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Welcome to the Real China Bond Market

Since the last time we wrote about the opening of China's bond markets in 2015, reforms have gone further.[1] The Renminbi Qualified Foreign Institutional Investors (RQFII) program was superseded in 2016 by the People's Bank of China Interbank Direct Investment Program (CIBM), replacing the quota constraint with a 'notification-only' regime. Last year, some of the operational complexities of CIBM were overcome with the launch of the "Bond Connect" joint venture between the China Foreign Exchange Trade System and the Hong Kong Monetary Authority, allowing for international and standardized settlement and custody arrangements. The volume of China onshore bonds traded by overseas investors has grown more than threefold in those three years.

In this paper, we show how the onshore market is much deeper, and more exposed to the fortunes of corporate China, than the U.S. dollar and offshore renminbi bond markets—and therefore more exposed to the domestic growth theme and more diversifying for a portfolio. Corporate-sector leverage, while still high, is now starting to turn in China. Low default rates, high recovery rates, and the relatively strong position of the official, banking and household sectors also reflect degrees of freedom to deal with these challenges. China's onshore, local-currency bond market is fast becoming a vital new component not only in the emerging market investor's toolkit, but in the global bond market at large.

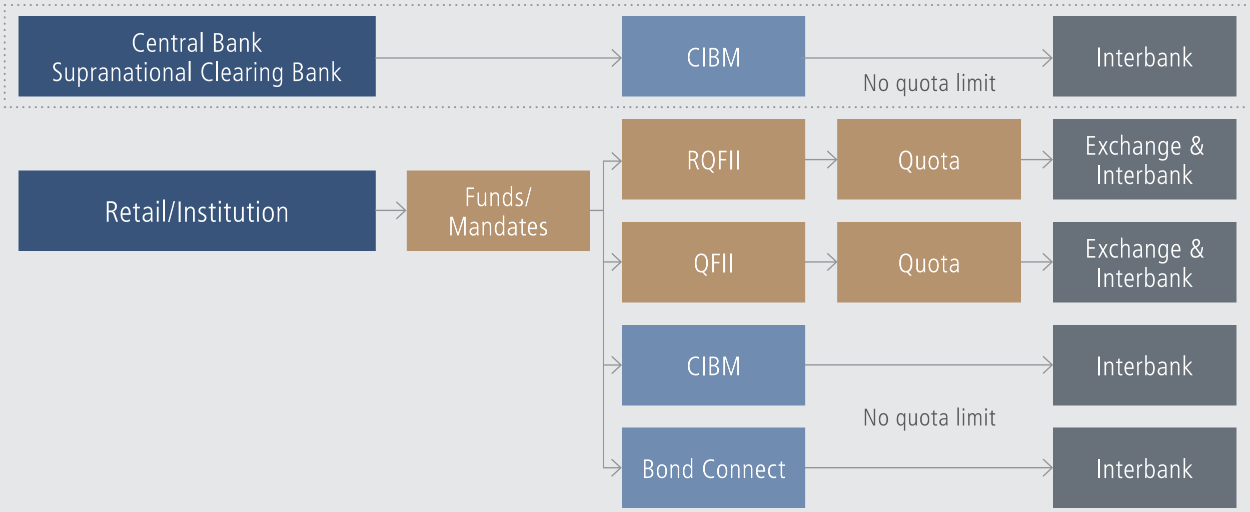
[1]Neuberger Berman Emerging Markets Debt Team, "China's Bond and Currency Markets Open Up", June 2015.

Executive Summary

- China's bond market can be split into three categories: the offshore USD and CNH ("Dim Sum") markets; and the onshore CNY market. In 2011, China kicked off liberalization of the onshore market by including them in the Renminbi Qualified Foreign Institutional Investor program (RQFII).
- Despite steadily increasing the RQFII quotas, by 2015 non-Chinese investors still owned less than 2% of this massive onshore bond market. This could be set to change after the launch of "Bond Connect" in 2017, a channel enabling international investors to trade, without quotas, on global trading platforms, with their assets held at global custodians, and with offshore cash accounts. We expect derivatives and two-way trading to follow in time.
- The People's Bank of China (PBoC) estimates that 15% of the onshore bond markets could become foreign-owned: the average for major developed and emerging bond markets sits at 39%; even Japan's bond market, which is domestically oriented and offers very low yields, is 8% foreign-owned.
- The investment case is well rehearsed. China is now the second-largest economy in the world and sovereign fundamentals are strong: it has a high savings rate and sovereign debt at less than 60% of GDP, it remains a net external creditor to the world, runs a persistent current account surplus, and is increasingly powered by domestic consumption rather than investments and exports.
- We argue that the onshore, CNY bond market is the better way to take exposure to this long-term China opportunity in fixed income. As well as simply being 10 times larger than the offshore markets, it includes more corporate issuers from a wider diversity of sectors, and therefore offers more exposure to the dynamics of domestic China with much lower correlations to international markets. Moreover, adjusted for credit quality, yields are somewhat higher onshore than offshore.
- Private sector leverage has been rising steeply in China, but is now levelling off. The banking and shadow-banking sectors are being de-risked and corporate sector debt-servicing capacity has been improving as productivity and profitability improve. While we expect a more laissez-faire attitude from regulators to defaults among non-systemic onshore borrowers, over the long term this should improve the overall quality of the market and instill greater discipline.

THERE ARE NOW FOUR WAYS INTO THE CHINA ONSHORE BOND MARKET

Onshore Market: Foreign Investor Access



Source: Neuberger Berman. For illustrative purposes only.

In 2015, we published a paper detailing how China's bond market—now the third-largest in the world behind the U.S.'s and Japan's, at more than $10 trillion—was opening up to international investors. Against a background of economic reform, a strong current account, subdued inflation, high nominal GDP growth, an incipient deleveraging cycle, and improving productivity rates, we concluded that the onshore market would soon be recognized as "a new and exciting opportunity for active management in emerging markets debt".[2]

China's bond market can be split into three categories: the approximately $316bn market in dollar-denominated bonds, which are freely traded and cleared; renminbi-denominated bonds that are traded and cleared offshore, in Hong Kong and eight other centers around the world (the "CNH" or "Dim Sum" market), worth RMB522bn, or $82bn; and renminbi-denominated bonds that are traded and cleared onshore (the "CNY" market), worth more than RMB75 trillion, or almost $12 trillion.

