The Evolution of China's Bond Market

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Cover Image: Beijing Central Business District

Establishing a broad and well-functioning bond market is a difficult and time-consuming process. In addition to forming the bond trading venues, a host of supporting institutions and regulatory developments are essential for the long-term viability of a bond market. Independent judicial institutions, creditor rights, accounting standards, prudent industry regulation, clear reporting requirements, independent rating agencies, and active market makers are all integral aspects of a functional and broadly utilized bond market. China has made great progress on many of these fronts, the best proof of which is the sheer size of the Chinese bond market today. Two decades ago, the Chinese bond market had 286 billion USD-equivalent in bonds outstanding, and less than 25 active issuers.[1] Today it is the world's third largest market, with 10.3 trillion USD-equivalent outstanding.[2]

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This paper discusses the evolution of China's bond market, highlighting recent developments and the myriad risks that accompany this large and growing asset class. In particular, the short-term maturity profile of the Chinese bond market is of concern, and confusing local ratings criteria as well as different notions of default risk make analysis of the Chinese bond market a challenging endeavor. However, considering the eventual inclusion of China into major global bond indices, this is an asset class that merits attention and understanding. Analysis of the issuers, terms, maturity, yields, and holders of these bonds as well as the regulatory environment highlights China's progress on its path to creating a well-functioning bond market. The bond market in China

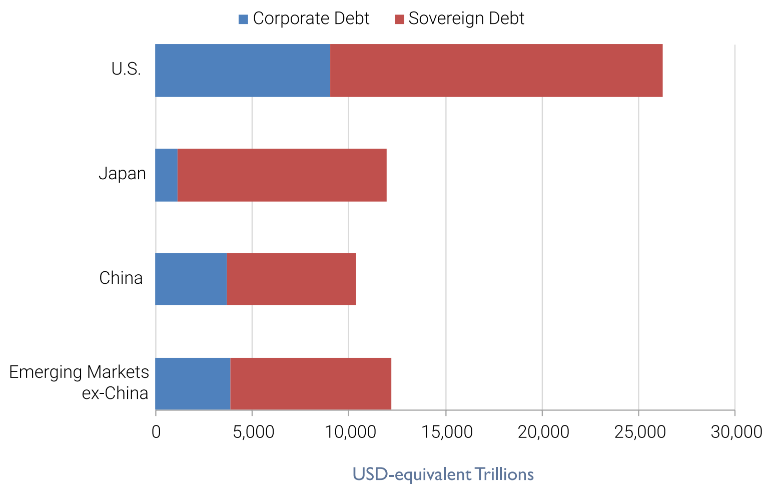
is remarkable and unique in its design, implementation and growth; the evolution of this market may well become one of the most interesting and far-reaching developments in modern financial history.

Part I. China's Fixed Income Markets – History and Evolution

Liquid fixed income markets promote stable economic development for local economies. The speed and magnitude of China's bond market boom underscore the country's desire to sustainably develop its capital markets. The universe of bonds from Chinese issuers has grown from just 286 billion in 2000 to over 10.3 trillion USD-equivalent as of June 2018. 6.6 trillion of those bonds are sovereign instruments, issued by the Chinese government and its agencies.[3,4] By comparison, the U.S. fixed income universe has 26.3 trillion USD in bonds outstanding, 17.3 trillion of which is in the form of U.S. sovereign bonds.

The speed and magnitude of China's bond market boom underscore the country's desire to sustainably develop its capital markets.

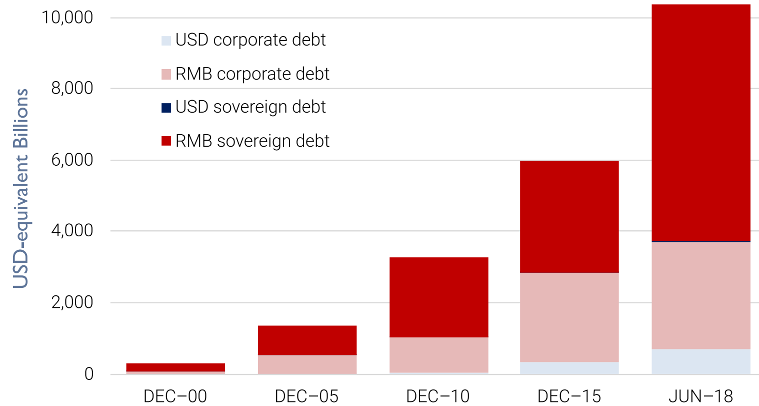
Figure 1. Global Bond Markets By Size
As of 6/30/18



Sources: Seafarer, Bloomberg.

