US\$20 billion. This increase has largely been attributed to the appreciation that the renminbi experienced in this period, overseas listed companies repatriating capital raised in stock listings, and QFIs converting foreign funds for investment in China's stock market.

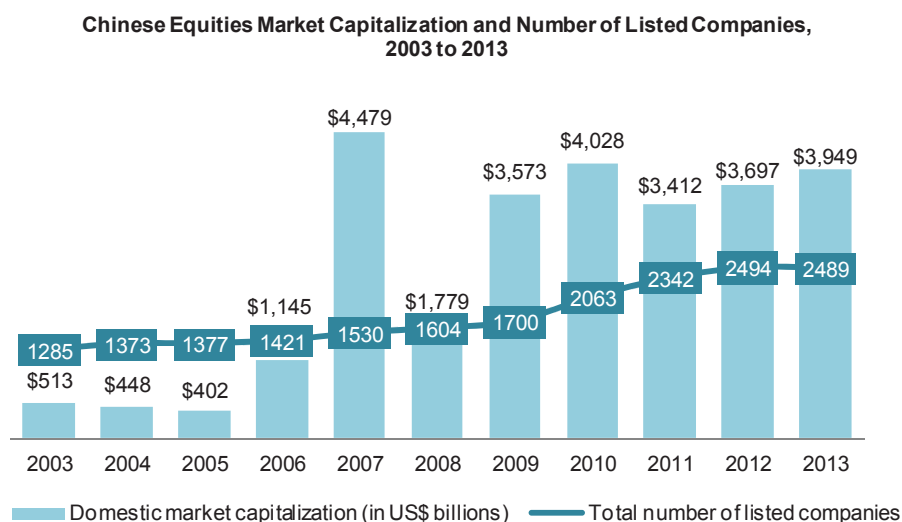
Figure 19: Average Daily Turnover of FX Markets



Source: CFETS, BIS Triennial Survey 2013, Aite Group

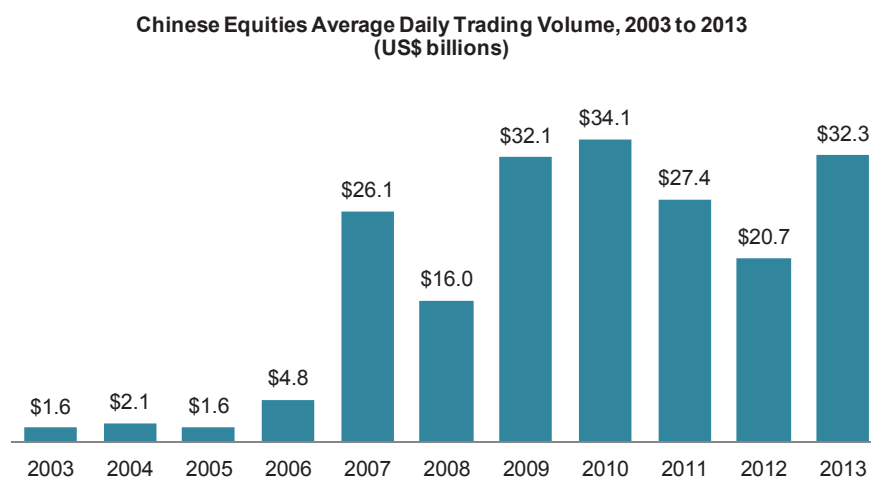
EQUITIES MARKET

China's equities market grew nearly eightfold over the last decade, reaching approximately US\$3.9 trillion in 2013 and comprising nearly 2,500 listed companies, according to data from the World Federation of Exchanges (Figure 20). The stock market bubble that engulfed much of the world spurred the domestic market to its all time high in 2007, but rumors that the Chinese economic authorities were planning an interest rate hike and a clampdown on speculative trading triggered the "Chinese Correction"—a 9% drop in the Chinese stock market in February 2007. The equities market has since gradually recovered, with some degree of year-on-year volatility, reflecting the post-2008 global market conditions.

Figure 20: Chinese Equities Market Capitalization and Volume of Company Listings

Source: World Federation of Exchanges, Aite Group

China has two stock exchanges, the Shanghai Exchange and the Shenzhen Stock Exchange, which had a combined average daily trading volume of approximately US\$32.3 billion in 2013 (Figure 21), higher than the combined average daily trading volume of Japan and Australia in that year, which was approximately US\$31.9 billion. In fact, China's average daily trading volume in 2013 was actually higher than all other countries except for the United States. The drop in cash equities volume between 2010 and 2012 reflects the outflow from that market as domestic investors moved to investing in a new equity futures index, the Shanghai Shenzhen China Securities Index 300 (CSI 300), which was launched in April 2010.

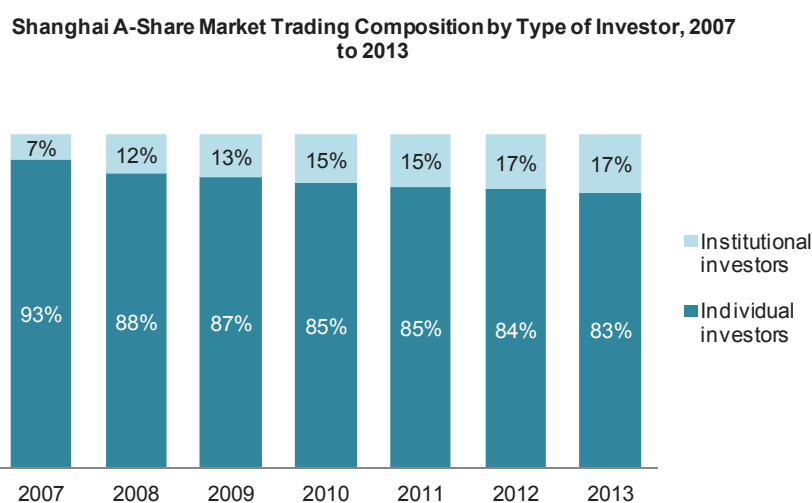
Figure 21: Chinese Cash Equities Average Daily Trading Volume

Source: World Federation of Exchanges, Aite Group

Retail investors, who generally lack investment knowledge and often speculate on short-term price movements in the market, dominate China's domestic equities market (Figure 22). The retail investors' short-termism has been identified by the PBOC as one of the key causes of volatility in the market and, therefore, the central bank has outlined the need to attract more institutional investors, whose generally longer-term investment approach should increase the level of market stability.

The perceived lack of stability, a lack of options for hedging and risk management (such as short selling and derivatives instruments), and government-imposed restrictions on these investments deter Chinese institutional investors from investing in domestic equities markets. For example, insurance companies are required to invest a minimum of 5% of their total assets in bank deposits and are limited to a maximum of 20% of investment in domestic equities. These investors instead seek overseas investment opportunities and are much more heavily invested in domestic bank deposits, domestic government bonds, and money market funds. These restrictions on investment scope are gradually relaxing over time, however, so it is likely that the future will see a gradual growth of institutional investors in the mainland equity market.

Figure 22: Shanghai A-Share Market Trading Volume Composition by Type of Investor



Source: Shanghai Stock Exchange, Aite Group

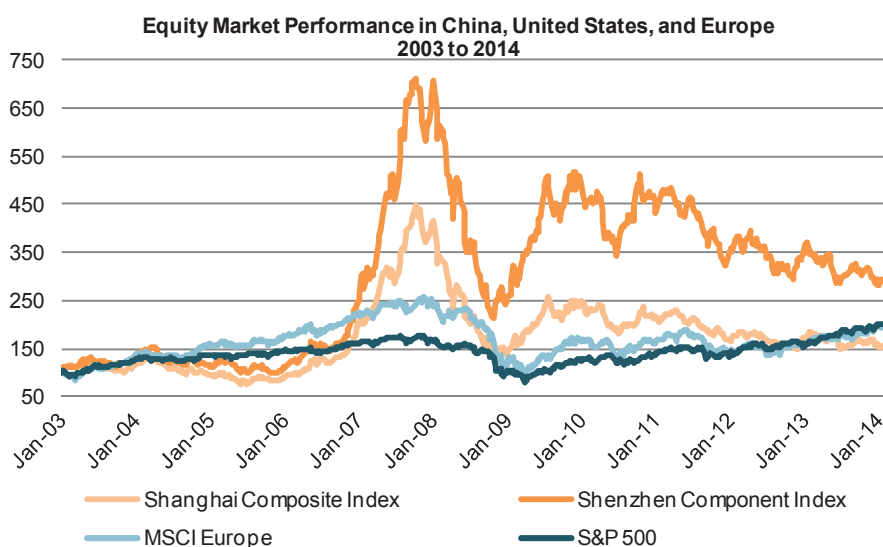
Most companies listed on the exchanges in China offer two types of shares—A-shares and B-shares. The former are generally only available for purchase by Chinese nationals, or for renminbi-qualified foreign investors through the RQFII scheme, and are shares of China-based companies denominated in renminbi. The latter, on the other hand, are shares of companies listed on Chinese stock exchanges denominated in foreign currencies, such as the U.S. dollar or Hong Kong dollar, and are available to both domestic investors and foreign investors, provided the domestic investors have access to a foreign currency account.

The stock markets of Shanghai and Shenzhen had a lackluster performance between January 2010 and January 2014, as can be seen in Figure 23 (the Shanghai Composite Index is an index of all stocks, both A-shares and B-shares, that are traded on the Shanghai Stock Exchange, while the Shenzhen Component Index is an index of 40 A-shares and B-shares traded on the Shenzhen Stock Exchange). Retail investors' short-term speculative activity is widely cited as the cause of the negative growth experienced over this period and is a key driver of the Chinese regulator's efforts to attract more institutional investors to the market.

Comparing the Chinese indices to MSCI Europe and Standard & Poor's 500 (S&P 500) indicates that the global stock market crash impacted the Shanghai and Shenzhen markets during and after 2008. Domestic forces were also at work, however; between 2005 and 2007, the Shenzhen component index attained record highs, reaching a peak in October 2007 as prices moved further away from fundamental values. Key factors that are believed to have caused the bubble are market reforms initiated by the Chinese government to provide incentives for investment and the trading behavior of Chinese retail investors. An unhealthy bullish sentiment reinforced by a group mentality assisted the growth of equity markets.

The bubble finally burst toward the end of 2007, at its worst knocking two-thirds off market value from Chinese stock indices. Chinese economic authorities were contemplating raising interest rates in order to curb inflation and clamp down on speculative trading, resulting in investors removing large amounts of liquidity from equity markets.

Figure 23: China Stock Market Performance



Source: Yahoo Finance, Aite Group

Regulatory permission has been granted for the establishment of a Shanghai-Hong Kong cross-border equity trading scheme, which will enable traders active on either exchange to invest in shares listed on each other's markets through an order-routing service. The aim is to officially launch a pilot program by October 2014, and the China Securities Regulatory Commission (CSRC)

and the Securities and Futures Commission of Hong Kong have granted approval in principle. The daily quota for Hong Kong investment into Chinese stocks will be limited to RMB 13 billion and the daily quota for mainland investment into Hong Kong stocks will be limited to RMB 10.5 billion.

In addition, trading between dual-listed companies will also be limited to prevent arbitrage between both markets. Currently, foreign investors have to register under the QFII, which operates under a quota system that is tightly controlled by the Chinese government. These measures will go a long way to opening up the Chinese capital markets and simultaneously help to promote the internationalization of the renminbi.

BOND MARKET

The domestic bond market will play a crucial role in China's progress toward opening its markets and economy to foreign investors. A bond market with depth and liquidity would reduce the interest rate volatility caused by cross-border capital flows and is a key requirement as China looks to remove its controls on interest rates. Currently there are three bond markets in China—one large interbank market, where bonds are traded OTC, and two smaller markets, one for small and midsize enterprises (SMEs) and the other for retail investors. Bonds issued by state-owned policy banks are considered to be government bonds.

There have been signs that the Chinese government is looking to reduce its level of intervention in the bond markets and let market forces take over—in March 2014, China experienced its first domestic bond default since 1997 when a small solar power company failed to pay the interest on a security it sold in 2012. This, combined with announcements that China would not bail out the defaulting firm, had a negative short-term impact on the bond market. Just three weeks after the default, more than 30 Chinese companies cancelled their plans to sell debt.

The longer-term effect of this decision by the PBOC should be more positive, however, as it will instill investors (foreign investors, in particular) with confidence about the robustness of the market. The decision represents a relaxation of the government's control of the domestic markets—by letting a failure occur, the government is ceding control to market forces. A European bank respondent believes, however, that there may have been government intervention behind the scenes that was not visible to the wider market; there could potentially have been a greater number of defaults.

The move to open up China's bond market to foreign investors will also act as a catalyst for the development of the other elements of China's capital markets. Prices of indices and individual bonds can act as a pricing benchmark for other securities markets, and a liberalized bond market should also bring stability to the capital markets as a whole. One of the key issues in the offshore bond market is the inability to attract large, overseas institutional investors, as the maturity of most bonds is no longer than three years (due to the risk associated with their nascence). Once these instruments have become more established, it is likely that there will be an uptick in overseas investment. On the other hand, there is a much larger volume of longer maturity bonds on the onshore market, so opening up the market should increase the investment by overseas pension and insurance funds that only wish to invest in low-risk securities, for example.

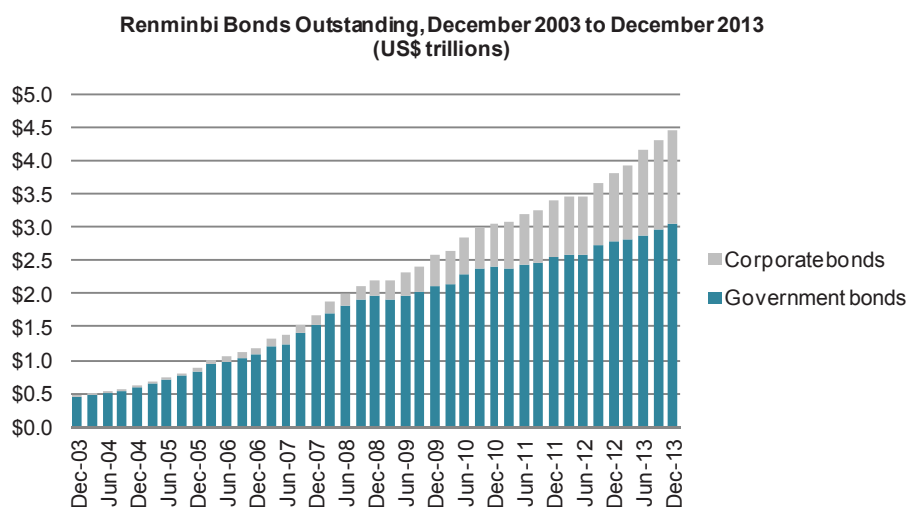
Figure 24 shows the value of outstanding renminbi bonds between December 2003 and December 2013, and the breakdown between corporate bonds and government bonds. Government bonds include obligations of the central government, local governments, and the PBOC, while corporate bonds are the obligations of state-owned and private corporations, which include medium-term notes, commercial paper, and bonds issued by financial institutions (excluding policy banks). As can be seen, the overall bond market grew by a factor of 10 over the 10-year period, from US\$448 billion outstanding in December 2003, to US\$4.5 trillion outstanding in December 2013.

The three government-owned banks—China Development Bank, Agricultural Bank of China, and Export-Import Bank of China—issue policy bank financial bonds by tender through PBOC's issue system; hence, they are considered to be government bonds. This classification goes some way to explaining why the government bond market is so much larger than the corporate bond market.

China's corporate bond market is regulated by three separate bodies. The National Development and Reform Commission, a central planning agency, controls enterprise bonds, which are issued by state-owned companies. The CSRC manages bonds that are issued by listed companies and traded on a public exchange, and the central bank oversees commercial paper and medium-term notes, which are traded only in the interbank market.