In 2002, China launched its Qualified Foreign Institutional Investor program (QFII), and in 2010 it encouraged CNY bond-buying under this program by allowing access on a quota basis. The Renminbi Qualified Foreign Institutional Investor program (RQFII) followed in 2011, allowing access to CNY bonds (and onshore equities) using renminbi funds raised outside mainland China, again subject to quotas, albeit with a more liberal regime regarding taxes and allowed venues.[3]

China's Renminbi Bond Markets: Onshore and Offshore

Onshore ('CNY')

- China allowed international access to onshore markets by launching the Qualified Foreign Institutional Investor program (QFII) in 2002
- QFII quotas were mostly used to buy equities until 2010, when the PBoC provided access to domestic interbank bonds
- The Renminbi Qualified Foreign Institutional Investor program (RQFII) launched in 2011, providing access to the CNY markets using RMB funds obtained outside mainland China
- Since 2011, quotas have increased and more of the fixed income market has been opened to international investors
- Since 2016, the Interbank Direct Investment Program (CIBM) and Bond Connect initiative have removed the quota restriction from onshore bond investing

CNY bond market worth approximately RMB75.2 trillion ($11.9trn) (as of end February 2018; Source: Wind).

Offshore ('CNH')

- China selected Hong Kong as first offshore clearing center for RMB in 2010
- Enabled Chinese companies to trade in RMB with non-Chinese trade partners
- RMB business accounts opened in Hong Kong, and growing deposits led to demand for CNH bonds ('Dim Sum' bonds), equities and derivatives
- Since 2010, London, Singapore, Taiwan, Seoul, Sydney, Frankfurt, Paris and Luxembourg have joined Hong Kong as CNH clearing centers

CNH bond market worth approximately RMB522bn ($82bn) (as of end February 2018; Source: Bloomberg).

[2]Neuberger Berman Emerging Markets Debt Team, "China's Bond and Currency Markets Open Up", June 2015.
[3]For Neuberger Berman's thoughts on onshore China equities, see Bin Yu, "China: The Anatomy of an Equity Market", January 2018, at https://www.nb.com/pages/public/en-gb/insights/china-the-anatomy-of-an-equity-market.aspx

This liberalization was vital to forge stronger links between monetary policy and market expectations for interest rates, and between interbank rates and corporate borrowing costs. It also aims to improve competition and elevate industry standards on compliance and credit differentiation, which should make capital allocation more efficient in an economy with such a high savings rate. The government has been supportive, steadily increasing the QFII and RQFII quotas. Nonetheless, by 2015, non-Chinese investors still owned less than 2% of this massive onshore bond market.

This could be set to change with the latest developments in market liberalization.

"Bond Connect" Could Revolutionize Access to the Onshore Market

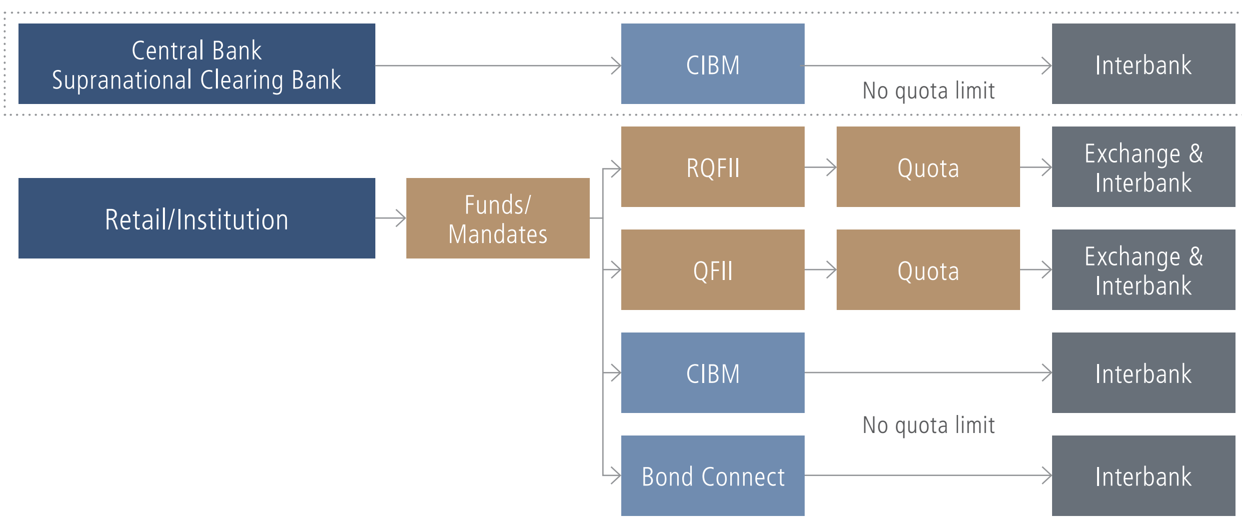
In 2016, the People's Bank of China (PBoC) introduced its Interbank Direct Investment Program (CIBM), which took the important step of removing quotas in favor of requiring investors to state their estimate of how much they would invest in their notification (with the additional requirement to re-apply if less than 50% of that amount has been invested after nine months). The notification process was also simplified. As the name suggests, this program excluded the smaller, exchange-traded bond market accessible via QFII and RQFII; but for the first time, it opened up the interbank derivatives market to international investors, for hedging purposes.[4]

In 2017, we got "Bond Connect", a joint venture between the China Foreign Exchange Trade System (CFETS, the PBoC's trading platform) and the Hong Kong Monetary Authority (HKMA).[5] Modelled on the "Stock Connect" channel that links the offshore and onshore China equity markets, this channel enables international investors to trade on global trading platforms linked with CFETS, with their assets held at global custodians who are members of Hong Kong's Central Moneymarkets Unit (CMU), via a nominee structure with an onshore clearinghouse.