The Chinese bond market has grown by means of both corporate and sovereign issuance, with most bonds denominated in renminbi (RMB). Figure 2 highlights this expansion, broken down into four sub-categories of Chinese bonds: U.S. dollar-denominated corporate and sovereign bonds (light and dark blue), and renminbi-denominated corporate and sovereign bonds (light and dark red).

Figure 2. China Bond Universe – Amounts Outstanding



Sources: Seafarer, Bloomberg, Bank for International Settlements, International Monetary Fund.
Note: RMB-denominated sovereign debt includes policy bank and provincial debt.

A notably positive attribute of China's bond market evolution is the currency of issue. More than 93% of all Chinese bonds (corporate and sovereign) are issued in renminbi.[2] This is prudent, as local currency-denominated bonds generally do not create currency mismatch risk for the bond issuer. A currency mismatch can be particularly painful for the issuer when the currency depreciation occurs close to the maturity date of the bond.[5] Of the 10.3 trillion USD-equivalent in Chinese bonds outstanding, 6.6 trillion of this is renminbi-denominated Chinese sovereign and policy bank bonds and another 2.9 trillion is RMB-denominated Chinese corporate bonds, leaving just 700 billion USD-equivalent of China's bonds denominated in U.S. dollar or other hard currencies.

China's Bond Market Venues and Regulatory Environment – A Young But Well-Structured Market

There are many unique features of China's bond market. The first of which is the number of bond venues and regulators. China has three main bond venues, and each is under the authority of different regulatory agencies.

Figure 3. China Bond Markets – Venues and Regulators

Bond Market	Year Established	Trading Venue	Types of Issuers	Regulator(s)	USD-equivalent Billion
Interbank Bonds and Medium Term Notes ("MTNs")	1993	Interbank Market	Central and Local Government, Policy Banks, Commercial Banks, SOEs, Corporations	National Development and Reform Commission (NDRC), People's Bank of China (PBOC)	8,755
Private Placements	2008	Interbank Market	Smaller Corporations	PBOC	618
Exchange Corporates	1993/2015	Exchange Traded Market (via the Shanghai or Shenzhen stock exchanges)	Non-financial Corporations (both private and state-connected)	China Securities Regulatory Commission (CSRC)	927

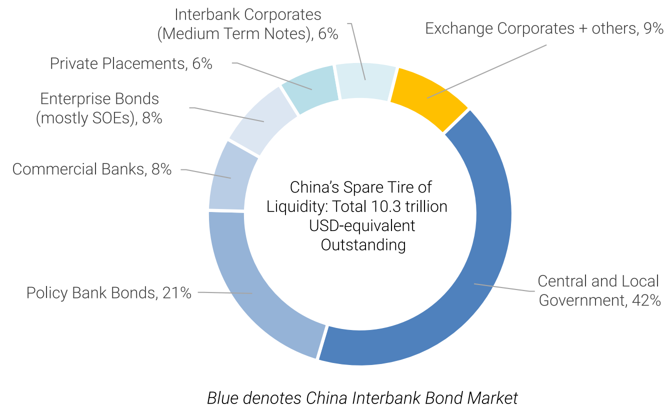
Sources: Seafarer, China Central Depository & Clearing Co., Ltd, Standard Chartered Bank.