A large portion of the overall bond market growth has come from the corporate bond sector in recent years—corporate bonds constituted 9% of total renminbi bonds outstanding in December 2007, whereas they accounted for 32% of total bonds outstanding in December 2013. The increase in the outstanding value of corporate bonds has been driven by both supply and demand. Chinese corporations have been encouraged to issue more debt as the government tries to tackle the growing credit bubble by reducing the lending opportunities for banks, while increasing wealth and limited bank lending has meant that Chinese insurance and pension funds have turned to corporate bonds for their investments, as they are perceived to be relatively safe with good yields. Their perceived safety is linked to the fact that many of these bonds are issued by state-owned enterprises such as Sinopec and China National Nuclear.

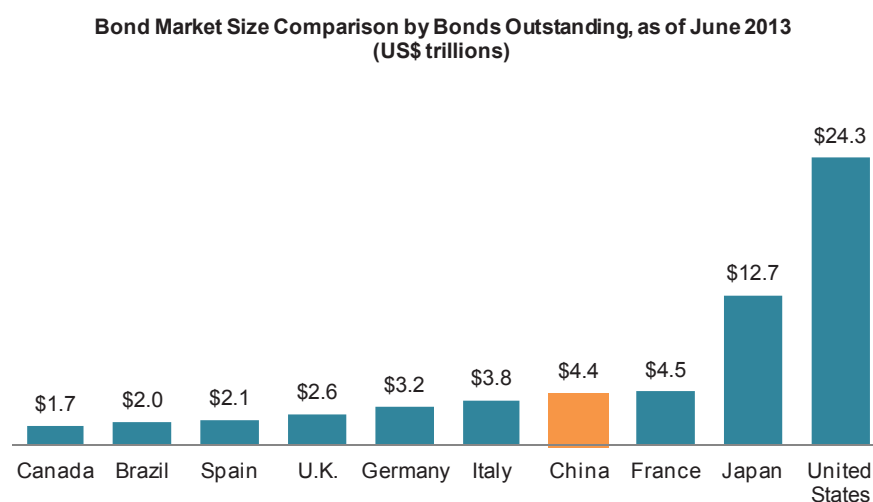
Figure 24: Outstanding Bonds in China



Source: Asian Bonds Online, Aite Group

The growth of China’s bond market made it the fourth-largest globally in June 2013, behind France, Japan, and the United States (Figure 25). Despite its size and growth performance, however, China’s bond market still lacks the liquidity of the foreign markets. According to figures from the China Central Depository & Clearing Company (CCDC), 95% of the bonds in the depository in 2013 were traded on the interbank market, while the remaining 5% were traded on exchanges. The interbank market mostly consists of OTC transactions, meaning that there is not enough high quality daily data for a strong secondary bond market to develop.

Figure 25: Bond Market Size Comparison



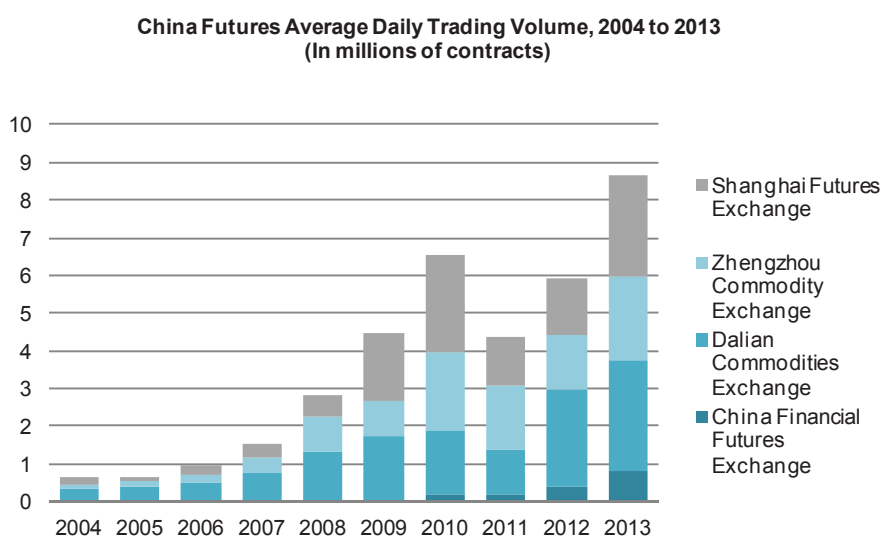
Source: BIS, SIFMA, Aite Group

Foreign institutions have access to the onshore Chinese bond market through three channels—in addition to the QFII and RQFII programs, there is also the PBOC Pilot Program for Offshore Institutions' Investment in the China Interbank Bond Market. Eligible investors include foreign central banks, foreign renminbi clearing banks, foreign banks engaged in renminbi trade settlement, and foreign insurance companies. Although these schemes do allow access to overseas investors, there is still a quota system in place that allows China to control the rate at which foreign investors enter the market.

DERIVATIVES MARKETS

There are four derivatives exchanges in China—three are focused on commodities futures trading (the Shanghai Futures Exchange, the Zhengzhou Commodity Exchange, and the Dalian Commodity Exchange), and one is focused on stock index futures (the China Financial Futures Exchange). The futures market in China has grown rapidly in the last 10 years, with the average daily trading volume increasing from 640,000 in 2004 to 8.6 million in 2013 (Figure 26). Even on a global scale, the growth of the Chinese derivatives exchanges has been substantial—according to figures from the World Federation of Exchanges, the three Chinese commodities futures exchanges accounted for 58% of the total global commodities futures volume (number of contracts traded) in February 2014.

Figure 26: Trading Volume on Chinese Derivatives Exchanges



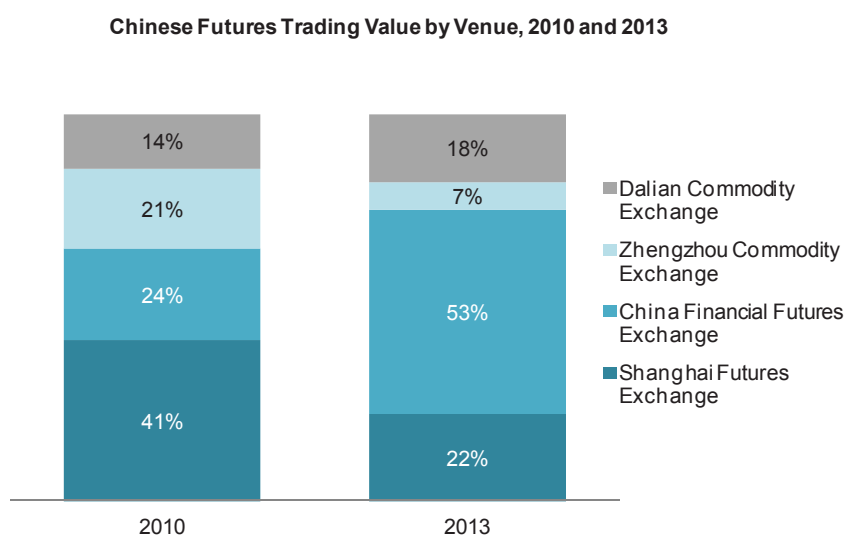
Source: World Federation of Exchanges, Aite Group

The commodities futures market dominated the Chinese exchange-traded derivatives market until April 2010, when the China Financial Futures Exchange launched the CSI 300. Investment in the CSI 300 has grown steadily since its launch, and World Federation of Exchanges figures show that its volume reached 193 million in 2013, up 83.9% from a year earlier. According to figures

from the Futures Industry Association,⁷ the CSI 300 is now the 10th most actively traded equity index in the world.

Figure 27 shows the growth of the China Financial Futures Exchange relative to the three commodities exchanges. Although the volume of contracts is still very low for the stock exchange index (as can be seen in Figure 26), the value of the contracts rose from 24% of all Chinese exchange-traded derivatives contracts in 2010 to 53% of all Chinese exchange-traded derivatives contracts in 2013. This is due to the fact that the contract size of the CSI 300 is relatively large for an Asian stock index, with an index multiplier of around RMB 300 (approximately US\$50). This is a further part of the Chinese authorities' attempts to reduce the participation of retail investors in the financial markets relative to the participation of institutional investors.

Figure 27: Chinese Futures Trading Value by Venue



Source: China Futures Association, Aite Group

The major problem faced by overseas investors is that the range of exchange-traded derivatives is very limited in China. The CSI 300 is the only equity-linked futures contract available, and there is currently no equity options market whatsoever (although the Shanghai Stock Exchange is looking to introduce this in Q2 2014). This lack of derivatives products means that investors have very limited choices when constructing their portfolios, which could dissuade foreign investors from entering the market. Developing a more diverse derivatives market in China would give foreign investors more hedging opportunities and so should increase the demand for Chinese capital markets overall.

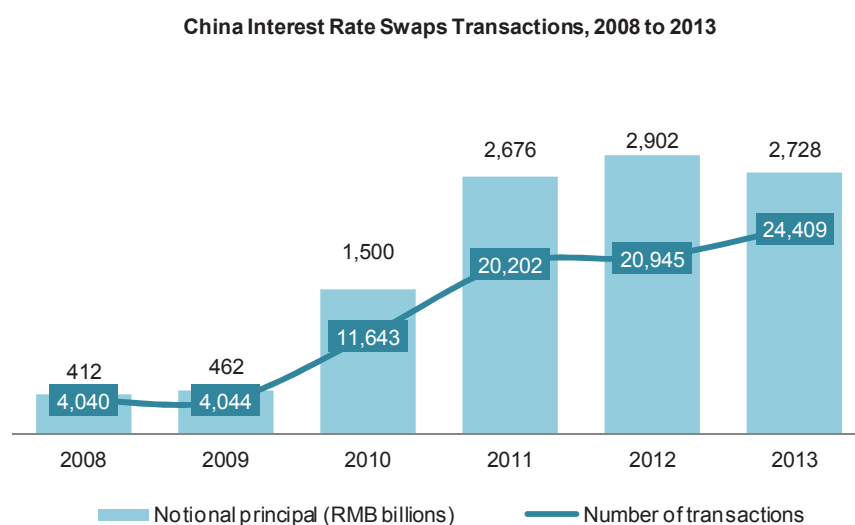
OTC derivatives activity in China mostly takes place in the interbank market, and the instruments traded include renminbi FX forwards and swaps, renminbi FX options, bond forwards, interest rate swaps (IRS), and renminbi FX currency swaps. These markets are accessed through the

7. "FIA Annual Volume Survey," Futures Industry Association, 2013.

trading platform of the China Foreign Exchange Trading Center and the National Interbank Funding Center.

IRS in China have seen considerable growth since 2008 as a result of increased interest rate volatility, with the total notional principal increasing from RMB 412 billion in 2008 to RMB 2.7 trillion in 2013 (Figure 28). Interest rates in China have become more volatile because of several factors—the development of debt financing among corporations, increased international capital flows, and continued progress toward interest rate liberalization, to name a few.

Figure 28: China's IRS Market



Source: PBOC

The growth of the Chinese IRS market has resulted in a regulatory move to push renminbi IRS onto a central clearing model, whereby OTC renminbi IRS between financial institutions with a tenure of five years or less must be cleared through the Shanghai Clearing House. This is an example of China's attempts to bring its financial markets infrastructure in line with global standards, and the presence of a clearinghouse should give rise to a more transparent and secure OTC derivatives market.

MOVING OUT OF THE SHADOWS

One of the key driving factors behind China's move toward interest rate liberalization has been the rise of its shadow-banking sector, which has become an integral part of the Chinese economy in recent years. In addition to a poorly performing equities market, the Chinese government has limited the yields on savings accounts to 3%, so savers have had to look elsewhere to invest their money. For firms seeking investment, traditional loans have been difficult to get hold of due to the requirement for Chinese banks to maintain a reserve ratio of at least 20%. As a result, savers and borrowers have both had to look to the shadow-banking sector, looking in particular for wealth management products.

Although banks market wealth management products, the raised funds are officially managed by "trust companies," which are prohibited from accepting deposits or lending money formally. This means that the funds raised do not appear on the banks' balance sheets, and therefore banks do not need to set aside capital to mitigate the risk of potential defaults. The trust companies lend the money to Chinese firms looking to raise cash, which, in turn, spend the money, deposit it in a bank, or reinvest it into another wealth management product. Each reinvestment of wealth management product funds must bring higher returns than the previous investment, which generally means riskier investments are made. As the wealth management products and other shadow banking products are off banks' balance sheets, nobody really knows the exact size of the Chinese shadow banking system or what would happen if there were a large default.

A market composed of risky investments and lacking transparency and backstops is a crisis waiting to happen. This is why the Chinese authorities have chosen to act now, and the task they face must be approached delicately. They believe that the shadow-banking sector needs to be reduced by liberalizing interest rates and opening up more official lending avenues in a way that is not detrimental to Chinese businesses. An international renminbi that facilitates free flows of foreign direct investment (FDI) should further assist this process.

SHANGHAI FREE TRADE ZONE

The Chinese State Council approved the application to establish the SFTZ on August 17, 2013, and it was launched in September in order to attract the foreign investor community by, among other things, moving from an approval-based to a registration-based system for the establishment of subsidiaries in the zone. The government is keen to enable the establishment of foreign-invested and Sino-foreign equity joint venture banks in SFTZ, as well as the setup of platforms for international transactions. On this note, the Xinhua news agency reported that the Shanghai branch of the PBOC had granted five third-party payment firms the ability to process yuan-denominated cross-border payments in the zone in February 2014.⁸

Cross-border renminbi-denominated loans are permitted within SFTZ, and industry participants anticipate that this move will accelerate the internationalization of the currency in the long term. In February 2014, the Singapore branch of ICBC lent RMB 100 million to a subsidiary of Shanghai Baosteel and RMB 70 million to Sinopharm Group. In the same month, Bank of Communications Financial Leasing (BCFL) obtained a RMB 700 million loan from Bank of Communications Singapore through the BCFL branch in the SFTZ.

The Shanghai Stock Exchange also gained approvals from regulators to set up an international trading center in the pilot zone, and banks in the zone are able to set interest rates for foreign currency deposits under US\$3 million. The latter rule applies to bank accounts opened by companies and organizations registered in the pilot free trade zone and individuals that have worked there for longer than a year. The move marks the full liberalization of interest rates on foreign-currency deposits in the zone, and government officials have indicated this rule could be promoted nationwide after an unspecified trial period.

8. "Shanghai FTZ Moves Ginglyerly to Liberalize Yuan," Xinhua News Agency, February 21, 2014.

The operational aspects of allowing the liberalization of interest rates in the free trade zone but keeping restrictions on the rest of the market has been a key talking point for the industry. Liberalization will mean interest rate rises in SFTZ, which will compel more Chinese banks to move their funds to the pilot zone, potentially destabilizing domestic monetary flows as a consequence. Much has been made, therefore, of the need to establish a strong firewall between the Chinese economy and SFTZ, though little progress has thus far been achieved in this endeavor.

An interview respondent from a global market infrastructure provider believes that SFTZ will eventually remove some of the physical and financial barriers to currency liberalization for the renminbi. He notes, however, that it is still very new as a pilot scheme, and it is far too early to see a definite impact because many banks are still attempting to understand how to proceed with operations in the zone. Another respondent from a global development body adds that Chinese banks, rather than international banks, are primarily registered and operating in SFTZ at the moment.

The industry is awaiting further clarification on details of the pilot scheme rules from the Chinese government, which have been promised for June 2014. One Asian-based interview respondent from a global bank is skeptical that these will be delivered on time, however, noting that the government is taking a very cautious approach to the liberalization process overall. He is hopeful that the SFTZ will be a positive step once further clarity is provided, because of the ability of banking institutions to act as intermediaries between the regulatory community and the corporate community, which is permitted within the zone. This will therefore reduce the direct administrative burden on corporations operating in the Chinese markets.