This was a big step forward, obviating the need for an onshore custodian and cash account, enabling bond investment and currency conversion to be completed together, and removing the additional burden of China onshore regulation—all of which should make China onshore bond funds easier for international institutions to operate and, just as important, to market worldwide. There is no quota and no requirement to estimate the amount of investment to be made. While derivatives are not yet accessible through Bond Connect, we think that is very likely to be the next stage of liberalization. Ultimately, the objective is to make Bond Connect two-way, with domestic Chinese investors able to trade freely in international securities at the same time as international investors trade freely in China's onshore securities—though this is likely to take longer to realize.

FIGURE 1. THERE ARE NOW FOUR WAYS INTO THE CHINA ONSHORE BOND MARKET

Onshore Market: Foreign Investor Access



Source: Neuberger Berman. For illustrative purposes only.

[4]See Prashant Singh and Puay Yeong Goh, "China: Opening Doors for Global Bond Investors", August 2016 at https://www.nb.com/pages/public/en-gb/insights/china-opening-doors-for-global-bond-investors.aspx

[5]CFETS provides trading systems to interbank FX market, money market, bond market and derivatives market and organizes trading. It fulfills market regulatory responsibility, ensuring smooth, sound and efficient market operation.

Just as the inclusion of China "A Shares" in the MSCI equity indices is expected to create new international flows into China's onshore stock markets, so this liberalization is expected to bring China onshore bonds into major fixed income indices, generating similar flows. Goldman Sachs has estimated that inclusion in the JPMorgan GBI-EM Global Diversified Index will generate a $20bn flow, while inclusion in the Citi World Government Bond Index and the Barclays Global Aggregate Index could add another $200bn or more.

According to CFETS, international investors now own around $170bn worth of onshore China bonds. Those holdings leapt from less than $120bn worth immediately before the introduction of Bond Connect in June 2017. The trading volume by international investors has increased by around three-and-a-half times since we wrote our first paper in 2015. The renminbi is now the sixth most traded currency in the world, its share of global FX turnover having doubled since 2013.

Foreign investors still hold only around 2% of the onshore bond market, but the PBoC estimates that there is realistic potential for that to grow to around 15%. The average for major developed and emerging bond markets sits at 39%. Even Japan's bond market, which is domestically oriented and offers very low yields, is 8% foreign-owned. The prospect of increased foreign ownership of onshore bonds received an earlier-than-expected boost at the end of March 2018, when Bloomberg announced that it plans to include government bonds and policy-bank notes in the Bloomberg Barclays Global Aggregate Index from April 2019. The move is subject to additional market enhancements that include delivery versus payment settlement, the ability to allocate block trades across portfolios, and clarification on tax collection, but once complete China is expected to constitute around 5.5% of the index. The announcement came ahead of news from JPMorgan on inclusion of China onshore bonds in its GBI-EM Index, and is expected to speed up the inclusion process and incentivize investors to pre-position.

Neuberger Berman is, of course, in the thick of this revolution. We now have five dedicated fixed income professionals on the ground in Shanghai. We received our QFII license in 2012, our RQFII license in 2015, and in 2017 our so-called WFOE license to establish a wholly foreign-owned asset management enterprise onshore in Shanghai, as well as our private fund license for the China onshore bond market. Our products now include an onshore fund and a China onshore bond UCITS that launched back in September 2015, and we offer both benchmark-aware and total-return strategies in China onshore bonds. This kind of offering has only become possible due to the liberalization of recent years.

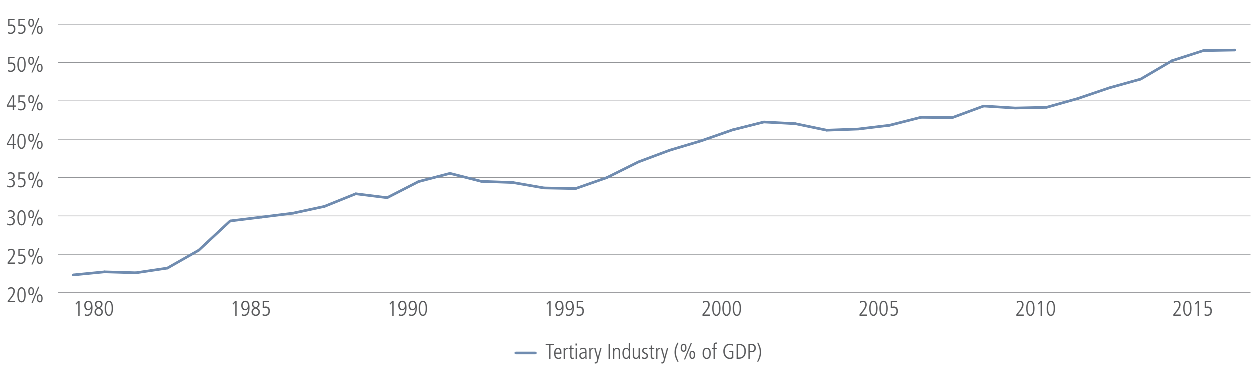
The Case for China

The case for portfolio exposure to China is well rehearsed. It is now the second-largest economy in the world and while its growth rate is slowing, its contribution to global aggregate demand continues to expand. Sovereign fundamentals are strong: it has a high savings rate and sovereign debt at less than 60% of GDP; it remains a net external creditor to the world, and runs a persistent current account surplus.