The corporate bond market in China is the youngest of the three. Although corporate bonds have been permitted as per China's securities laws since the 1990s, nearly all bonds issued by Chinese corporations until the mid-2000s were classified as enterprise bonds.[6] Enterprise bonds were traditionally issued by large state-owned enterprises (SOEs), frequently to fund "government-approved projects on fixed-asset investment and technological investment," and often with guarantees from state-owned banks.[6] In light of the amount of debt issued in this time frame, regulators rightly became concerned by the risks inherent in state-owned banks guaranteeing an increasingly large amount of enterprise bonds. In 2007, regulators issued a policy prohibiting such arrangements, and a shift from enterprise bond issuance to corporate bond issuance began. [7] Corporate bonds initially were limited to listed companies, but the regulatory framework established by the China Securities Regulatory Commission (CSRC) in January 2015 allowed for bond issuance by both listed and unlisted companies.[6] This evolution was all part of China's stated financial goal of decreasing the interlinkages between SOEs and state-owned banks.[6]

This three-pronged regulatory environment, with different standards and rules in each, is not ideal as it leads to confusion and risks for issuers and investors. For example, if an issuer unknowingly violates an aspect of the permitting or approval process, the issuer's credit worthiness will be affected, impacting both the issuer and the bondholder. In addition, overlapping regulatory responsibilities undermine the effectiveness of the CSRC and impede the desired shift of bond issuance from enterprise to corporate bonds.[8] This is an important shift for China's capital markets that could be facilitated by a streamlined regulatory environment. Moreover, the distinct and sometimes complicated regulatory arrangements in each bond market venue has led companies to continue to access financing in the bank market. Fortunately, this is changing with enhanced coordination between

the regulators and streamlined listing requirements that reduce deterrents to bond issuance.

Figure 4. Bond Amounts Outstanding by Venue and Issuer Type
As of 8/31/18



Blue denotes China Interbank Bond Market

Sources: Central China Depository & Clearing Co., Ltd., Bloomberg, Seafarer.

Bank Market Versus Bond Market

China's bond markets, or spare tire, may be big in absolute size, but are still small in relation to the Chinese banking system.

The transition of financing economic development with primarily shorter-term bank debt to financing it with longer-term bonds is what some academics call "the second phase of global liquidity."[9] Central to this transition is disintermediation, which is the process of removing the middleman or intermediary (in this case the banks), and thereby connecting borrower and lender directly. Disintermediation is beneficial to economies as it decreases systemic risk to the banking system. Bond markets, by virtue of longer-dated maturities and the structure of the indentures, tend to bind lender and borrower together for longer periods of time and with fewer restrictions than that seen in the bank markets, where credit lines may be revoked for reasons unrelated to an individual borrower's financial health. With more financing in China coming in the form of longer-term bonds instead of short-term bank loans, borrower and lender are committed over longer time horizons, thus lessening the chance of sudden and widespread reversals of credit availability. It is still relevant to think of bond markets as a "spare tire" of liquidity for the banking system – a backup form of intermediation that is important to have when economic corrections occur.[10] China's bond markets, or spare tire, may be big in absolute size, but are still small in relation to the Chinese banking system.

While China has clearly made the largest contribution to gross domestic product (GDP) and capital market development in the developing world over the past decade, the credit-fueled growth has left the country with elevated levels of bank debt, now close to 120% of GDP. This compares to a level of 32% for the rest of the emerging markets in aggregate. The International Monetary Fund (IMF) and credit rating agencies are alarmed over China's explosion of bank debt, a concern justified and amplified by the level of opacity surrounding the terms and who may ultimately bear the losses from bad bank loans.

The Chinese financial system has developed and matured in an unconventional manner that may exacerbate certain risks; the country has incurred large amounts of debt in a very short period, most of which is inside the largely state-controlled banking system.[11] Rather than a gradual reduction in the government's control of the country's banking system, China's large state-controlled banks have continued to lend aggressively to SOEs and related entities. Rather than striving for a more transparent financial system, much of the capital allocation in China continues to be steered by the central and local governments for political ends and often in an opaque manner.[12] The consolidation of power that President Xi has orchestrated over the past few years only amplifies concerns surrounding these developments, making many cautious regarding the debt market in China.