Another important step for the internationalization of the pilot zone and the renminbi could be the development of commodities futures trading in the SFTZ. The government has granted approval for the trading of a crude oil futures contract on the Shanghai International Energy Exchange, which was launched in November 2013. The contract, which is currently in development, is expected to be available for trading before the end of 2014, and it will enable foreign investment in renminbi for commodities, which is currently restricted. If more oil contracts and other commodities such as natural gas and petrochemicals are added onto the exchange, this could prove a tipping point for the use of renminbi within capital markets overall, as it would naturally lead to use of renminbi in the derivatives markets in the longer term.

Most industry participants pondering the zone are primarily considering how to use it as a vehicle to open up the Chinese capital account. Beijing has said that it would allow a trial of a fully convertible renminbi capital account, with a view to easing controls that bar foreign firms from raising capital through initial public offerings in China. Many questions remain about this process, and much more clarity is needed around operational and legal aspects for foreign and domestic players.

Financial reform measures in SFTZ include the following:

- Interest rate liberalization, market-oriented pricing for assets of financial institutions
- The convertibility of renminbi on the capital account on a first-to-do and first-to-try basis

- Foreign banks and joint venture banks between domestic private capital and foreign capital are allowed to be established
- Restricted license banks are allowed to be established
- Foreign-invested credit rating companies are allowed to be established
- Some Chinese banks are allowed to engage in offshore business
- Financial lease businesses are encouraged and tax incentives are given
- Overseas companies will be gradually allowed to participate in commodity futures trading
- Project companies engaged in overseas equity investment could be subject to a 15% corporate tax in line with the high-tech services sector

In terms of future developments, there are plans to establish a further 12 free trade zones in various locations across China, including Tianjin and Guangdong. The Chinese authorities have not published a list of all of the cities and regions that have applied for the pilot scheme, but it is anticipated that there will be a gradual process of approvals.

OFFSHORE MARKET

It goes without saying that for a currency to be classed as international, it must have a presence in foreign markets. Up until the end of the last decade, the renminbi was barely heard of outside of China, let alone traded or invested, as the Chinese government spent the best part of the 20th century ensuring that it did not become international. A new course of political will combined with economic and financial reforms have since changed this.

To this end and ahead of full convertibility, PBOC has been focused on further encouraging the settlement of cross-border trades and direct investment in renminbi by negotiating bilateral swap agreements with a range of individual countries (Table B).

Table B: Bilateral Swap Agreements Between China and Individual Countries

Country	Size	Effective date	Period of validity
Albania	RMB 2 billion	September 2013	3 years
Argentina	RMB 70 billion	April 2011	3 years
Australia	RMB 200 billion	March 2012	3 years
Belarus	RMB 20 billion	March 2009	3 years
Brazil	RMB 190 billion	March 2013	3 years
Eurozone	RMB 350 billion	October 2013	3 years
Hong Kong	RMB 400 billion	November 2011	3 years
Hungary	RMB 10 billion	September 2013	3 years
Iceland	RMB 3.5 billion	September 2013	3 years
Indonesia	RMB 100 billion	October 2013	3 years
Kazakhstan	RMB 7 billion	June 2011	3 years
Malaysia	RMB 180 billion	February 2012	3 years
Mongolia	RMB 10 billion	March 2012	3 years
New Zealand	RMB 25 billion	April 2011	3 years
Pakistan	RMB 10 billion	December 2011	3 years
Singapore	RMB 300 billion	March 2013	3 years
South Korea	RMB 360 billion	October 2011	3 years
Thailand	RMB 70 billion	December 2011	3 years
Turkey	RMB 10 billion	February 2012	3 years
United Arab Emirates	RMB 35 billion	January 2012	3 years

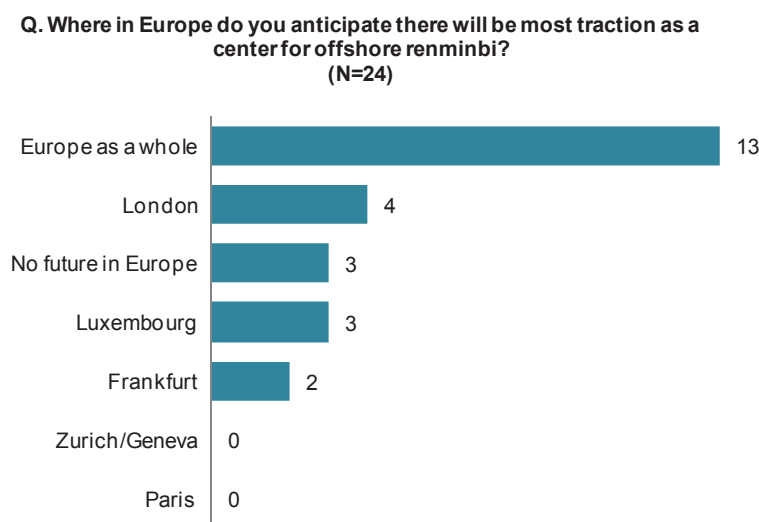
Country	Size	Effective date	Period of validity
Ukraine	RMB 15 billion	June 2012	3 years
United Kingdom	RMB 200 billion	June 2013	3 years
Uzbekistan	RMB 0.7 billion	April 2011	3 years

Source: PBOC

PBOC began this program in December 2008 and has since signed agreements with 23 central banks, the most significant of which was with the European Central Bank in October 2013. China also played a key role in the Asian region under the auspices of the Chiang Mai Initiative, which is the first regional currency swap arrangement launched by the 10 members of the Association of Southeast Asian Nations (ASEAN), Japan, China, and South Korea in May 2000. The intent of the initiative was to provide short-term liquidity to member central banks to counter currency speculation and avoid a repeat of the 1997 Asian financial crisis.

A key vehicle for the development of the renminbi in foreign markets is the creation of offshore centers, and, in turn, the development of these centers relies on the supply of liquidity by China. Hong Kong has certainly been the key offshore center for renminbi activity since the currency started internationalizing, as China uses it as a testing ground when implementing its various programs and schemes, such as the QDII and QFII. The offshore market for renminbi overall is fairly limited in size and scope, and funds tend to flow primarily via Hong Kong as the main conduit to the rest of the world, though this is gradually changing. Elsewhere in the Asia-Pacific region, Singapore, Taipei, Sydney, and Tokyo can all be expected to play a role in the development of the renminbi in offshore markets.

More than half of interview respondents believe Europe as a whole will play a key role in the internationalization process (Figure 29). Development of more offshore centers will increase renminbi trade settlement and should have a positive impact on renminbi liquidity globally. A top-tier European-headquartered bank respondent believes this extra liquidity should, in turn, have a positive impact on renminbi volume in Hong Kong and other offshore renminbi centers around the globe.

Figure 29: Respondent Views on European Centers for Renminbi

Source: Aite Group survey of 24 firms active in the Chinese market, Q1 and Q2 2014

It has been widely reported that a number of cities in Europe are competing with each other to become the primary location of European renminbi activity. It is actually more likely that Europe as a whole will become a center for renminbi investment and trading, with each city having its own role in a more cooperative system. The specialist capabilities of each international financial center and its existing relationships with Chinese institutions will play a significant role in this dynamic. A Chinese bank interview respondent believes that this expertise in different sectors will bring about cooperation and collaboration rather than competition between European offshore renminbi centers. London, for example, is a center for FX trading, whereas Luxembourg has a long history of investment funds service provision, and Frankfurt has a significant presence in trade finance. The post-trade infrastructure present in all of these markets is also a key benefit for their roles as offshore centers.

Not all respondents believe Europe has a role to play in the offshore market for renminbi in the long term. One of the Asian-based global bank respondents believes Hong Kong currently fulfills all the functions and requirements needed for clearing offshore, including extending clearing hours to support European and North American firms; hence, there is no practical reason why these centers in Europe need to be developed at all. Instead, he believes it is more of a political move in order to be able to facilitate access for Chinese banks to overseas markets. The respondent believes that development could also potentially be damaging to offshore liquidity for renminbi overall if the currency that is cleared in each offshore center is not fully fungible with other offshore centers, which could be the case if they are subject to different interest rates. If renminbi cleared in London is trapped and not available for use in Luxembourg or Paris, for example, then liquidity could be restricted overall.

A top-tier U.S. bank interview respondent contends that the very concept of offshore centers or hubs is inefficient because the hub and spoke system is too complex for payment flows to be effectively delivered. Another European-headquartered bank respondent is also an offshore

center skeptic, noting that flows in renminbi unrelated to China are unlikely to happen; he highly doubts, for example, that an Austrian company will want to set up payments in renminbi with a Spanish company.

EUROPEAN COOPERATION

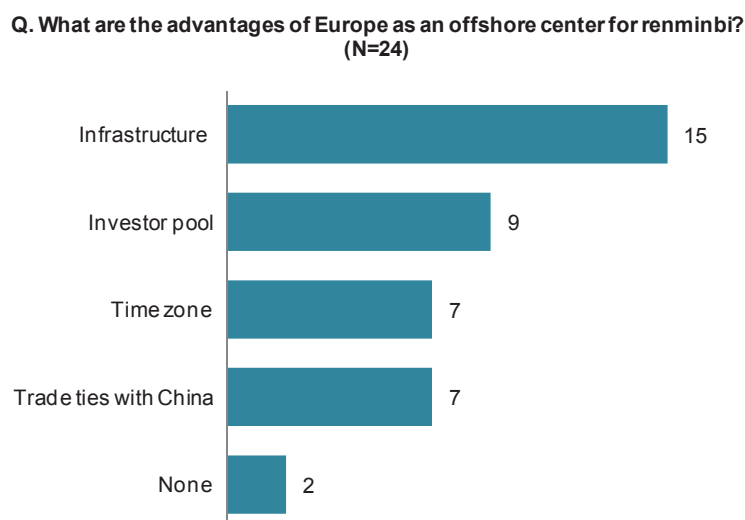
The proximity of certain Asian cities to China, and the resulting economic and political connection between them, means that financial centers such as Singapore are a natural location for offshore renminbi activity. Chinese ambitions for the currency extend well beyond this, however, and numerous European countries also have a history of cooperation with China in light of longstanding trade routes. An interview respondent hailing from a large European-headquartered firm explains that Europe also has a time zone advantage as a mid-point between North America and Asia, and markets in the region could easily act as a connection point between the other regions. Europe is well positioned to play this role both in terms of geography and infrastructure, so a move westward for the renminbi makes operational sense, and the development of a European center should have the wider benefit of enhancing the renminbi's status in other regions.

European investors are also much more familiar with Asia than American investors are and would therefore be more inclined to invest in renminbi-denominated assets, according to the European banker. A Chinese asset management interview respondent concurs and contends that, as the potential investor pool in Europe is much bigger, the dim sum bond markets could be considerably larger if there was more access for European investors.

As was previously mentioned, the internationalization of the renminbi can be divided into a three-stage progress, the first of which is its development as a trade currency. Logic would therefore dictate that offshore centers for the currency should initially be developed in regions where China continues to maintain significant trade ties. According to figures from the European Commission, bilateral trade in goods between the European Union and China was EUR 428 billion in 2013,⁹ making it the largest bilateral trade flow of any region with China. Imports from China exceeded exports by EUR 130 billion. U.S. trade with China was US\$562.4 billion in 2013 and imports from China exceeded exports by US\$318 billion. Using the euro-dollar exchange rate on December 31, 2013 (1.3791), the European Union's trade in goods with China in 2013 converts to US\$590.67 billion, meaning it continues to be China's largest trading partner in goods.

The primary appeal of Europe, according to interview respondents, is the highly developed infrastructure that is present in the region to enable the offshore clearing of renminbi-denominated products (Figure 30). As noted by a Chinese bank respondent, infrastructure and human capital are two primary drivers for interest in financial centers overall. Other important attributes for Europe as an offshore market are its investor pool, time zone, and historical trade ties with China.

9. "Facts and Figures on EU-China Trade," European Commission, March 2014.

Figure 30: Respondent Views on Advantages of Europe as a Center for Renminbi

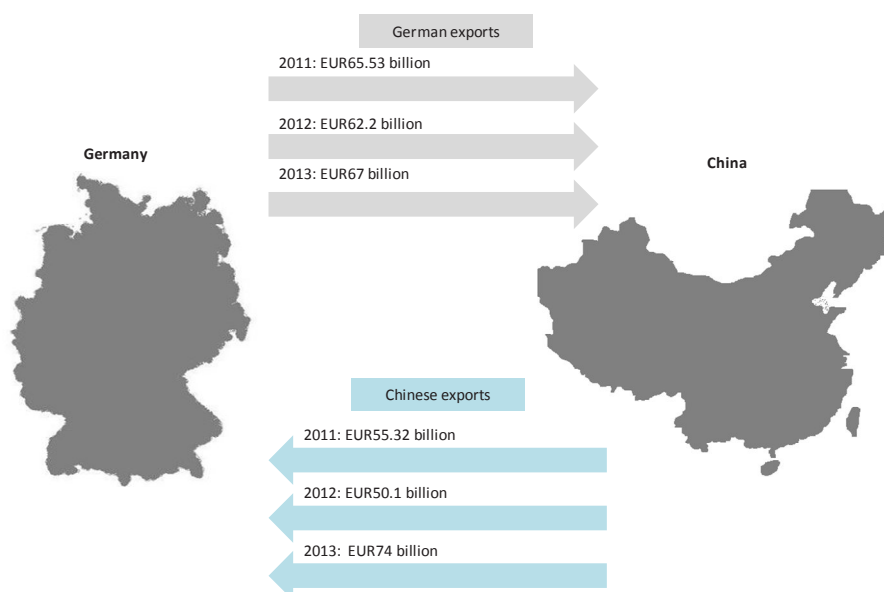
Source: Aite Group survey of 24 firms active in the Chinese market, Q1 and Q2 2014

A European-based respondent from an Asian-headquartered bank expects that the various centers in Europe will complement each other. London will remain a hub for FX, Frankfurt will continue to benefit from its strong ties with China as a trade partner, and Luxembourg will remain the center through which a lot of Chinese investment in Europe is structured. Collaboration between the centers is, however, unlikely in the short term because they appear to be competing in the race to act as a hub for renminbi clearing, she adds.

While Europe needs to cooperate for the full advantage of renminbi internationalization to be felt, China can benefit from the expertise that is on offer in each European financial center. Flows of renminbi could also occur between these centers more frequently in future; as noted by a European-based asset manager, much of the money invested out of Luxembourg originates in Germany. The mutual listing regime in Europe should contribute to this trend as it allows renminbi liquidity to be fungible across the region.

FRANKFURT

Germany is China's largest European trade partner, and Frankfurt is Germany's financial center. The emergence of the renminbi as a currency for trade settlement therefore makes Frankfurt a natural destination for renminbi flows, and its position as a European financial center should also mean that these flows bring wider benefits and liquidity to the region as a whole. Figure 31 shows the overall trade flows between China and Germany between 2011 and 2013, based on annual World Bank figures and those provided by the German federal statistical office. Though it does not break these down into renminbi-denominated flows, it highlights the high volume of trade between the two countries.

Figure 31: Trade Flows Between Germany and China

Source: World Bank, Destatis, Aite Group

China and Germany have initiated measures that take advantage of their trade connection—in March 2014, the PBOC announced that it had made an agreement with the Bundesbank to set up a clearing and settlement bank in Frankfurt for renminbi trade, meaning that renminbi transactions between European and Chinese firms no longer needed to be settled through renminbi clearing banks in China or Hong Kong. The removal of time zone issues benefits European firms, and operational similarities reduce the complexity of renminbi trade. The arrangement should certainly bring more renminbi liquidity to Europe and extend that liquidity to smaller and midsize firms that were previously unable or unwilling to participate in renminbi activity.

Also in March 2014, Deutsche Börse Group announced a trade and clearing agreement with Bank of China, which will also boost renminbi liquidity in Europe. The agreement makes it easier for European small and midsize enterprises and individuals in particular to participate in renminbi activity and should be beneficial to international investors looking to participate in investment and trade activity in China.