At last year's National Congress of the Communist Party of China, President Xi Jinping pledged to open the financial-liberalization door wider and improve the "quality and efficiency" of Chinese growth. His comments echoed those of then PBoC Governor Zhou Xiaochuan, who anticipated "bigger steps to increase the market access for financial institutions."[6]

FIGURE 2. CHINA IS MOVING UP THE VALUE CHAIN

Services now account for more than 50% of GDP

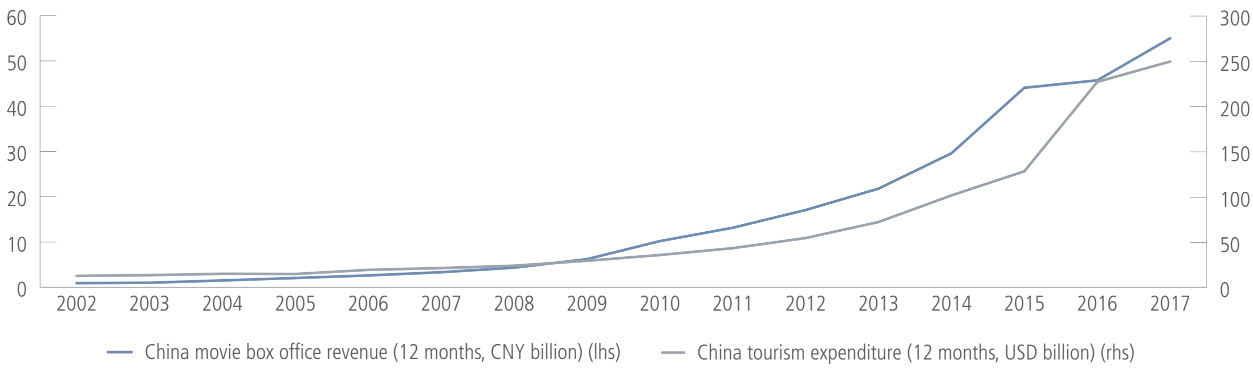


Source: CEIC.

[6]See Joseph V. Amato, "CIO Weekly Perspectives: China Charts Its Future", October 2017, at https://www.nb.com/_layouts/www/transfer.aspx?URL=/insights/cio-weekly-perspectives-oct-22-2017.aspx

President Xi's program involves a crackdown on corruption and concerted efforts to move China from being an economy driven by fixed-asset investment to one driven by consumption, technology and market forces. Services now account for more than half of the country's output, and that has led to rising productivity and rapid urbanization. Movie box office revenue and overseas tourism expenditure point to the sizable shift in middle-class consumption in China, which is expected to overtake that of the U.S. by the end of 2020.

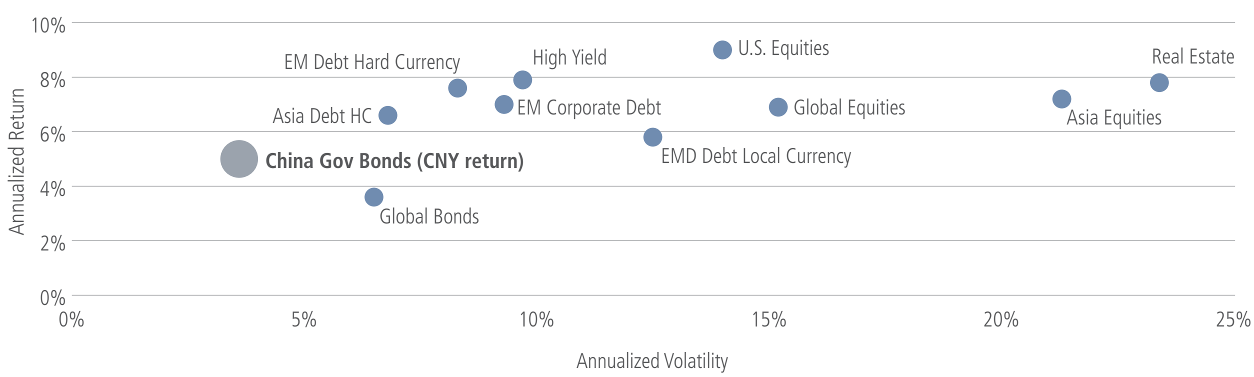
FIGURE 3. CHINA'S MIDDLE CLASS SHOWS ITS SPENDING POWER



Source: China State Administration of Press, Publication, Radio, Film; CEIC; Neuberger Berman.

Despite this strong growth and productivity profile, and despite the fact that China's 60% sovereign debt-to-GDP ratio compares well with the U.S.'s ratio of more than 100%, China's 10-year debt still tends to trade with around 100 basis points of extra yield than the U.S. 10-year Treasury. This has resulted in a very attractive risk-return profile over the past 12 years. As shown in figure 4, volatility in domestic government bonds is extremely low, at around 3.5% on average, with duration currently at 4.6 years, having been in a range of 4.4–5.1 over the past three years. This makes it quite comparable to the low volatility of U.S. Treasuries.

FIGURE 4. CHINA BONDS HAVE EXHIBITED AN ATTRACTIVE RISK-RETURN PROFILE



Source: Bloomberg, Neuberger Berman. Data as of October 2017. Indices used: JPM JADE Broad China Onshore (China Govt Bonds CNY); Citi World Government Bond Index (Global Bonds); JPM Asia Credit Index (Asia Debt HC); JPM Corporate EMBI Composite Index (EM Corporate Debt); JPM EMBI Global Diversified Composite Index (EM Debt Hard Currency); Bloomberg Barclays U.S. High Yield 2% Issuer Cap Index (High Yield); S&P 500 Index (U.S. Equities); JPM GBI-EM Global Diversified Index (EM Debt Local Currency); MSCI World Free Net Total Return Index (Global Equities); MSCI Asia ex-Japan Index (Asia Equities); FTSE NAREIT All Equity REITS Total Return Index (Real Estate).

Onshore Corporate Bonds Offer Exposure to the Real China

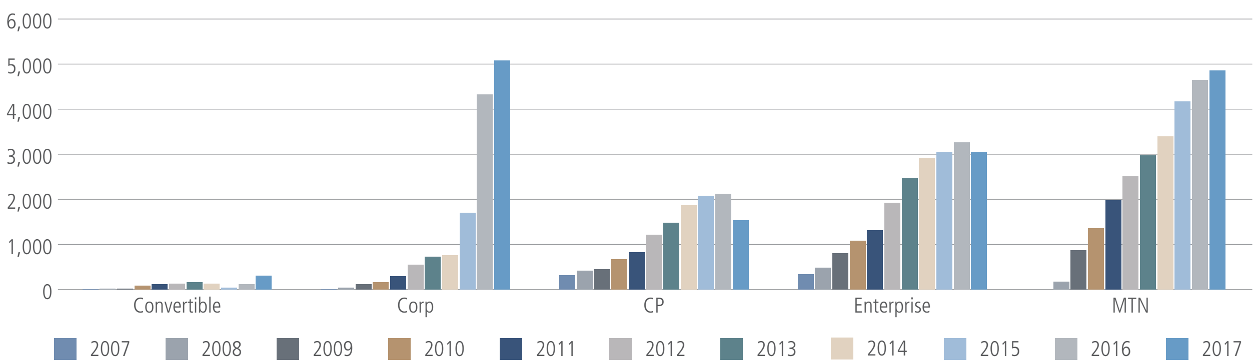
We argue that the onshore, CNY bond market is the better way to take exposure to this long-term China opportunity in fixed income.