While China does have significant levels of bank debt, it is important to acknowledge the fact that China's centrally-controlled financial system affords the government the ability to recapitalize, reorganize, and/or merge Chinese banks at will, "a formidable array of administrative levers," as the IMF refers to it in a 2017 report.[13,14] The global financial crisis of 2007-2008 clearly highlighted the fragility of developed markets' bank liquidity. China's stated goal of economic stability combined with the means to inject capital as needed may provide the necessary levers for Chinese financial institutions and the broader economy to avoid a similar course of events. Another concern over China's elevated levels of bank debt is that many borrowers are SOEs, and therefore not subject to the same level of default risks associated with non-government corporate borrowers.[15] While these arguments don't mitigate the rapid rise of bank debt in China, it is important not to overlook the unique aspects of the Chinese financial system that create credit conditions that are not directly comparable to those in other debt markets.[16]

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The Bond Connect and Global Bond Index Inclusion

China's efforts to build a corporate bond market that functions as a spare tire is extraordinary both in scale and speed; the most recent development on this front is the Bond Connect. Despite the rapid growth of the renminbi bond market, which increased sevenfold over the past decade, international investors hold only around 3% of these renminbi-denominated bonds.[17] This is largely due to the rules and regulations associated with the Chinese financial system and bond market. Until very recently, the renminbi-denominated onshore bond market was only accessible to international investors in possession of Qualified Foreign Institutional Investor (QFII) status.[18] This began to change with the 2017 establishment of the Bond Connect.

The Bond Connect is a mechanism similar in construct to the 2014-launched Stock Connect, whereby international investors can buy and sell onshore bonds denominated in renminbi via authorized platforms in Hong Kong. A joint announcement by the People's Bank of China (PBOC) and the Hong Kong Monetary Authority in May 2017 outlined program details, including that the Bond Connect initially only applies to the Interbank bond market, with plans to roll out the program to the Exchange Traded bond market in the future. The significance of Bond Connect is far-reaching: 10.3 trillion USD-equivalent of fixed income instruments becoming available to the international investor overnight is an

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Chinese bonds are a large part of the world's financial markets today, as evidenced by sheer size: renminbi-denominated bonds constitute 67% of all emerging market local currency corporate bonds and 48% of all emerging market local currency sovereign bonds.[2] The Bond Connect enables international investors to trade onshore Chinese bonds on global trading platforms through their global custodians, removing the need for an onshore custodian or cash accounts, and therefore allowing bond and foreign currency transactions to be completed together. Most significantly, Bond Connect transactions are without quotas. The next logical development in bond market liberalization would be derivative trading, as is common in most well-developed bond markets.

Due to the amount of leverage in China, its long-standing capital market restrictions, the relative infancy of the Bond Connect program, as well as the intricacies surrounding local market settlement and custodial account requirements, many international investors are still not able or willing to invest in renminbi-denominated fixed income instruments.[19] The program's development and broader use will likely be one of the most interesting aspects of China's capital market evolution. If Bond Connect succeeds in a manner like that of Stock Connect, these renminbi-denominated bonds will be widely accessible and this large pool of fixed income instruments will offer international investors greater diversification across their investment portfolios. Foreign ownership within the Chinese onshore bond market is around 3% today, but the PBOC has estimated that as much as 15% of the onshore bond market could become foreign-owned.

Just as A-share inclusion continues to impact the composition of international and regional equity indices, if Bond Connect succeeds, renminbi-denominated bonds will gain significant weighting in global fixed income indices. In fact, three important pre-requisites for index inclusion of Chinese bonds have recently been met: real time delivery-versus-payment ("DVP") settlement, clarification that value added tax ("VAT") and withholding tax will be waived for three years and the establishment of block trading. As a result, asset managers can trade in blocks and then allocate to accounts as part of the quest for best execution. With these hurdles met, Bloomberg LP (a key bond index provider) has announced that renminbi-denominated securities will be added to the Bloomberg Barclays Global Aggregate Index over a 20-month period starting in April 2019. Once the inclusion is complete, renminbi-denominated securities would represent approximately 5.5% of this large global benchmark bond index.[20] The increased China weighting in international bond portfolios will undoubtedly encourage better liquidity for renminbi-denominated bonds and further structural improvements to China's local bond markets.