Kreditanstalt für Wiederaufbau (KfW), a German state-owned development bank, issued its first renminbi-denominated bond in Frankfurt on April 29, 2014. The AAA-rated bond was the first to be listed on the Frankfurt Stock Exchange, with a volume of RMB 1 billion, a maturity of two years, and a coupon of 1.375% per annum. KfW previously issued renminbi-denominated bonds in 2012 and 2013 in Hong Kong, and the decision to issue in Frankfurt was engineered to increase the promotion and development of the city as an offshore center for the currency. Lead managers of the transaction were Commerzbank and Deutsche Bank, and Clearstream Banking has the responsibility for settlement.

LONDON

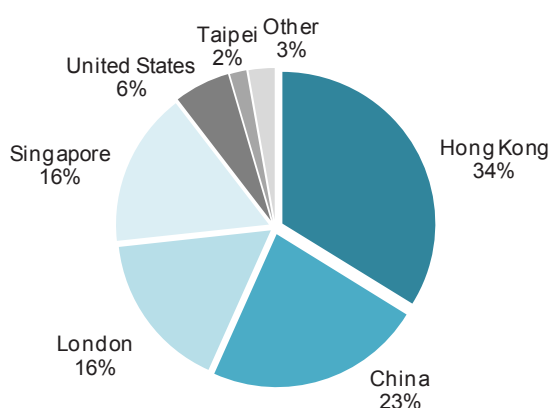
London is widely regarded as a leading global financial center, and it would be difficult to see the renminbi ever gaining significant international recognition without a reasonable presence in the U.K. capital. Its strength within the FX market is well known, and it is unsurprising that it was selected and approved as a location for renminbi clearing and settlement by PBOC in March 2014. After all, it is also well placed geographically and culturally as a mid-point between North America and the rest of the world. Moreover, nearly every large financial institution on the global stage has a presence in London; it is a key location from which to access this community.

A renminbi clearing bank in London should increase the ease with which international firms can trade and invest in China, and the competition between the Frankfurt and London clearing banks should further reduce the cost for firms looking to undertake renminbi investment and trade. A renminbi clearing bank in London should also facilitate increased investment in Chinese domestic securities through the RQFII scheme, for which London was granted an RMB 80 billion quota in November 2013.

One of the top-tier Chinese bank interview respondents indicates that London's status in the FX arena is a significant draw for the Chinese banking community, as is its related high level of infrastructure development. A City of London Corporation study in 2014 found that in the first half of 2013, 56% of offshore renminbi spot FX volume was conducted in London.¹⁰ In the OTC FX market, figures from the BIS Triennial Bank Survey show that in April 2013, 16% of OTC FX market trading activity went through London (Figure 32).

Figure 32: Location of OTC FX Renminbi Trading Activity

Location of Renminbi OTC FX Trading Activity, April 2013



Source: BIS Triennial Bank Survey 2013, Aite Group

10. "London RMB Business Volumes January-June 2013," City of London Corporation, 2014.

LUXEMBOURG

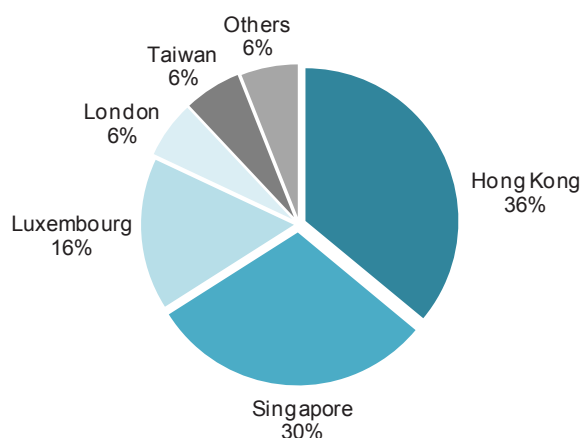
Luxembourg has been at the forefront of the renminbi's advancement into Europe, with three of the four largest Chinese banks—Bank of China, ICBC, and CCB—establishing their European headquarters in the city. Luxembourg's political and financial stability, combined with the strength of its market infrastructure and connectivity within global financial markets, makes it an ideal location for international renminbi business.

As a global center for investment funds, Luxembourg has positioned itself as a gateway to Europe for Chinese investment funds, and at the end of 2014 Luxembourg-based investment funds held the highest level of renminbi-denominated assets under management (AUM). According to the Commission de Surveillance du Secteur Financier, Luxembourg's renminbi-denominated AUM stood at EUR29 billion at the end of 2013.¹¹ Luxembourg's interconnectedness within the global financial system should provide a solid platform for these funds to expand their operations throughout Europe and other regions.

Luxembourg is also a leading center for eurobond listings (international bonds issued in a currency not native to the country of issuance), and renminbi liquidity has also been developing in Luxembourg through the dim sum bond market. In May 2011, the Luxembourg Stock Exchange was the first stock exchange to list a dim sum bond issued by a European corporation, and as of February 2014, Luxembourg was the third-highest globally in terms of dim sum bonds listed on its exchange, behind Hong Kong and Singapore (Figure 33).

Figure 33: Dim Sum Bond Listings in Luxembourg by Location of Exchange

Breakdown of Dim Sum Bond Listings by Exchange, February 2014



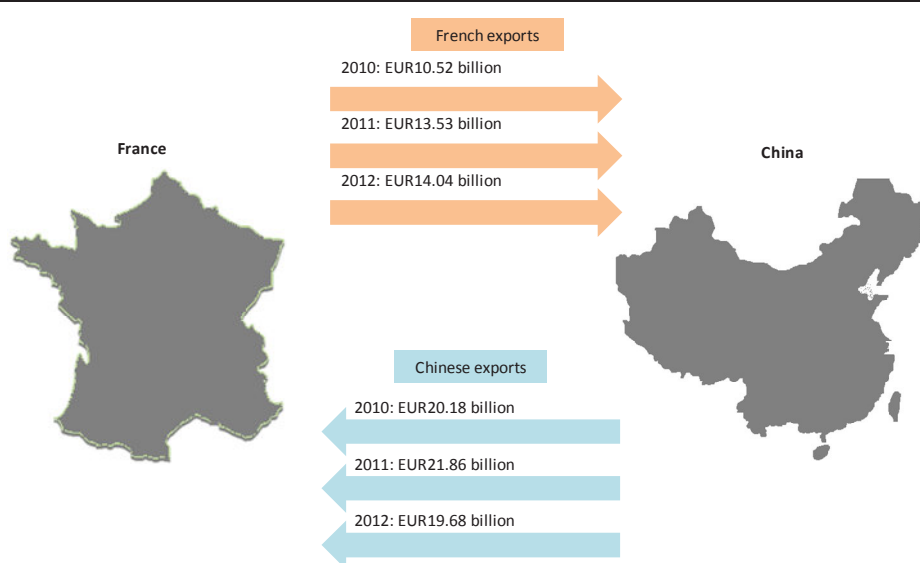
Source: Luxembourg Stock Exchange, Aite Group

PARIS

11. "Renminbi Factsheet February 2014" Luxembourg for Finance, February 2014.

Much like Germany, France has a fairly close trading relationship with China; it was the first major Western country to establish diplomatic relations with the People's Republic of China in 1964. Moreover, both countries' governments have worked together to strengthen these ties over recent years, and France is currently China's fourth-largest trade partner in the European Union, behind Germany, the Netherlands, and the United Kingdom. Figure 34 shows the overall trade flows between China and France between 2010 and 2012 based on World Bank figures, highlighting the high volume of trade between the two countries during that period. In March 2013, it was announced that Chinese firm Dongfeng would take a stake in troubled French car manufacturer Peugeot as part of a wider series of trade agreements negotiated between the two countries.

Figure 34: Trade Flows Between France and China



Source: World Bank, Aite Group

One of Paris' appealing factors as a renminbi center is its prospect as an intermediary between China and Africa. As FDI flows between China and Africa continue to rise, Paris can look to benefit from France's trade relationship with many of its former colonies and build on the infrastructural and cultural connections that are already in place. The operational benefits that accrue from Paris' time zone placement should not be overlooked, making Paris an attractive location for Chinese firms looking to invest in the African region. Numerous French banks have built out their branch networks in Africa and can therefore offer on-the-ground services to Chinese firms seeking banking support in the region.

A global financial market infrastructure provider interview respondent indicates that French corporations are really looking at broader adoption of renminbi when dealing with China. Figures from SWIFT support this notion, as 21% of payments between France and China in March 2013 were in renminbi, up from 7% in March 2012.¹²

12. "SWIFT RMB Tracker March 2013," SWIFT, March 2013.

ZURICH

In May 2013, Switzerland was the second European country (after Iceland) to sign a comprehensive free trade agreement with China. Trade between the two countries, however, is largely conducted in Swiss francs, euros, and U.S. dollars rather than in renminbi. Even if the currency is not being actively used cross-border, Swiss banks do offer renminbi accounts and services to their trade finance, private banking, and asset management clients.

The appeal of the Swiss market to China is its economic and political stability, the size of its private wealth management sector, and its presence in the international physical commodity markets. Today, according to the Swiss Bankers Association, Switzerland remains the global leader in managing offshore private client assets, banking approximately CHF2.7 trillion (US\$2.9 trillion) of foreign client assets, or 27% of the world's total pool of offshore assets. Foreign-owned assets added up to 51% of the total CHF5.3 trillion of AUM (US\$5.7 trillion) in Switzerland at the end of 2011.¹³

13. See Aite Group's report [Switzerland's Independent Asset Management Sector: The Shape-Shifters](#), September 2013.

TRADE FINANCE DYNAMICS

It took a while before China began to permit domestic importers and exporters to freely conduct cross-border trades in renminbi—the government did not allow this until mid-2012—but Chinese firms are increasingly keen to conduct settlement in the currency. Chinese corporations' recent trend of offering discounts of up to 5% to incent counterparties to settle in renminbi is proof of that desire. Regardless of these ambitions, however, the U.S. dollar remains the primary currency for intraregional trade, used in around 75% of global annual trade message flow via SWIFT.¹⁴ Although it won't be threatening the dollar any time soon, the use of renminbi in the realm of trade finance is expected to continue growing in the foreseeable future. SWIFT believes that the volume of trade denominated in renminbi will double over the next two to three years.

Figure 35 shows key milestones of the renminbi trade settlement program that initially started in July 2009 with a handful of Chinese enterprises gaining permission to settle in renminbi when trading with counterparties in Hong Kong, Macau, and other ASEAN countries. The scheme was vastly expanded in 2010 as a number of restrictions were lifted, allowing all current account transactions that were made with counterparties of any location to be settled in renminbi, while the number of licensed enterprises was increased to 67,724. In August 2011, the program was extended again to include some capital account transactions, such as FDI, outward direct investment (ODI), and renminbi loans. In February 2012, the PBOC announced that all China-based enterprises with import and export qualifications could settle their goods exports in renminbi.

Figure 35: Renminbi Trade Settlement Program



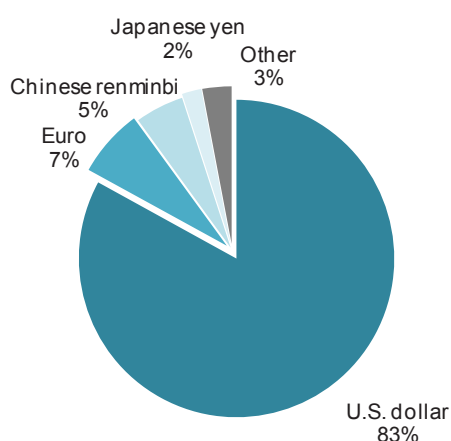
Source: Aite Group

14. "SWIFT RMB Tracker March 2014." SWIFT, March 2014.

China's growing use of letters of credit in the intra-Asian region is an indicator of the renminbi's future prospects in trade finance, as it represents the currency's increased use for cross-border financing arrangements for corporations in the region. Letters of credit issuance in the region outpaces the rest of the world; interregional trade between China and other Asian countries is growing by around 10% per year compared to around 1% in the rest of the world, according to figures from the International Chamber of Commerce (ICC).¹⁵ In 2012, the renminbi's market share in terms of value of global issuance of letters of credit was 5%, according to figures from SWIFT based on its MT 700 message type¹⁶ (Figure 36). This ranked it at third in terms of issuance in the globe, after the U.S. dollar (83%) and the euro (7%).

Figure 36: China's Share of Letters of Credit in 2012

Value of Letters of Credit in 2012 (of SWIFT MT 700 Messages)



Source: ICC Global Trade and Finance Survey 2013

In 2013, the U.S. market share declined to 80% and the renminbi's share had doubled to 8%. Moreover, use of renminbi-denominated letters of credit increased by 250% in terms of value in 2012, with volume up 500%, which shows that average ticket size is also expanding. The adoption of the renminbi is gradually picking up pace.

In order for the renminbi to make a significant impact in the trade finance sector, it will need to overcome a significant hurdle: its adoption for the financing of commodity trades. A few years ago, the Chinese government proposed its adoption as a tradable currency for use during the importing of oil to China, but this failed and the country continued using the U.S. dollar.

15. ICC Global Trade and Finance Survey 2013.

16. The SWIFT MT 700 message is used by ICC as an indicator of trade finance because SWIFT traffic captures an estimated 90% of the market in letters of credit.

All hope is not lost, though. In May 2012, Iran indicated that it is accepting renminbi for some of the crude oil it supplies to China, partly driven by U.S. sanctions around the country's nuclear program. According to industry estimates at the time, the renminbi-denominated trade flow between the two countries was around US\$20 billion to US\$30 billion annually. This political dynamic could certainly impact trade flows over time and, accordingly, the renminbi's use as a transaction currency for commodity products, especially since financing costs in the renminbi continue to fall year-on-year.

Chinese exporters offering generous discounts to foreign importers willing to settle in renminbi is influencing the Western world as well as Eastern-based flows; discounts of up to 5% are not unusual. The incentive for Chinese exporters to request renminbi-denominated settlement is clear if one takes into account the downward pressure on profit margins most corporations face (along with the rest of the world) due to the continued challenging global economic landscape. Profit margins are likely in single digits, and avoiding foreign exchange charges can make a significant difference to bottom line; plus, onshore staff are more familiar with renminbi processes overall. Settling in renminbi means that corporations are not required to access the onshore foreign exchange hedging market to manage their currency exposure, so risks are also lower.

There is still a long way to go in terms of encouraging international corporations to use the renminbi for trade finance, however. According to a survey of 711 international corporations from Australia, China, Germany, Hong Kong, Singapore, the United Kingdom, and the United States by HSBC in Q2 2013 (the third year the bank has conducted the survey, involving around 100 participant firms per country),¹⁷ 61% of Chinese companies indicated that their counterparties were unwilling to use the renminbi. This resistance can largely be attributed to a lack of understanding of the potential benefit of using the currency and a reluctance to alter operational systems for invoicing and billing to adopt a new nonconvertible currency.

Other highlights of the HSBC survey include the following:

- In terms of the use of renminbi for trade finance, Hong Kong (50%) and Mainland China (30%) are in the lead, followed by Singapore (11%), the United Kingdom (11%), Germany (9%), the United States (9%), and Australia (7%).
- The top three reasons cited by those using the currency were:
 - Reduction in foreign exchange risks or costs (48%)
 - Requests from trading partners (46%)
 - Convenience (42%)
- Almost three-quarters (73%) of businesses using the currency expect renminbi cross-border business to grow in the next five years.
- Almost a quarter (24%) of those surveyed not currently using the currency expect to start using the renminbi within the next five years to mitigate foreign exchange risk (59%) and benefit from better pricing (42%).

17. "HSBC Renminbi Survey 2013," HSBC, September 2013.

- Forty percent of respondents felt they currently had "quite a good understanding" of renminbi services, but another 40% felt their understanding was "poor."
- Twenty percent of firms that are not using renminbi services indicated they had no working understanding of the services or the benefits of using the currency.
- About half (51%) of companies not using the currency said that its usage would increase if the procedures around its use were further simplified.
- About half (53%) of Chinese companies indicated they would give discounts of up to 5% for use of renminbi-denominated transactions.