Compared with offshore U.S. dollar-denominated bonds, investors get exposure to potential renminbi appreciation, of course. After a correction since 2015, USDCNY is now trading around fair value based on China–U.S. interest rate differentials, and it remains on a long-term upward trend. We explored these dynamics in more detail in our 2015 paper.

Perhaps more importantly, the onshore market simply has a different profile than the offshore markets, and is far less correlated to the international markets than its CNH and USD peers.

Four types of security are issued onshore: commercial paper (CP), medium term notes (MTNs), corporate bonds and convertibles, and enterprise bonds. Each issue has to be approved by the government entity that regulates the market. For CP and MTNs, that is the National Association of Financial Market Institutional Investors (NAFMII); corporate bonds are regulated by the China Securities Regulatory Commission (CSRC); and enterprise bonds come under China's main economic planning body, the National Development and Reform Commission (NDRC). These regulators report up to the People's Bank of China and the State Council, China's executive.

FIGURE 5. GROWTH OF THE ONSHORE CREDIT MARKET SINCE 2007



Source: JPMorgan.

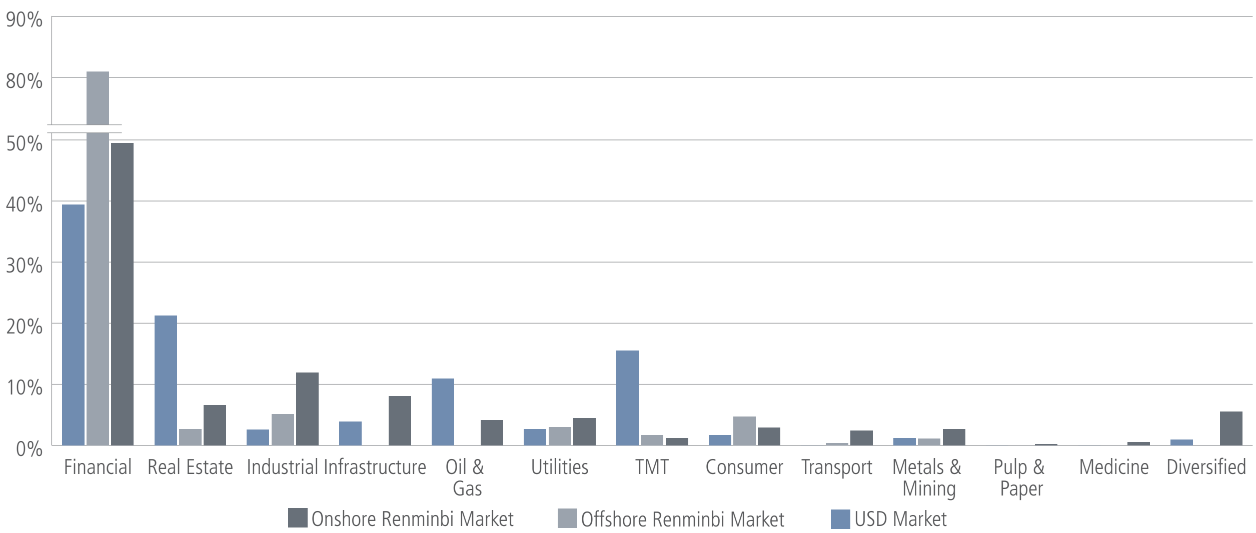
Leaving aside government bonds, figure 6 shows how substantial the differences are between offshore and onshore corporate issuers. Financials account for more than four-fifths of the offshore renminbi market, defined as the full universe excluding bonds with maturity of less than one year, which are mostly bank certificates of deposit. Onshore, this sector accounts for only half of the market. Add financials, real estate and technology companies together, and you have accounted for almost 80% of the offshore USD market, whereas they account for less than 60% of the onshore market.

Much of the balance in the onshore market is made up from the industrial, infrastructure and diversified sectors, indicating its greater exposure to the domestic economy. Utilities, consumer and transport companies are also well represented onshore. Moreover, we estimate that slightly less than a third of the corporate-bond and state-owned enterprise issuers represented there also issue into the offshore market—leaving two-thirds inaccessible except through the onshore CNY market.

FIGURE 6. BIGGER, MORE DIVERSE, WITH SIMILAR RATING-ADJUSTED YIELD
Issue type, issuer type and domestic ratings in the onshore market

	Commercial Paper				Medium-Term Notes				Corporate Bonds				Enterprise Bonds			
Type of Enterprise	**AAA**	**AA+**	**AA**	**AA-**	**AAA**	**AA+**	**AA**	**AA-**	**AAA**	**AA+**	**AA**	**AA-**	**AAA**	**AA+**	**AA**	**AA-**
State-owned Enterprise	25%	3%			31%	1%			27%	3%	1%		16%			
Local Gov.-owned Enterprise	33%	16%	7%		31%	15%	9%		19%	10%	2%		25%	23%	34%	
Private Enterprise	1%	7%	4%		2%	4%	2%		4%	6%	6%				1%	
Public Enterprise	1%				1%				9%	3%						
Foreign-owned Enterprise									2%	1%	1%					
Joint Venture Enterprise									2%	1%	1%					

Corporate sector exposures of the USD, CNH and CNY bond markets



Size, average credit rating and average yield of the USD, CNH and CNY markets

	Number of issuers/issues	Size	Average Credit Rating	Average Yield to Maturity
USD Market	124/323	$230bn	BBB+	5.7%
Offshore Renminbi Market	119/512	$383bn	BBB	4.6%
Onshore Renminbi Market	5,092/32,255	$5,230bn	AA+	5.4%

Source: JPMorgan, CCDC, Neuberger Berman. The USD market is represented by the JPMorgan CEMBI Bond Index—China; the offshore market is represented by the full universe excluding bonds with maturity of less than one year; the onshore market is represented by the whole China credit bond universe. Average credit ratings for the USD and offshore markets are based on Standard & Poor's ratings; average credit ratings for the onshore market are based on domestic rating agencies' ratings. Data as of February 28, 2018.
The average credit rating of the onshore market is based on domestic credit rating agencies' assessments: see "A Note on Onshore Credit Ratings".