To set the survey figures into context, the six countries (other than China, of course) account for around 40% of the global trade with China. It seems from the results that progress is being made in the use of renminbi domestically and internationally, but a lack of understanding about the operational details of using the currency for trade finance remains. For example, corporations are confused about how they could manage renminbi liquidity as part of their regional treasury operations in Asia. Some firms are also under the misapprehension that a bank account in renminbi is required to use the currency in this context—though beneficial in terms of cash management overall, it is not a requirement.

An interview respondent to the Aite Group survey from an Asian-headquartered bank indicates that there are many benefits to settling in renminbi beyond just discounting. Use of the currency is beneficial from a working capital, cash management, and liquidity pooling perspective, especially for those operating in a pan-Asian environment. The benefits of using the renminbi are therefore present for both parties in the import/export dynamic:

- Foreign exchange risk is reduced.
- Costs for domestic Chinese exporters in terms of operational support are reduced.
- Foreign corporations may benefit from discounts and hedging efficiencies.
- Working capital is freed up.
- Foreign corporations can increase their wallet share and business flows with Chinese corporations.
- Trade flows increase overall.

A CORPORATE TREASURER CASE STUDY

The process of adopting renminbi within the realm of trade finance is not without its hurdles, and this case study highlights the challenges faced by a large multinational corporation that completed the process at the end of 2013. The main points are the following:

- **Drivers:** Procurement savings of around 1% to 5% with individual Chinese entities, the improvement of hedging efficiency overall, and timelier settlement
- **Main challenges and concerns:** Reservations about a lack of convertibility, adoption of a new hedging regime, changes to intragroup treasury systems for invoicing,

debiting, crediting, and accounting, and the building of connectivity between its onshore payments factory and its renminbi bank

A large international corporation added support for trade finance transactions in renminbi in Q4 2013 in order to allow all of its group companies to conduct settlement with counterparties in China without having to use euros or U.S. dollars. The driver behind the decision to kick off the project, which was first discussed in 2009, was related to the fact that the corporation has more than 10% of its sales originating from China, representing around EUR 7.6 billion in revenue for 2013. It also has relationships with more than 50 Chinese entities (many of which are state owned) and the volume of invoices with those entities total around 300,000 annually. The adoption of the renminbi would therefore allow some degree of procurement savings with Chinese exporters and improve hedging efficiency, as well as grant a certain amount of goodwill with its numerous Chinese counterparties. The firm estimates these savings to equate to between 1% and 5% in terms of procurement savings with individual counterparties.

State-owned entities were particularly receptive to the decision to support renminbi as they face foreign debt quotas and hedging limits from the domestic regulator and are keen to receive settlement in the domestic currency. The move on the part of the corporation has meant that payment and settlement of invoices is occurring in a more timely fashion with these entities.

The firm waited until it felt there was a significantly liquid offshore hedging market before it moved forward with the project, but there were still reservations among its treasury team about accommodating a currency that is not fully convertible. A significant part of the adoption project was focused on developing a new hedging regime to accommodate this offshore renminbi exposure. This required a change in its daily and monthly booking rates for renminbi trades to a spot rate that was considered closer to the offshore market rate. It also meant amendments to its intragroup treasury systems for invoicing, debiting, crediting, and accounting to separate onshore and offshore renminbi transaction types.

The firm opted to use a single bank and adopted a receivable-on-behalf-of and a payable-on-behalf-of model for transactions. It also worked to build connectivity between its onshore payments factory and its renminbi bank, alongside negotiating prices and legal arrangements over a six-month implementation period after the account had been opened.

A number of operational hurdles within the payment universe also arose during the testing process, including determining usage of either CNY or CNH internal codes within the treasury system for sending payment messages. The selection of the code, a seemingly innocuous choice, would have significant hedging implications due to market practice requirements; it took some time for the operation team to work out the details of when to use either code. There were cost implications for selecting one code over another due to system and process changes.

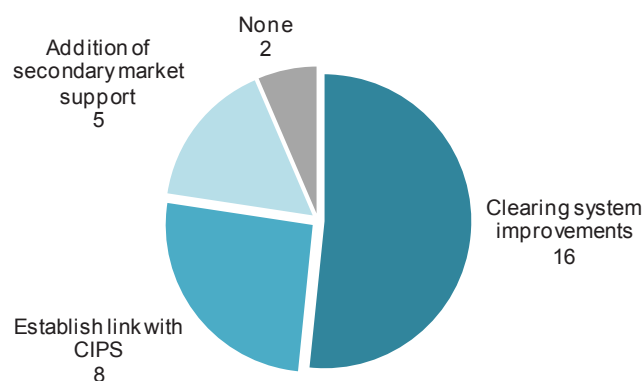
PAYMENTS, CLEARING, AND SETTLEMENT

A key factor in the internationalization of a currency is the development of the domestic market's payment and settlement infrastructure in order to improve its chances of competing with North American and European markets. The creation of safe and efficient systems for the clearing and settlement of securities and low-value and high-value payments is therefore an important step in bringing China into line with the rest of the world, especially given the increasing interconnectedness of global markets. The renminbi's position as a payments currency (the second step on the road to becoming a reserve currency) will be strengthened by the modernization of this infrastructure and the adoption of global standards. Accordingly, the PBOC has been working on comprehensively reforming the national payments systems and bolstering capital markets infrastructures over the last five years.

Figure 37 shows the requirements for renminbi settlement perceived to be of most importance by interview respondents, indicating that 16 respondents believe domestic clearing system improvements are of paramount importance for the future. The development of the new China International Payment Platform (CIPS) is also viewed as important by eight respondents. A European-based bank respondent believes CIPS, which will enable the onshore clearing of international transactions in renminbi, will be a game changer for the internationalization of the currency. Onshore clearing is also likely to be better for the market as a whole from a liquidity point of view. The current lack of clarity around when CIPS will be launched and the functionality that will be included in the system is, however, a sticking point for market participants because they are keen to see who will have access to CIPS and when. To this end, the bank respondent anticipates that the launch will be phased and only a limited number of banks will initially be granted direct access to the system.

Figure 37: Connectivity and Infrastructure Requirements for Renminbi Support

Q. Which requirements do you believe are essential for firms to begin settling in renminbi?
(N=24)



Source: Aite Group survey of 24 firms active in the Chinese market, Q1 and Q2 2014

AN OVERVIEW OF PAYMENT SYSTEMS

PBOC owns and operates the China National Advanced Payment System (CNAPS), which consists of five interbank payment systems: the High-Value Payment System (HVPS), the Bulk Electronic Payment System (BEPS), the Cheque Imaging System (CIS), the Internet Banking Payment System (IBPS), and the China Domestic Foreign Currency Payment System (CDFCPS). CNAPS has two tiers of processing centers—the National Processing Center (NPC) and processing centers at provincial cities, and Shenzhen City Clearing Processing Centers, which are connected to NPC by dedicated communication networks. For transactions processed in HVPS, NPC receives and forwards payment transactions and submits transactions to the clearing account management system in real time. Provincial processing centers are responsible for forwarding and receiving payment transactions.

Table C provides an overview of the main payment systems in China, including the transactions they support, the details of their clearing cycles, and participants.

Table C: An Overview of Payment Systems in China

Type	Transaction type	Clearing cycle	Participants
CNAPS-HVPS	High-value (over RMB 50,000) or urgent payment All cross-border RMB flows (regardless of amount)	08:30 to 17:00 on China working days Real-time	Approximately 1747 direct and 107,850 indirect participants
CNAPS-BEPS	Low-value (less than or equal to RMB 50,000)	10:00 to 16:00 on China working days Trade date plus one day (T+1) (dated debits are settled on a T+2 basis)	Approximately 1754 direct and 107,755 indirect participants
CDFCPS	Electronic fund transfers denominated in AUD, CAD, CHF, EUR, GBP, HKD, JPY, and USD	09:00-17:00 T+0	Approximately 31
CIS	Intercity cheques	16:00 cut-off time T+2	
Local clearinghouses	Paper-based payment instruments	16:15 cut-off time T+1 to T+2	Approximately 1161

Source: PBOC

HVPS, which began operations in June 2005, is a systemically important real-time gross settlement (RTGS) payment system that handles high-value payments and urgent low-value transfers. It is connected to numerous trading, payments, and securities settlement systems to allow for settlement in central bank money. It primarily facilitates credit transfers, third-party funds transfers, and local netting transactions. All interbank payments are settled on reserve accounts (clearing accounts) of commercial banks in the central bank. Clearing agents Bank of China Hong Kong and Bank of China Macao have also joined HVPS as direct participants.

In addition, PBOC local officers or delegated banks administer numerous cheque clearinghouses around the country. China Union Pay (CUP) handles the clearance of card transactions whose balances are settled in HVPS. Also, automated clearinghouses and other systems handle clearance and settlement for a variety of payment instruments. CIS enables electronic exchange of cheque images, automated clearing of the exchange "paper" instruments, and multilateral net settlement of the exchange instruments at the HVPS. The CIS is primarily used to clear and settle cross-region cheques. CDFPCS, launched in April 2008, handles the clearing and settlement of domestic foreign currency denominated transactions. It is an RTGS system built by the PBOC to clear and settle foreign currency denominated transactions arising out of domestic trades of goods and services.

THE SEQUELS: CNAPS 2 AND CIPS

PBOC is developing the second generation of CNAPS with a view to bringing the onshore payment systems into line with the rest of the world and is adding capabilities for the support of cross-border message exchange and settlement in renminbi. It is expected that it will support payment-versus-payment settlement of renminbi and foreign currencies in the foreign exchange market to reduce risks. It will also likely feature queue matching for the HVPS system and an automatic lending facility aimed at reducing liquidity risk in the market overall.

A lack of clarity about the timeline for the launch of CNAPS 2 remains, though the PBOC has recently indicated it will be online at some point in 2014. It was originally due to be launched in October 2012 and has been significantly delayed, with little in the way of detail. The Bank of China Hong Kong has said it will have its clearing system changed in compliance with CNAPS 2 standards effective from May 19, 2014.

While the next generation CNAPS will focus on onshore use of renminbi, CIPS will cater specifically to international transactions. The central bank first announced its plans to develop the international renminbi clearing platform in April 2013 but has not yet committed to a project timeline. Although there has not been a great deal of information circulated in the public domain about the new system, it is expected that the key features of CIPS will be the following:

- Support for cross-border renminbi clearing among both onshore and offshore participants
- Adoption of international reporting standards and multilingual support
- Payment support for 17 time zones in Asia, Africa, Europe, and Americas simultaneously via an extension to 23-hour operations

- Support for SWIFT ISO 20022 standards, including mapping between SWIFT message formats and CNAPS message formats

SECURITIES MARKET INFRASTRUCTURE

Similar to the improvement program for payments, the Chinese government and the PBOC have also been focusing on the securities clearing and settlement infrastructure in order to further develop the domestic capital markets, with a view to supporting a higher volume of settlement in the future. This work has most recently involved support for the extension of the Shanghai Clearing House's services to cover the OTC derivatives markets.

A regulatory mandate for clearing of IRS and credit default swaps (CDS) is expected in July 2014, and it is anticipated that client clearing arrangements will be established at the central counterparty clearinghouse (CCP) at that point. Two international banks—Bank of East Asia and HSBC—have thus far applied to be clearing members; however, many similar firms are adopting a cautious approach to membership due to a lack of clarity around default fund requirements and margining arrangements. Shanghai Clearing House has only shared its draft clearinghouse rules with prospective members and has made them sign nondisclosure agreements, thus preventing any public discussion of these details.

Unlike many other global markets, China's A-shares and bond markets operate on a T+1 settlement cycle—most European and North American markets currently operate on a T+3 basis. The B-shares market operates on a T+3 basis in order to take into account the more international nature of this market, in which U.S. and European investors are active.

There are currently two central securities depositories (CSDs) that support the main stock exchanges in Shanghai and Shenzhen and the interbank bond market. The China Securities Depository and Clearing Company (SD&C) serves two stock exchanges and also acts as a CCP for them, and the CCDC and the Shanghai Clearing House serve the domestic electronic and OTC bond markets, respectively.

SD&C

The SD&C,¹⁸ which is headquartered in Beijing, is responsible for the clearing and settlement of stocks and bonds traded on the Shanghai and Shenzhen stock exchanges, both of which are equal shareholders in the CSD. After the completion of the trades, they are sent from the stock exchange to the respective SD&C branches in Shanghai and Shenzhen, which apply the following clearing and settlement principles:

- **Tiered settlement:** The SD&C is responsible for the settlement with securities companies or direct investors, but securities companies are responsible for settlement with their clients (indirect settlement).

18. SD&C is known by numerous other acronyms in the industry, including CSDCC and CDCC.

- **Multilateral netting:** For the majority of trades between the securities companies/direct investors, the resulting obligations to deliver securities or cash are netted by the SD&C on a multilateral basis.
- **Central counterparty:** The SD&C acts as a CCP to the counterparties of a securities transaction and is liable for settlement obligations in the event of a default.
- **Settlement reserve fund:** Each securities company or direct investor must maintain a daily minimum balance in its cash settlement account as a settlement reserve fund, the amount of which is set by the SD&C.

SD&C Shanghai and SD&C Shenzhen are operated independently of each other and there is no system integration between the two branches. Delivery versus payment (DVP) settlement only occurs for a certain number of instruments settled via SD&C such as ETFs and options. The banking community, however, has interest in improved integration between these branches, liquidity management tools such as support for DVP agreements, and the introduction of repurchase agreements in order for member banks to arrange short-term liquidity and mitigate counterparty risk on settlement.

SHANGHAI CLEARING HOUSE

The Shanghai Clearing House was established in 2009 to provide renminbi and foreign currency clearing services for both spot and derivatives markets in China. It currently offers clearing, settlement, registration, and depository services for instruments including credit risk mitigation warrants and super and short-term commercial paper. It is extending its ambitions, however, and began a trial of OTC derivatives clearing operations in January 2014 with 15 clearing member banks for the renminbi IRS market as part of the country's efforts to bring its OTC market into line with the United States and Europe.

The clearer provides a centralized clearing service in renminbi and foreign currencies as well as for cross-border transactions in renminbi for the OTC interbank bond market. OTC derivatives regulation is still in draft form (and there is no guarantee it will come into force), but the first asset class likely mandated to clear will be IRS. There is some question whether market participants will initially participate in the voluntary central clearing solution offered by the CCP or whether regulators will mandate central clearing when the services are launched.

CCDC

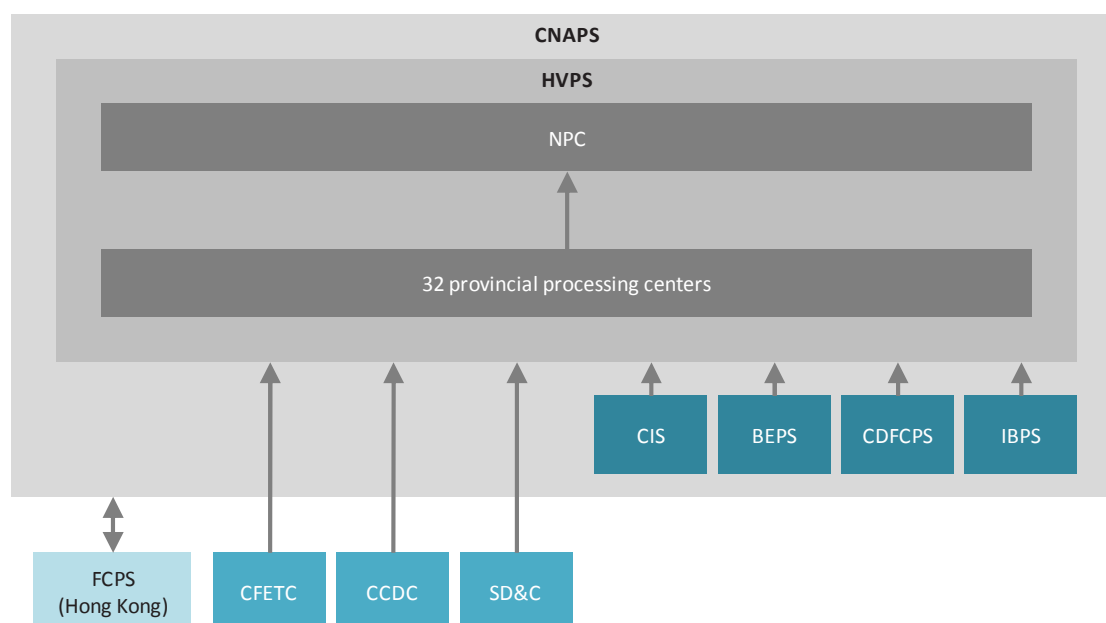
CCDC, which is entirely state owned and was established in 1996, offers issuance, registration, custody, settlement, and principal redemption/interest payment agency services for government bonds, financial debentures, corporate bonds, and other fixed-income securities as well as for bond funds and money market funds. The SD&C acts as subcustodian for the exchange bond market, and four large domestic commercial banks act as subcustodians for the retail bond market. Most bonds are settled on a DVP basis, and to be able to participate in this type of settlement, interbank bond market participants must open bond custody accounts with the CCDC and fund settlement accounts in the HVPS.

The following settlement principles are applied:

- **Same-day confirmation:** Market participants have to confirm the details of the trade on the same day. After matching the settlement instructions of the two counterparties, a settlement contract is formed, and the CCDC proceeds with the settlement of the instructions.
- **Settlement cycle:** The settlement cycle is T+0 for DVP and T+1 for other settlement methods (payment after delivery, delivery after payment, and free of payment).

In order to facilitate cross-border settlement, the CCDC established electronic links with the Central Moneymarkets Unit (CMU) of the Hong Kong Monetary Authority in 2004 for settlement in Hong Kong dollars and with Clearstream Banking Luxembourg in 2007 for settlement in U.S. dollars and euros. Figure 38 provides an overview of the current financial markets post-trade and payments infrastructure in China, indicating that all of the settlement systems feed into the CNAPS system, which comprises the HVPS and two levels of processing center (provincial and national). The Hong-Kong-based Foreign Currency Payment System (FCPS) link also feeds into CNAPS.

Figure 38: An Overview of the Current Payment, Clearing, and Settlement Systems in China



Source: PBOC, IMF, Aite Group

THE CURRENT CHALLENGES

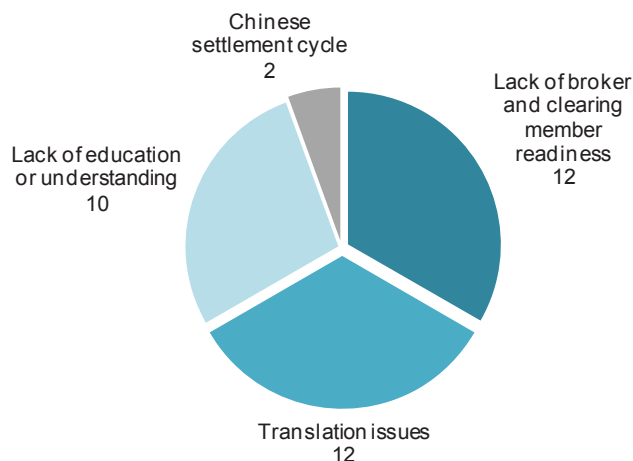
The numerous challenges related to interacting with onshore Chinese payment, clearing, and settlement systems mean that processing in renminbi involves higher operational costs and levels of latency than for other major currencies. These include the following:

- **Language support:** One of the main challenges as the renminbi gradually internationalizes is language support and translation between Latin characters and Chinese characters. The high number of local dialects and different naming conventions compound this problem. Currently, the burden is on banks active in these markets to translate and interpret messaging between the countries—a task rife with potential for misinterpretation and error. This can also cause multiple issues beyond the realm of pure message support, including functions such as compliance, anti-money laundering, and sanctions screening, which rely on the identification and flagging of specific data items in a timely manner.
- **Time zone issues:** There are currently significant challenges related to time zone differences and support for non-Asian countries by onshore Chinese payment systems. A payment made in the morning of the originating city may only be received at the evening time of the destination city due to time zone differences between North America and Asia. Although the Hong Kong renminbi RTGS platform lengthened its operational hours in 2012 (from 10 hours to 15 hours), onshore Chinese payments platforms still operate on local time—CNAPS and the China onshore FX market both close at 16:00 local time. This means these international transactions incur a delay in the processing of any payments.
- **Conversion of payments messages:** CNAPS does not currently support international messaging standards such as ISO 20022; therefore, firms must manually or automatically convert payment messages from one format to another.
- **Resolution concerns and liquidity management:** Given that the global regulatory community is focused on reducing systemic risk, the lack of clarity around resolution arrangements in China is a key concern for financial institutions interacting with the country's onshore payment and settlement systems. Further clarity is needed around lenders of last resort and instances in which intraday credit can be extended.
- **Local restrictions on currency operations:** Designing and constructing a feasible foreign currency cash concentration solution within the boundaries of current regulations is a significant challenge.
- **A continued lack of clarity about system upgrades and changes:** PBOC has not been very transparent about the upgrade process for CNAPS and the development of CIPS. Those active in the market do not even have a timeline with which to work.

Figure 39 shows that interview respondents believe that the biggest operational challenges relate to a lack of clearing broker readiness for operating in renminbi (12), translation issues (12), a lack of understanding about the requirements for operating in renminbi (10), and the T+1 Chinese settlement cycle (2).

Figure 39: Operational Challenges of Renminbi Activity

Q. What are the main operational challenges faced during renminbi payment, clearing, and settlement activities? (N=24)



Source: Aite Group survey of 24 firms active in the Chinese market, Q1 and Q2 2014

In order to tackle some of the translation challenges within the realm of transaction monitoring, a code has been developed by several Chinese speaking markets including China, Taiwan, and Hong Kong (though each version is currently specific to each market). Dubbed the Chinese Commercial Code (CCC), it converts Chinese characters into four-digit numbers from 0000 to 9999. In China, there is a standard version of CCC that has been set by the PBOC.

CORPORATIONS AND LIQUIDITY MANAGEMENT

Liquidity management has long been a challenge for corporate treasurers and banks in China because of the traditional restrictions on moving renminbi-denominated cash in-country and cross-border between onshore and offshore accounts. In order to tackle this problem, PBOC took the step in July 2013 to enable cross-border renminbi lending across China for approved corporations via the establishment of cross-border entrustment loans. This builds on an earlier pilot scheme that allowed for cross-border intercompany lending for a handful of corporations located in Beijing and Shanghai. These schemes are collectively referred to as the Foreign Currency Centralized Management pilot scheme for multinational companies.

The central bank has also permitted global transaction banks to launch automated renminbi cash sweeping services for the first time, and three have thus far set up such operations in the SFTZ—Citi, Deutsche Bank, and HSBC. Essentially, all of this means that corporations can now better optimize their working capital by moving renminbi-denominated cash into their Asian and global cash pools. PBOC has established certain restrictions, including prescribed value limits for cash movements, but these movements can take place on a daily basis if required.

The earlier Beijing and Shanghai schemes, which were established by SAFE in Q4 2012, resulted in take-up by 13 multinational corporations within the first six months of their launch. The Foreign Currency Centralized Management schemes permit foreign currency cross-border

lending supported by automated cash concentration within certain monitored value limits (determined by approval from SAFE), and participants can set up designated accounts from which they can manage their lending and borrowing to and from overseas group entities.

In order to be approved by SAFE, a set of minimum requirements must be met by corporations active in Shanghai:

- Total corporate assets must be greater than US\$400 million
- Total corporate investment into China must be greater than US\$50 million
- The corporation must have a minimum of three entities in China
- The corporation must have a minimum of two entities overseas

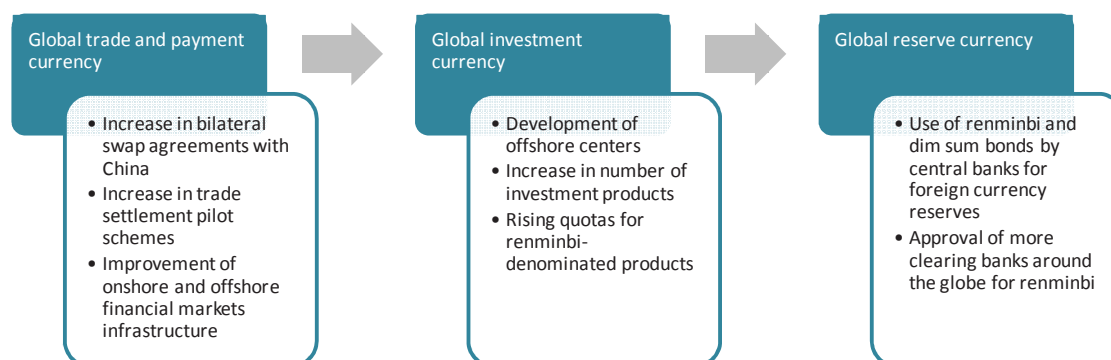
As well as meeting these requirements, corporations must also pass an assessment conducted by SAFE, which may entail the meeting of certain other criteria that have not been publicly communicated.

THE FUTURE

Looking to the future, many industry participants believe 2020 will represent a key turning point for the renminbi as an international currency and the point at which it is likely to reach full convertibility on a global stage. Until it reaches full convertibility, however (whether this is in 2020 or at some later point), the offshore markets largely depend on liquidity provided by PBOC, which will limit their growth in the short term. The three-step internationalization process for the renminbi—in trade and payments, in investment, and as a reserve currency—will therefore be significantly quickened by steps toward convertibility.

Figure 40 highlights the bigger-picture view of some of the steps that need to be achieved in order for the renminbi to truly be considered an international currency in the three key areas. Economic growth in China will also be important to the future of the currency and will require further structural reforms to ensure a smooth transition to a growth model based more on domestic consumption and the development of services industries than on investment, exports, and manufacturing.

Figure 40: Progress Toward Internationalization of the Renminbi



Source: Aite Group

FUTURE AS A TRADE AND PAYMENTS CURRENCY

The bilateral swap agreements the PBOC has negotiated with 23 different bodies across the globe go some way toward improving the renminbi's chance of taking on the U.S. dollar as an international currency for trade and payments and set it on the path for full convertibility in future. The size of China's economy and its role as a leading power in imports and exports should mean that the renminbi will gain the most traction in invoicing and settlement in the short term (comparative to other areas such as its use as an investment currency). As noted by one of the European-based bank interview respondents, however, this will not create new trade flows for offshore centers. The more important aspects for the future of the renminbi are around its use in areas such as FX and capital raising exercises.

As previously noted, the commodities sector would boost the currency's chances in trade finance if it moved away from the U.S. dollar and toward adopting the renminbi. A North American-headquartered bank respondent adds that the technology sector's adoption of renminbi would also help improve flows, especially given China's dominance in that space.

On the operations side of the coin, the investment by PBOC in improving financial market infrastructure in the securities post-trade and payments environment will go a long way toward bringing the country into line with the rest of the world. The development of a linkage between offshore markets and the next-generation onshore payments systems will be important, as it should make it easier for international market participants to clear renminbi with onshore counterparties using consistent international standards.

FUTURE AS AN INVESTMENT CURRENCY

The renminbi's future as an investment currency is tied to the further development of renminbi-denominated products and offshore markets, thus creating incentives for nonresidents to hold the currency in their portfolios. To this end, the market has come a long way since the first dim sum bond was issued in 2007, and much more progress is expected over the next few years.

An Asian exchange operator respondent notes that offshore renminbi payment flows are still largely related to FX or trade settlement, as indicated by the fact that volume drops off sharply during U.S. public holidays. In order to encourage the currency's wider use outside of China, there need to be more investment products denominated in renminbi beyond certificates of deposit and dim sum bonds. He expects further development of renminbi-denominated products such as equities, mutual funds, money market funds, and insurance products, thereby building on the success of products such as RQFII ETFs, which have seen quite high levels of investor interest.

A respondent from an investment bank headquartered in the United States adds that as an investment currency, the renminbi is still in its infancy. It can, therefore, only unfold its full potential if the institutional framework is created to enable the smooth and efficient reinvestment of the renminbi. As well as the development of offshore markets, much more work must be focused on fostering the onshore capital markets to bring them into alignment. Significant challenges to the development of the domestic capital markets remain, including restrictive regulations such as deposit rate ceilings, lending rate floors, and directed credit rules, all of which restrict competition and the diversity of assets.

FUTURE AS A RESERVE CURRENCY

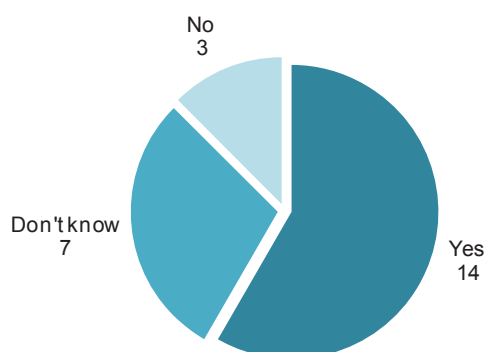
The renminbi is gaining ground slowly as a reserve currency, with the announcement in April 2013 by the Australian central bank that it would add the Chinese currency into its mix of foreign currency reserves. It is the third country after the United States and Japan to take such a step, though central banks in Malaysia, Nigeria, Chile, Thailand, Brazil, and Venezuela have included renminbi in their reserve portfolios via the holding of dim sum bonds.

A Chinese bank respondent reckons this is the ultimate goal of the Chinese government, but admits that the establishment of renminbi's status as a reserve currency is likely to take time, and it will not be an easy road. A North American-headquartered bank respondent adds that, to this end, the Chinese government needs to enable more capital account liberalization in the near term. At the same time, the government also needs to improve transparency in order to assure the international community that the renminbi is stable enough to act as a reserve in the long term. Fundamentally, there has to be confidence in the currency in terms of legal contracts, and much progress is needed in that regard.

Though many industry participants have talked about the long-term potential for the renminbi to displace the U.S. dollar as a reserve currency, many interview respondents believe this is unlikely, though they do believe it will be adopted by more central banks in future (Figure 41). A European investment bank respondent reckons that the Chinese government would probably be happy with reaching 5% of overall FX reserve baskets. A Chinese asset manager adds that the currency will grow in importance over a long period of time but will be no challenge to the dollar any time soon. A respondent from an Asian-headquartered global bank agrees that the renminbi will never replace the U.S. dollar as a reserve currency but does believe it will eventually become the third most used currency by central banks in the future, especially for emerging market central banks.

Figure 41: Respondent Views on Renminbi as a Reserve Currency

Q. Will the renminbi become a more widely used reserve currency in future?
(N=24)



Source: Aite Group survey of 24 firms active in the Chinese market, Q1 and Q2 2014

A survey of central bank reserve managers by the IMF, published in May 2013,¹⁹ indicates that there is hope for the renminbi's future. In spite of the risk management and operational challenges faced by these managers in investing in renminbi, a third of the 67 respondents (33%) indicated that they are considering holding renminbi as a reserve in future. Currently, only six of

19. "Survey of Reserve Managers: Lessons From the Crisis," IMF Working Paper, May 2013.

the respondent central banks have any allocation to the Chinese currency in either onshore or offshore funds.

OFFSHORE AND ONSHORE DYNAMICS

The majority of interview respondents believe it is hard to estimate how long it will take before the introduction of full convertibility can bring about full fungibility between onshore and offshore renminbi flows. Estimates range from as short as two years to as far out as 20, though industry estimates tend to point to 2020 as a key date for full currency fungibility. Most respondents who were prepared to hazard a guess estimated that it could take between three and five years, but a few suggested that 10 or even 20 years might be a more accurate assumption. One of the Asian-based banks indicates that a lot of structural and legal reforms are required before this step can be achieved, and the Chinese government is very cautious in its approach due to fears around "hot money" flows. The PBOC has also publically stated that it could be 2025 before any progress is achieved to this end.²⁰

One of the key measures that will improve the integration of onshore and offshore flows will be the further development of trade zones in the same vein as SFTZ. On this note, a Chinese bank interview respondent indicates that a few cities and provinces have already applied to the PBOC in order to establish free trade zones in the near future, which will definitely open up the domestic market further to foreign investment flows.