As well as having proportionately more representation of corporate China, the onshore corporate bonds market is simply 10 times larger than the offshore dollar- and renminbi-denominated markets combined. It currently has more than 5,000 issuers, against 119 in the CNH market and 124 in the USD market. We expect this gap to widen further, as the offshore CNH market has been shrinking since 2015, when investors began showing greater interest in onshore bonds.

The large size of the onshore market means that, right now, each issue receives much less analyst coverage that those in the offshore and U.S. dollar markets. Along with these issuers' need for capital, this lower level of coverage helps to explain why onshore yields tend to be quite high relative to their domestic credit ratings (although, if one adjusts for methodological differences between offshore and onshore rating agencies, the credit quality is on average somewhat lower: "A Note on Onshore Credit Ratings"). The size, depth and liquidity of this market also enables institutional asset managers such as ourselves to design a range of strategies suited to different kinds of investor, from conservative, benchmark-aware to unconstrained, total-return approaches.

The unique and idiosyncratic profile of the onshore China bond markets can be seen in its correlations with other major asset classes, including other credit asset classes and China's offshore bond market—a point recently explored by our colleagues in Multi-Sector Fixed Income, writing on the heightened need to find international diversifiers for bond portfolios.[7]

FIGURE 7. A GENUINELY IDIOSYNCRATIC ASSET CLASS

Asset class correlation, 2007–2017

	U.S. Equity	World Equity	EMD HC	U.S. High Yield	U.S. Treasury	EMD LC	U.S. IG	Global Bond	China Bond
China Bond (JPM JADE Broad China Onshore)	0.02	0.02	0.23	0.03	0.25	0.21	0.17	0.27	1
Global Bond (Bloomberg Barclays Global Bond)	-0.06	0.02	0.68	0.3	0.96	0.51	0.73	1	
U.S. IG (Bloomberg Barclays US Aggregate)	0.11	0.25	0.72	0.43	0.64	0.72	1		
EMD LC (JPM GBI-EM Global Diversified)	0.4	0.54	0.83	0.66	0.37	1			
U.S. Treasury (Bloomberg Barclays US Government)	-0.24	-0.18	0.52	0.08	1				
U.S. High Yield (BofAML US HY Master II Unconstrained)	0.66	0.75	0.69	1					
EMD HC (JPM EMBI-GD)	0.39	0.51	1						
World Equity (MSCI World)	0.95	1							
U.S. Equity (S&P 500)	1								

Source: Neuberger Berman, Bloomberg. Data as of October 31, 2017.

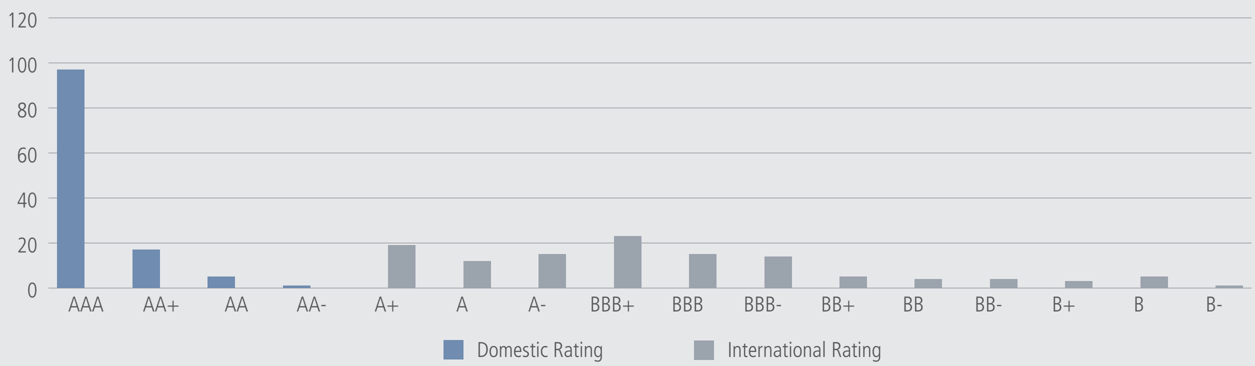
[7] See Ashok K. Bhatia, "A Changing Landscape for Multi-Sector Fixed Income Investing", January 2018 at https://www.nb.com/_layouts/www/transfer.aspx?URL=/insights/a-changing-landscape-for-multi-sector-fixed-income-investing.aspx

A Note on Onshore Credit Ratings

While offshore China bonds are rated by the well-known international rating agencies, onshore bonds are assessed by domestic agencies. There are 10 recognized agencies in all, and the three that dominate that market—China Chengxin International Credit Rating, China Lianhe Credit Rating and Dagong International Credit Rating—are either part-owned by or have cooperation agreements with the international 'big three' agencies.

A total of 120 issuers have issued bonds in both onshore and offshore markets, enabling us to compare their credit ratings in the chart below. For offshore bonds, we use the Moody's rating where there is one; otherwise we use whichever is the higher of S&P's or Fitch's.

COMPARING THE DOMESTIC AND INTERNATIONAL CREDIT RATINGS OF THE 120 ENTITIES THAT HAVE ISSUED BOTH ONSHORE AND OFFSHORE



Source: Bloomberg for international ratings; Wind for domestic ratings.

The onshore ratings are clearly higher than the offshore ratings—indeed, because the sovereign is rated A+ internationally, that is the highest possible rating for an offshore bond. Onshore, the sovereign ceiling is AAA, against which base other credits are compared.