A respondent from an Asian-headquartered global bank believes that regardless of how long it takes, the convergence of onshore and offshore markets is inevitable. At the moment, the offshore markets are likely to grow because of restrictions on activity in the domestic Chinese markets; in the long term, however, liberalization, market infrastructure improvements, and regulatory reform will reduce the need for offshore activity and clearing.

In the short term, there will continue to be a few operational challenges when financial institutions deal with the onshore market. As noted by a Chinese asset manager active in the domestic markets, one of the biggest challenges remains in the Chinese market's T+1 settlement cycle. The majority of European countries and the United States are on a T+3 settlement cycle; hence, firms based outside of China but interacting with the domestic market must make sure they have the funds in their onshore bank accounts to cover settlement demands. Europe's move to a T+2 settlement cycle by 2015, as required by the Central Securities Depositories Regulation (CSDR), should bring these markets into better alignment with China.

Interview respondents largely view the internationalization of the renminbi as a positive force in terms of its impact on the Chinese capital markets, and many note its potential to mitigate the negative impacts of the domestic financial sector reforms in China. It will allow domestic firms to access cheaper financing offshore instead of seeking funds from the shadow-banking sector.

The future of the renminbi will not be without its threats as well as its opportunities. A North American-headquartered global bank respondent warns that although there is currently a lot of

20. Speech by PBOC Deputy Governor and Director of SAFE, Yi Gang, at the China Development Forum in Beijing, March 22, 2014.

continued investment in China, there are concerns about the rising cost of doing business in the country as it continues to develop. This could mean that investors begin to turn to other Asian countries that are at an earlier stage of development.

The international development of the renminbi market will rely on establishing an efficient and recognized infrastructure and optimizing liquidity while remaining flexible to further relaxation of cross-border restrictions that will eventually merge the onshore and offshore markets into a single traditional market with full international access.

GLOBALIZATION TRACKING FOR THE RENMINBI

It could be a little easier to track the currency's progress in the offshore realm in future. A few indices have been established over recent years, including Standard Chartered's Renminbi Globalization Index (RGI), which was launched in November 2012. New York was recently added to the offshore centers on the RGI in March 2014 (alongside Hong Kong, London, Taiwan, and Singapore) in response to investor interest and the rise in trade flows between the United States and China. Index parameters include deposits, dim sum bonds, certificate of deposits, trade settlement, and other international payments and foreign exchange turnover.

In March 2013, the Bank of China rolled out its first offshore renminbi index, which tracks the development of the currency's deposit scale, operation, use of financial tools, and several other aspects. The index features five indicators to reflect the performance of renminbi in the international financial market. This move builds on the bank's cross-border renminbi index, which it launched in 2013. These indices should help to provide the global financial markets with a good indicator of progress overall and are not likely to be the last in this vein.

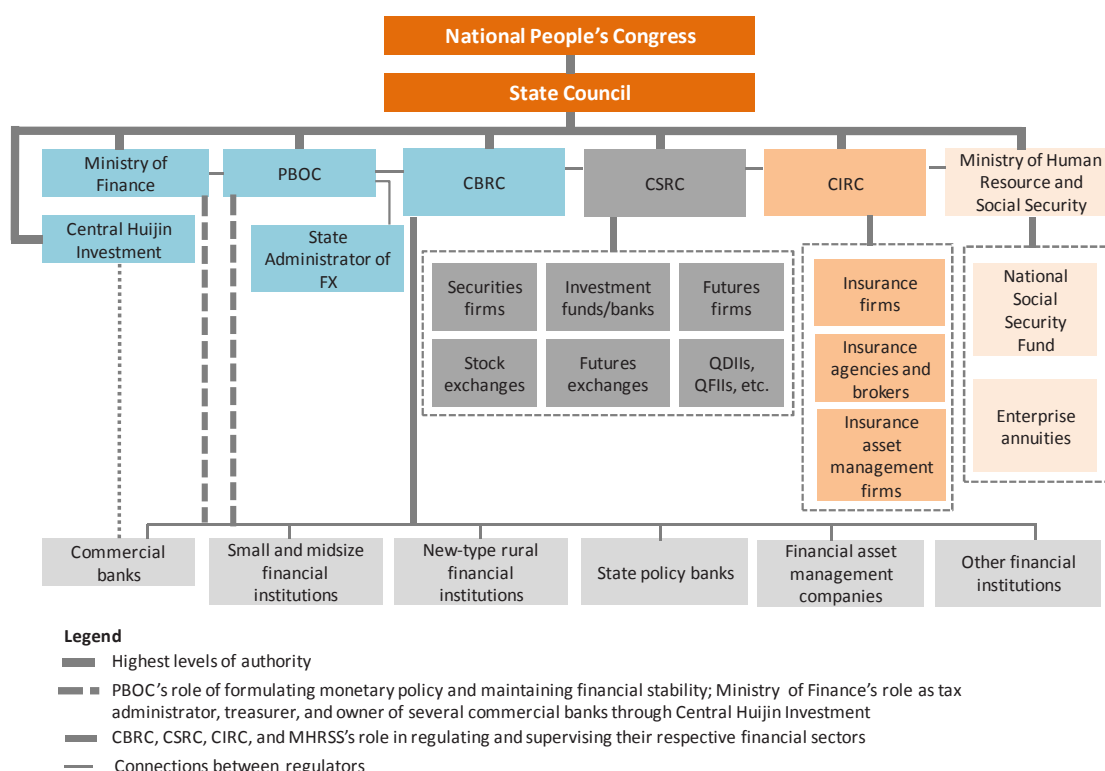
CONCLUSION

- **Renminbi's use in trade finance will increase significantly over the next three to five years.** The renminbi has already made some headway in adoption as a global currency for trade finance, and half of interview respondents feel trade flows have significantly impacted the internationalization process thus far. The size of China's economy and its role as a leading power in imports and exports should mean that the renminbi will gain significant traction in the universe of trade invoicing and settlement in the next three to five years.
- **Domestic regulatory restrictions continue to hamper the renminbi's investment currency prospects overall, but there is hope.** The lack of deep and liquid domestic financial markets, a tight financial market and capital account, and limited exchange rate flexibility continue to hold back the renminbi's prospects as an investment and reserve currency in the short term. Financial sector reforms need to continue to liberalize the capital account and strengthen the flexibility of China's exchange rate as well as ease restrictions on foreign investment in the domestic market to keep the liberalization of the currency and financial markets on track.
- **A broadening of the range of renminbi-denominated assets will foster growth of the onshore capital markets and the currency's prospects globally.** Interview respondents consider the lack of investment product options for foreign and Chinese domestic investors and the quota restrictions on the investment schemes that are available to be significant barriers to the renminbi's adoption within the realm of capital markets. The development of renminbi-denominated products such as equities, mutual funds, money market funds, and insurance products is vital for the renminbi's prospects as an investment currency.
- **The industry has mixed opinions on offshore center development in Europe, but many believe cooperation will be important for future growth in liquidity.** Some firms are convinced that one particular center will dominate; but more than half of respondents believe Europe as a whole will eventually cooperate to foster offshore liquidity in renminbi and believe this is vital for the future development of the currency on a global stage. A minority (13%) feels that Europe will fail to garner sufficient liquidity in the long term and Hong Kong or another Asian hub will prove more attractive.
- **PBOC is improving onshore infrastructure, but administrative and operational hurdles will continue to challenge.** PBOC has indicated that onshore payments and settlement system improvements, such as the establishment of CIPS, are on the agenda, but clear timelines for these developments have not been provided, and progress may be slow. Some hurdles such as translation and time zone issues are also likely to remain for the long term in terms of system operation.
- **2020 may be a key date for progress toward reserve currency status.** Many firms active in renminbi and the Chinese market anticipate that 2020 could be a key date for achieving convertibility and internationalization.

APPENDIX 1: CHINESE REGULATORY STRUCTURE

The regulatory structure of China's financial markets is referred to domestically as "yihang sanhui," which translates as "one bank, three commissions." Under the direct leadership of two separate government bodies, the State Council and the National People's Congress, the Chinese regulatory structure consists of the PBOC, the China Banking Regulatory Commission (CBRC), the CSRC, and the China Insurance Regulatory Commission (CIRC). Figure 42 provides an overview of the various financial market participants and the regulators to which they report as well as a view of how the regulators are connected to each other.

Figure 42: Regulatory Structure of the Chinese Markets



Source: Regulators, Aite Group

Prior to 1992, the PBOC functioned as a central bank and a regulator of the banking, securities, and insurance markets. Major developments in the sophistication of financial markets in the 1990s led China to adopt a more sector-based model with the responsibility of securities regulation falling on the State Council Securities Commission and the CSRC. These two bodies merged, and the CSRC took on sole responsibility for securities regulation in April 1998. Furthermore, growth of the insurance industry led to the formation of the CIRC in November 1998, and the formal establishment of the CBRC took place in April 2003.

The National People's Congress passed the Law on Banking Regulations and Supervision in 2003, authorizing the CBRC to oversee all banks and nonbank financial institutions. The National

People's Congress promulgates all financial sector laws, and the State Council executes financial regulation and issues mandatory policy directives to all the financial regulatory and supervisory agencies. The three regulatory bodies in charge of banking, securities, and insurance are the CBRC, CSRC, and the CIRC, respectively, all of which report to the PBOC, which is in turn part of the State Council. The PBOC acts as a central bank with a role similar to that of the U.S. Federal Reserve and audits the operations and balance sheets of all financial institutions in China. Other governmental agencies also perform important roles, such as the Ministry of Finance, which manages central government finances, sets tax policy, and coordinates tax collection.

Like its peers in the securities and insurance markets, the CBRC is a ministry level unit under the direct leadership of the State Council. It regulates a variety of financial institutions including banks and exercises its duties through the setting of standards such as those related to asset/liability ratio requirements, capital adequacy requirements, and risk management. The oldest of the three industry-specific regulatory commissions is the CSRC, whose authority covers the regulation of shares, corporate bonds, treasury bonds, investment funds, and derivatives products. The main reference for regulatory issues in this market is the Securities Law of the People's Republic of China.

APPENDIX 2: INVESTMENT VEHICLES

The Chinese government has used cross-border investment programs as a key vehicle to promote international use of the renminbi.

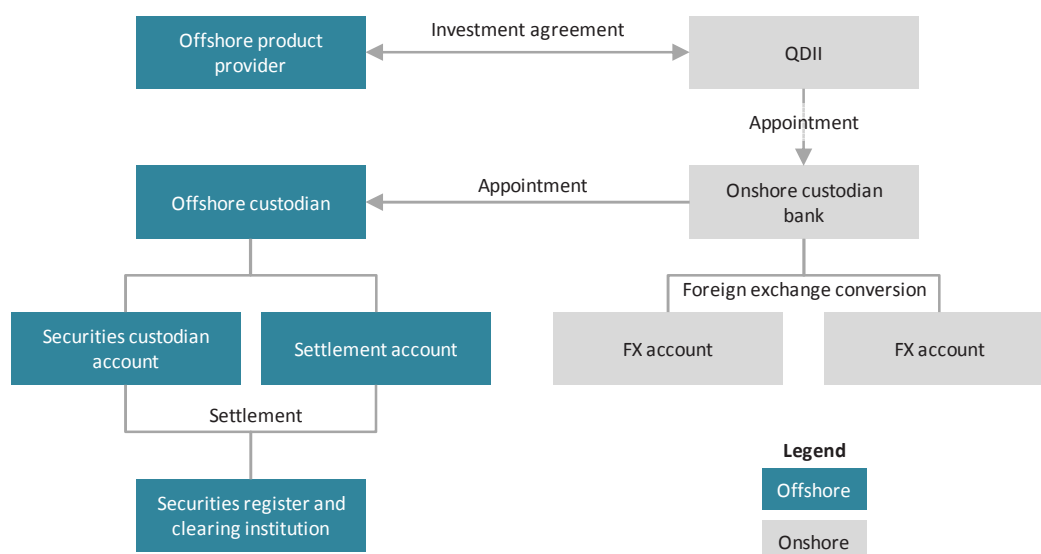
QDII

The QDII scheme was introduced to encourage domestic Chinese institutions to develop experience and expertise in making international investment before the full removal of China's capital restrictions. Domestic investors have access to foreign securities through certain CSRC-approved fund management institutions, insurance companies, securities companies, and other asset management institutions, but they must first obtain approval and a quota grant from SAFE. The scheme can be viewed as a transitional measure that gives domestic investors access to overseas investment opportunities while preventing substantial outflows that could damage the mainland stock markets.

To become a QDII, institutions must first apply to their respective regulator for approval—commercial banks and trust companies apply to the CBRC, insurance companies apply to the CIRC, while fund managers and securities companies apply to the CSRC. After receiving approval, institutions are then granted a quota by SAFE, which does not put a cap on the total quota issued under the QDII scheme, unlike the QFII and RQFII schemes.

Figure 43 shows the operation of QDII investment. An investment agreement is made between the QDII and an offshore product provider. The QDII must then appoint an onshore custodian, which supervises all of the institution's investment activities, and necessary foreign exchange transactions are made. The onshore custodian then appoints an offshore custodian, which handles the offshore custodian activities, which is then followed by settlement and clearing.

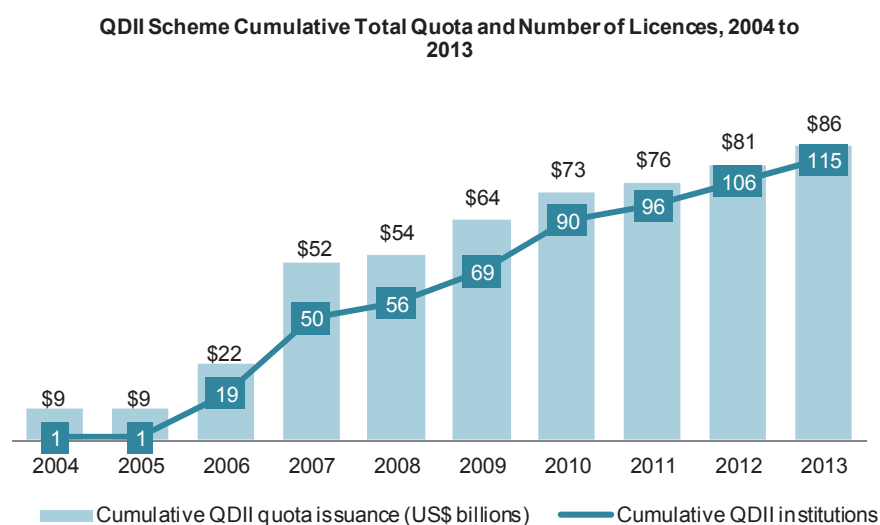
Figure 43: Operations of a QDII



Source: Aite Group

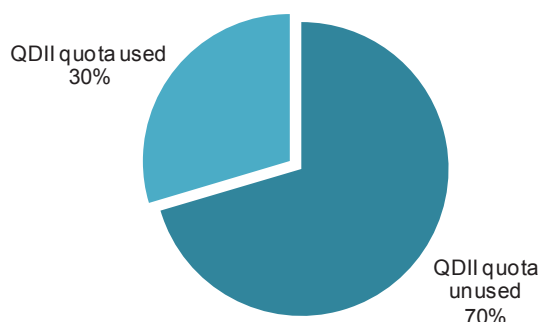
Figure 44 shows the issuance of QDII quotas has steadily increased in recent years, as total approvals rose from US\$22 billion at the end of 2006 to US\$86 billion by the end of 2013, and the number of license-holding institutions increased from 19 to 115 over the same period. These numbers are not necessarily representative of the demand for QDII funds by Chinese investors, however, as the CSRC and SAFE control the number of approvals depending on the market conditions and policy stance at any given moment in time.