The People's Bank of China's Working Paper No. 2017/5 sets out guidelines for comparing domestic and international ratings. It notes that domestic agencies rate bonds on average six or seven notches higher than international agencies when bonds are issued in both markets. In general, once it adjusts domestic ratings to align them with international ratings, the PBoC has found that larger asset size and higher leverage tend to result in issuers receiving higher domestic ratings; whereas higher profitability or state ownership is more likely to result in issuers receiving lower domestic ratings. This is because asset size is weighted more heavily as a positive factor by domestic agencies; leverage is weighted more heavily as a negative factor by international agencies; and profitability and state ownership are weighted more positively by international agencies.

On average, a simple ratings adjustment would see a domestic rating adjusted down by six or seven notches to align with an equivalent international rating. Adjusting for asset size, leverage, profitability and ownership structure would tend to require another one or two notches of downward adjustment.

Since May 2017, foreign rating agencies have been able to establish wholly owned Chinese subsidiaries. Before, they could only enter into joint ventures with stakes of 49% or less in local agencies. Over time, this may facilitate some convergence with international standards: currently, rating agencies' activities in China are financed only by bond issuers, whereas internationally, investors as well as issuers pay for ratings, which is the better incentive structure for truly independent ratings.

Private Sector Debt is High, But Levelling Off

We believe that the onshore market offers more genuine exposure to the long-term China story because it is a broader representation of corporate China, which is likely to be the main growth generator as the authorities open up the economy and markets, and shift from fixed-asset investment to consumption and services.

That does beg a question, however. Is now an opportune time to seek such exposure? While the strong fiscal position of the sovereign balance sheet is widely acknowledged, international investors express much more concern about the financial strength of China's local-government, financial, real estate and other corporate sectors. Is that concern justified?

Whereas the corporate debt burden is relatively modest in most other emerging economies, it has surged in China—the natural corollary of the size of its bond market, among other things. Between 2008 and the end of 2016, total credit growth doubled to more than 200% of GDP, and non-financial corporate credit rose from 100% of GDP to north of 160%. Last year, both Moody's and Standard & Poor's lowered their ratings of China's sovereign credit risk by one notch, to A1 and A+, respectively. Fitch maintains its long-held A+ rating with a stable outlook.[8]

FIGURE 8. CREDIT HAS SURGED IN CHINA

Total social financing (% of GDP)

Source: CEIC.

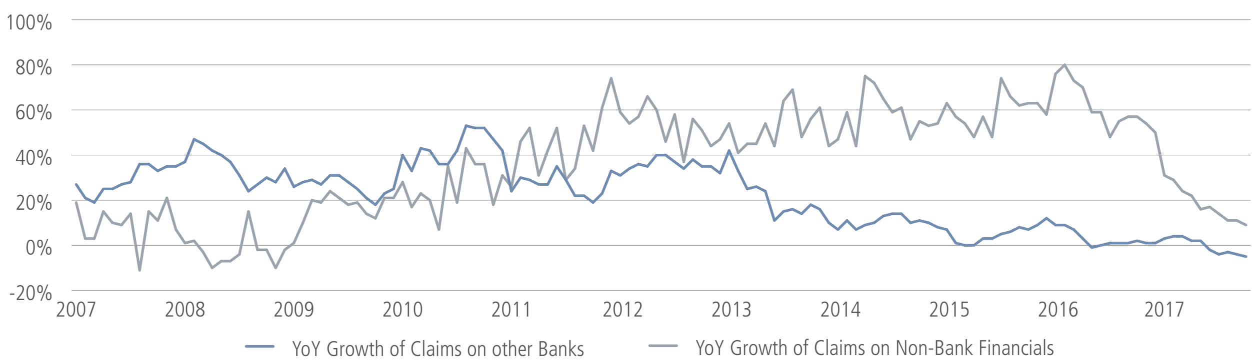
While we think the potential for these debt levels to manifest as a systemic problem is limited because of the sovereign's capacity to absorb the risk, the implication is that the sovereign's ability to stimulate growth without generating even more debt is constrained. Moreover, these debt constraints are tightening just as China appears to be reaching its "Lewis turning point"—when surplus labor hits zero because the economy has grown old before it has grown rich.

These are certainly complex risks that China's governing elite will need to navigate carefully in the coming years. But we also need to keep them in perspective. Higher levels of nominal growth, still at around 11% in China, allow for a faster pace of deleveraging than would a developed-world growth level of 3–4%. Moody's and S&P both amended their China sovereign outlooks from negative to stable when they downgraded their ratings, indicating that their views reflect the medium-term trend in overall debt metrics rather than any specific deterioration in fundamentals.

[8] See Puay Yeong Goh, Sean Jutahkiti and Prashant Singh, "Implications of the China Downgrade", June 2017 at https://www.nb.com/_layouts/www/transfer.aspx?URL=/insights/implications-of-the-china-downgrade.aspx

Indeed, 2017 saw Chinese regulators begin a concerted clampdown on shadow banking, resulting, for the first time since 2012, in a decline in China's shadow-banking sector as a share of GDP, according to analysis by Moody's. Authorities are also committed to using a number of micro and macro policy levers to limit the activities of inter-financial institutions and promote financial deleveraging in general. Liquidity is being kept tight, interest rates are high relative to inflation to increase the real burden of newly incurred debt, and the yield curve is fairly flat, removing the incentive to borrow short and lend long, which has been a major driver of rising leverage at smaller banks, in particular. System-wide interbank asset growth has fallen sharply since 2015, according to data from the People's Bank of China (PBoC).[9]

FIGURE 9. SYSTEM-WIDE GROSS INTERBANK ASSET GROWTH SLOWED SHARPLY IN THE YEAR TO THE END OF OCTOBER 2017
YoY Growth of Interbank Assets



Source: CEIC, PBoC, Neuberger Berman estimates.

In our 2015 paper, we noted Morgan Stanley research suggesting that deleveraging was underway in a number of corporate sectors. Figure 10 shows that the level of non-financial corporate debt peaked and began to decline shortly after we published. Since 2016, non-financial corporate profit growth in China has been broad-based and strong, driven by supply-side reforms that have helped the industrial sectors improve their profitability through rationalizations such as closing loss-making operations, by growth in new-economy sectors such as services and technology, and by robust household and export demand—this is improving debt-servicing ability even as interest rate costs have been rising.

In the 11 years since 2006, data from WIND suggests that fewer than 75 out of some 5,000 issuers of onshore China bonds have defaulted on less than $14 billion worth of debt, and before 2014 none of these defaults resulted in losses for investors. Moreover, the average recovery rate in those defaults has been 57%, according to data from Merrill Lynch.

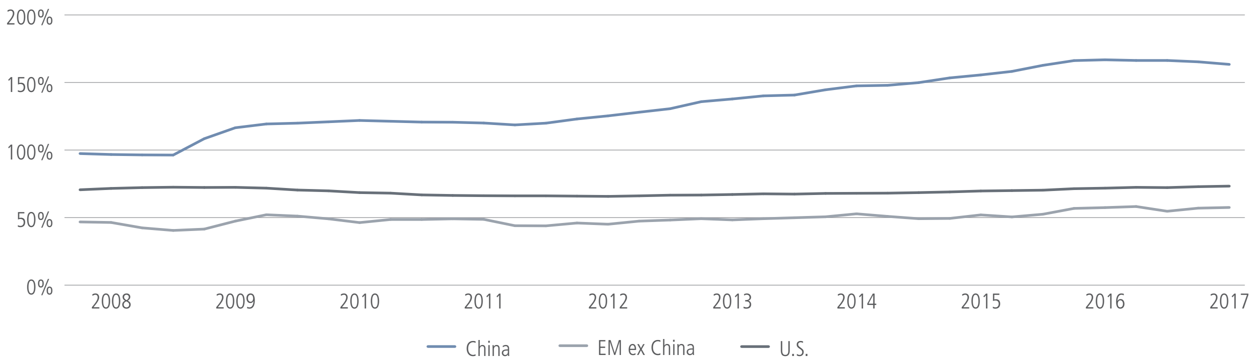
Investors should be aware that this does somewhat overstate the fundamental robustness of China's bond issuers, however. Because the onshore market is regulated by three different government entities answerable to the State Council, when issuers have hit financial trouble those regulators have gone out of their way, in partnership with banks, to find a solution that avoids a true credit default event and losses for investors. Two headline-making defaults in the solar power sector in 2013–14 illustrate the pattern. LDK Solar defaulted on CP and MTNs issued in the onshore market, but the local government stepped in to help it pay its maturing debt; by contrast, Suntech Power, which defaulted on U.S. dollar-denominated convertible bonds in the offshore market, received no government support.

Investors should expect more defaults and losses in the onshore market in future as the authorities become more tolerant of bankruptcies in non-systematic and non-strategic sectors, removing implicit support on Lower Government Finance Vehicles (LGFV's), for example, and working to better classify non-performing loans. Nonetheless, this should improve the long-term robustness of China's corporate sector, which is already making impressive progress toward improving its debt-servicing ability and reducing leverage.

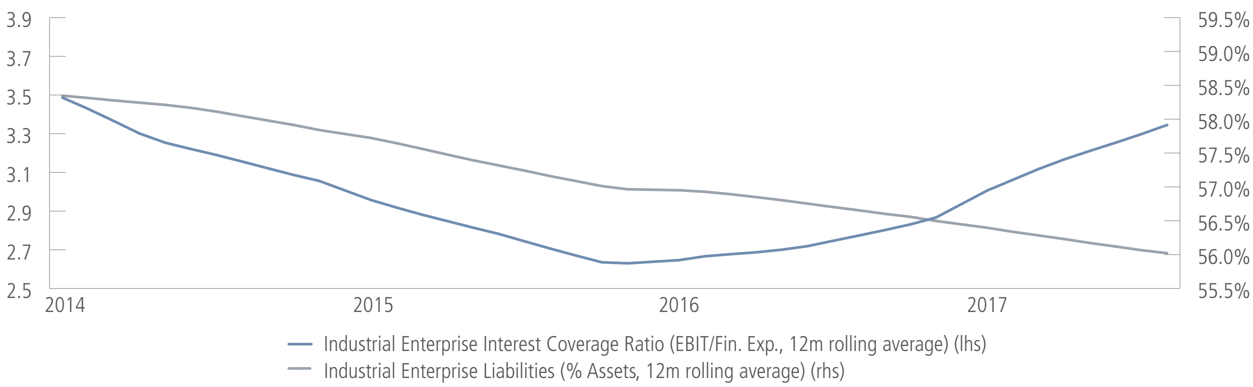
[9] See Sean Jutahkiti, "China's Banks: Light from Behind the Shadow", November 2017 at https://www.nb.com/_layouts/www/transfer.aspx?URL=/insights/chinas-banks-light-from-behind-the-shadow.aspx

FIGURE 10. CORPORATE DEBT HAS PLATEAUED AND DEBT-SERVICING ABILITY IS IMPROVING

Credit to non-financial corporations (% of GDP)



Corporate interest coverage and leverage levels



Source: Bank of International Settlements, CEIC, National Bureau of Statistics, Neuberger Berman estimates. Data as of September 2017.

Conclusion

The liberalization of China's multitrillion-dollar onshore bond market is one of the most important events in global fixed income markets for decades. With the Bond Connect initiative, that liberalization appears to be entering its final phase. International institutions are now able to trade onshore bonds seamlessly, without quotas, using offshore custody and cash accounts. These advances make it much easier to establish, manage and market a China bonds portfolio strategy to investors worldwide, promising substantial flows into the asset class.

When investors move onshore, they become exposed to a very different China to the one accessible via offshore "dim sum" and U.S. dollar-denominated bonds. As well as being many times bigger, the onshore market is less dominated by sovereign, financial and real estate issuers and features more non-financial corporate bonds. For now, those bonds also offer higher yields, relative to their credit quality, than offshore bonds.

While China's corporate debt burden has increased markedly over the past decade, that increase has started to level off and most sectors are now deleveraging. The strong sovereign balance sheet and recent deleveraging in the banking sector limits the risk of systemic problems, and better corporate productivity is improving debt-servicing capacity.

The maturation of China's economy is the story of our age. Genuinely to invest in this story requires exposure to China's onshore markets—in both equities and bonds. The next few years should see that possibility become a reality.

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