Figure 44: QDII Quota Approval and Issuance of Licenses



Source: SAFE, Aite Group

A more appropriate indicator of the demand for QDII products is the total amount of funds raised relative to the total quota issuance. Figure 45 shows that, by the end of 2013, the QDIIs had only managed to raise funds to fill 30% of the total approved quota, underlining the lack of demand for QDII products among Chinese investors. This is echoed by various European and U.S.-based fund houses, which have been vocal in expressing the difficulties that they have found in attracting Chinese investors to QDII products, as many were launched before the financial crisis and have performed poorly since, especially relative to the high yields offered by the Chinese shadow banking sector.

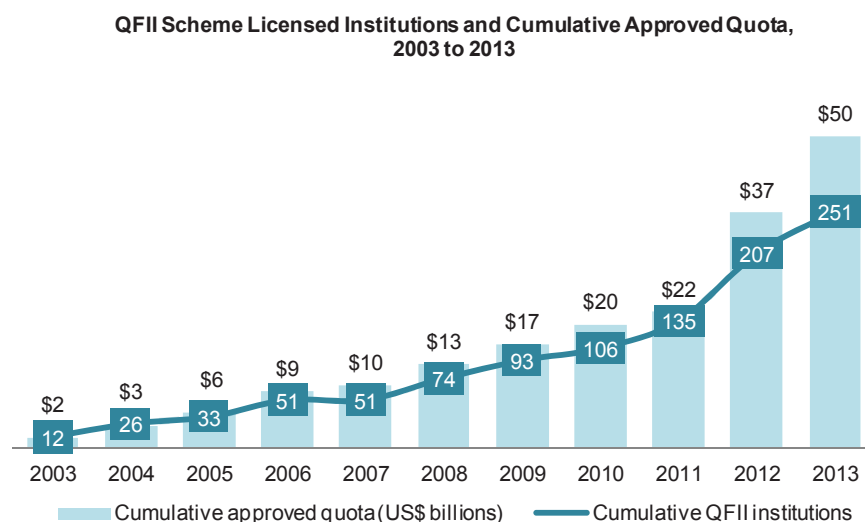
Figure 45: Use of QDII Quota**QDII Funds Raised Versus Unused QDII Quota, as of 2013 Year-End**

Source: SAFE, china-xbr.com, Aite Group

QFII

The QFII scheme was first piloted in 2002 as a means to ease foreign investment into the Chinese market. As with the QDII scheme, the Chinese government is keen to prevent speculative activity and ensure that investment is made with a long-term view based on market fundamentals, and so it has phased in the scheme by gradually increasing the overall quota limit. This has allowed investors to test the waters and develop a level of confidence in the market while mitigating the risk of widespread capital outflows.

Figure 46 shows that the QFII scheme experienced relatively stable growth from 2003 to 2011, as the total QFII investment quota increased from US\$2 billion in 2003 to US\$22 billion in 2011, and the number of registered QFIIs increased from 12 in 2003 to 135 in 2011. In 2012, the Chinese government adopted a more aggressive approach to the liberalization of the capital account, and in the process raised the QFII quota limit and marketed the scheme to overseas investors. The total quota granted to overseas investors increased by US\$15 billion in 2012 and US\$13 billion in 2013.

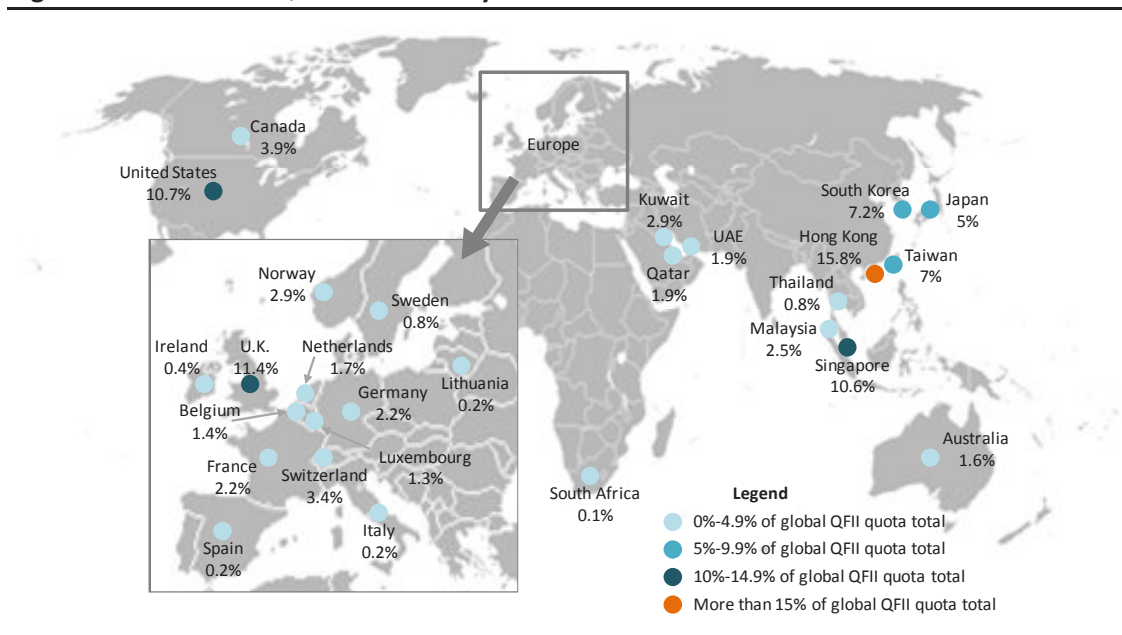
Figure 46: QFII Licensed Institutions and Cumulative Approved Quota

Source: SAFE, Aite Group

The list of QFIIs predominantly consists of large multinational institutions and corporations. There is a noticeable absence of small and midsize firms, not due to the eligibility requirements of the scheme, which are not particularly exclusive—asset managers require US\$500 million in AUM, while securities companies require US\$5 billion in AUM with US\$500 million of net assets—but because of the cost and uncertainty of registering to become a QFII. The complexity of the paperwork, particularly the multiple pages of tax documentation that need to be completed, is the first barrier firms looking to gain QFII approval face.

Market dynamics also play a role, with the renminbi exchange rate, Chinese equity market conditions, and current net capital inflows all impacting the number of approvals made by the regulators. Smaller firms simply cannot justify the time and monetary expenditure associated with this process, as a market shock at the time of application could render all their effort futile. In addition to this, foreign investors with a lack of knowledge and experience in Chinese markets often have to seek local investment expertise. Such advice comes at a cost, which is another disincentive for investors, particularly for smaller firms. Larger firms can more easily absorb the costs of the approval process and investment advice and can justify the costs and risk by gaining a foothold in the market before it has properly opened up.

Figure 47 shows the location of the various registered QFIIs as of January 2014 and the percentage of the total global QFII quota granted to firms in each country. The Asia-Pacific region was the most active region in terms of investing in China, with 50.5% of the total global QFII quota. Europe, on the other hand, had just 28.1% of the total quota, although about 40% of this amount was held by U.K.-based firms. There was more investment made by firms in Kuwait (US\$1.5 billion) than in Germany (US\$1.1 billion), France (US\$1.1 billion), or Luxembourg (US\$700 million), while the further US\$1 billion invested by both Qatar- and UAE-based firms highlights the appetite for QFII products in the Middle-East.

Figure 47: Location of QFIIs as of January 2014

Source: SAFE, Aite Group

The growth of the QFII scheme in 2012 and 2013 is evidence that there is significant and increasing foreign interest in investing in mainland Chinese markets. It also means that there are pools of offshore liquidity developing, and as Figure 47 indicates, the liquidity pools are developing in several different regions, even Africa—despite the concentration in Asia.

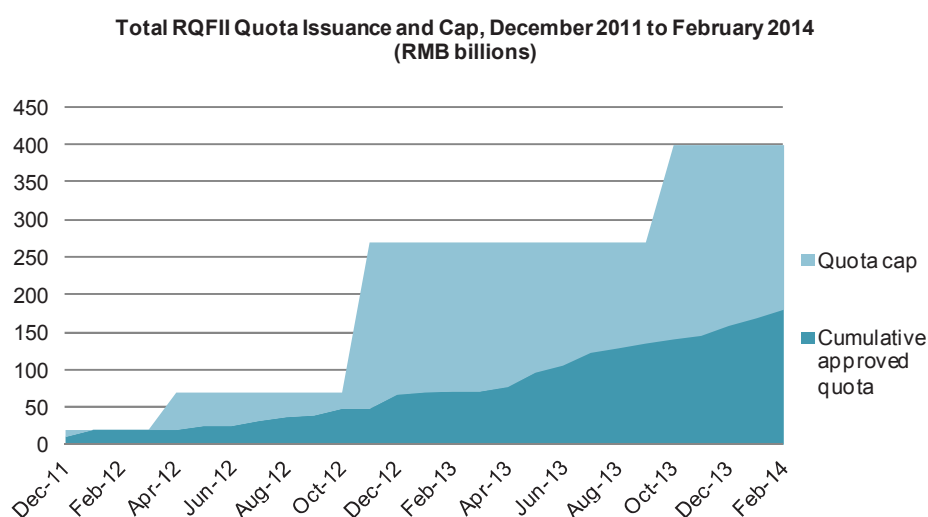
RQFII

Launched in December 2011, the RQFII scheme was introduced to encourage investment of offshore renminbi in the mainland equity and bond markets. The scheme was brought in with the intention of not only promoting the renminbi as an international investment currency, but also as a means of stabilizing the Chinese equity and bond markets. The majority of activity in China comes from retail investors, who tend to take a short-term approach to investing, which has caused volatility in the market. By allowing foreign institutions to invest, the RQFII program sought to bring in investors with a longer-term view, which would in turn bring more stability to the markets.

The RQFII scheme has seen fairly substantial growth since its introduction in December 2011 (Figure 48). The quota cap was initially set at RMB 20 billion and was exclusively available to the Hong Kong subsidiaries of Chinese asset management firms with investment in equities limited to 20% of total investment. Demand was so high that the quota limit had been reached by January 2, 2012, four days after the first allocation was made. In April 2012, the cap was increased to RMB 70 billion, with the launch of RQFII A-share ETFs, and continued demand prompted SAFE and the CSRC to further increase the quota maximum to RMB 270 billion by October 2012.

The RQFII rules were relaxed in March 2013, when Hong Kong subsidiaries of Chinese commercial banks, Chinese insurance companies, and financial institutions registered in Hong Kong became eligible to apply. The asset allocation rules were also removed, and the scope of permitted investment was expanded to include stock index futures and fixed income products traded on the interbank bond market. The program was extended in October 2013 to include Taipei, London, and Singapore, with quotas issued of RMB 100 billion, RMB 80 billion, and RMB 50 billion to each city respectively. London-based Ashmore Investment Management then became the first non-Hong Kong domiciled institution to receive an RQFII quota, as it was approved RMB 3 billion to invest in February 2014. In March 2014, the program was extended further still, as French financial institutions were granted a quota of RMB 80 billion.

Figure 48: RQFII Quota Issuance and Cap



Source: SAFE, Aite Group

The RQFII program has been, and will continue to be, a key milestone in terms of the renminbi's progress toward becoming a global investment currency. Not only has the growth of the quota issuance and cap highlighted the popularity of the scheme, but the fact that international financial centers have actively sought to gain these quotas (London, for example, has allowed Chinese banks to set up wholesale operations in the city in return for its RQFII allowance) is indicative of how highly foreign institutions regard the currency in terms of its current and future investment potential.

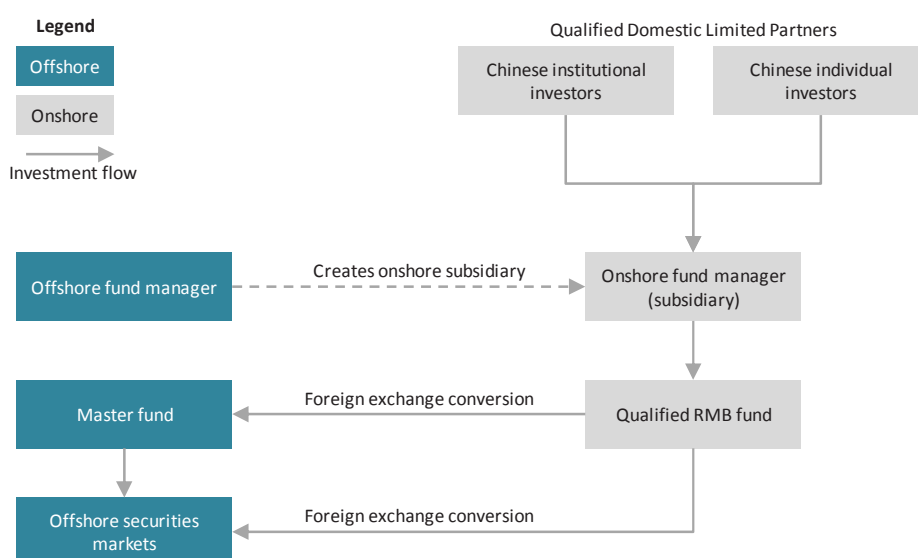
QDLP

The implementation of the QDLP program in September 2013 created a new channel for Chinese money to flow overseas, as six global hedge funds (Man Group, Winton Capital Management, Oak Tree, Citadel, Och-Ziff Capital Management Group, and Canyon Partners), were granted approval to raise up to US\$50 million in renminbi for investment in offshore markets. As with the other cross-border programs, the QDLP has seen a cautious introduction, with a total quota of

just US\$300 million initially granted, but this is expected to be expanded fairly rapidly. While the program is lacking in scale, it is a further sign of China's commitment to the opening up of the capital account and the integration of the onshore and offshore renminbi markets.

The typical operational structure of a QDLP fund is shown in Figure 49. The offshore hedge funds must create a subsidiary in China (Shanghai specifically), before attracting capital from Chinese institutional investors and high-net-worth individuals (known as QDLPs). The investment is then put in an onshore, qualified renminbi fund, from which the necessary foreign exchange conversion is made before it is invested in the offshore securities markets, either directly or through the offshore hedge fund's master fund.

Figure 49: QDLP Operational Structure



Source: Aite Group

QDII2, QFII2, AND RQFII2

The four aforementioned cross-border schemes are primarily directed at institutional investors. In order to promote cross-border investment by individual investors, the PBOC is drawing up plans to introduce the QDII2, QFII2, and RQFII2 schemes. These programs will likely be implemented in a similar manner to their institutional counterparts, with small quota limits initially to allow the Chinese regulators to keep a fair degree of control over the flows of capital. They will also most likely follow the same geographic route, with domestic investors initially being limited to buying and selling securities listed in Hong Kong under QDII2, while QFII2 and RQFII2 are likely to be restricted at first to individuals based in Hong Kong before expanding to other global regions.

ABOUT CLEARSTREAM

Clearstream is a global leader in post-trade securities services as an international central securities depository (ICSD), and with more than EUR 12.1 trillion in assets under custody, is one of the world's largest settlement and custody firms for domestic and international securities. As an ICSD, Clearstream provides customers in more than 120 countries with access to 53 domestic markets, the eurobond market, and the carbon emission rights market. Its global reach is more than just geographic, as its services cover all major asset classes and enable settlement in real-time across borders, time zones, and currencies. As a CSD based in Frankfurt, Clearstream also provides the post-trade infrastructure for the German securities industry, offering access to a large number of markets in Europe.

As a core market infrastructure provider, Clearstream is at the forefront in facilitating the development of the Chinese currency, offering issuance, custody, and settlement services of financial instruments denominated in renminbi. Its product portfolio also includes award-winning collateral management and securities lending services through the Global Liquidity Hub, as well as innovative investment funds services via its Vestima platform.

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