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Summary of Part I

China's fixed income markets have grown to the point that they now constitute a large and important part of global capital markets. The country's efforts to establish large and liquid local bond markets in a relatively short span of time is a remarkable achievement – and also a necessary one. China needs a robust bond market precisely so that it can de-emphasize reliance on its largely state-controlled banking system, enhance regulated and transparent channels for financial liquidity, and allow markets to play a needed role in long-term capital allocation. The introduction of the Bond Connect brings participation from international fixed income investors, broadening and deepening China's access to global capital. This is a young but seemingly well-structured market; given its growth trajectory and anticipated index inclusion, this is a market that deserves global investors' understanding and consideration.

Part II of this paper discusses in more detail the distinctive features of China's bond market and the myriad risks that accompany this large and growing asset class, including the short-term maturity profile of the Chinese bond market, confusing local ratings criteria, and different notions of default risk. Analysis of the issuers, maturities, yields, and holders of these bonds as well as the regulatory developments help to illustrate where China is on its quest to create a well-functioning bond market.

Part II. Unique Features of the Chinese Bond Market

Regulatory Reforms

Chinese policymakers have made meaningful progress in addressing financial risks in recent years. Among the positive reforms are measures to reduce the scale and limit risks of asset management products, promote inter-agency data sharing, enhance regulatory enforcement and coordination, and reduce economic leverage. There is a strong desire by Chinese regulators to pursue what they call "multi-level capital market development," with a key goal of reducing reliance on bank loans and developing the bond and equity markets. Although the average debt servicing ability of listed companies in China has not improved and inefficient debt-laden SOEs remain less profitable than private firms, the share of loss-making SOEs has declined from 28% to 24% since 2015 and the ratio of their liabilities to profits has improved.[21]

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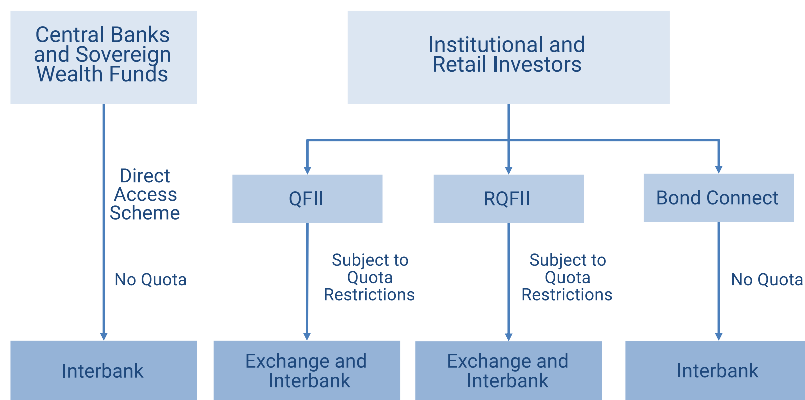
Recent regulatory changes are steps in the right direction but maintaining the accuracy and timeliness of debt data and clearly laying out a roadmap for future reforms will be critical in guiding investor expectations and ensuring the orderly pricing of fixed income assets. The IMF recommends that the new institutional structure of regulatory bodies take a more holistic, forceful, and coordinated approach to financial risks as they emerge.[21] Part of that effort would certainly include a plan to dismantle the implicit guarantees for government-linked entities in the bond market, without which capital misallocation and the consequent impacts on the broader economy will almost certainly reemerge.

Among the most interesting regulatory developments are the increasing number of ways that international investors may access the Chinese bond market. Today, investors can access the onshore Interbank and Exchange markets in four main ways: a direct access scheme, QFII, Renminbi Qualified Foreign Institutional Investor (RQFII), and, as of 2017, via the Bond Connect program. Larger investors, such as central banks and sovereign wealth funds, who are registered with the PBOC, are permitted to "directly" access the bond markets without being subject to investment quotas, lock up periods or repatriation restrictions. QFII and RQFII investors who access the bond market are generally subject to quotas and may also be subject to lock up periods and repatriation restrictions.[22] The Bond Connect mechanism is described in Part I.

Figure 5. Four Ways to Access the Onshore Chinese Bond Market



Sources: Seafarer, Bond Connect Company Limited, Hong Kong Monetary Authority.

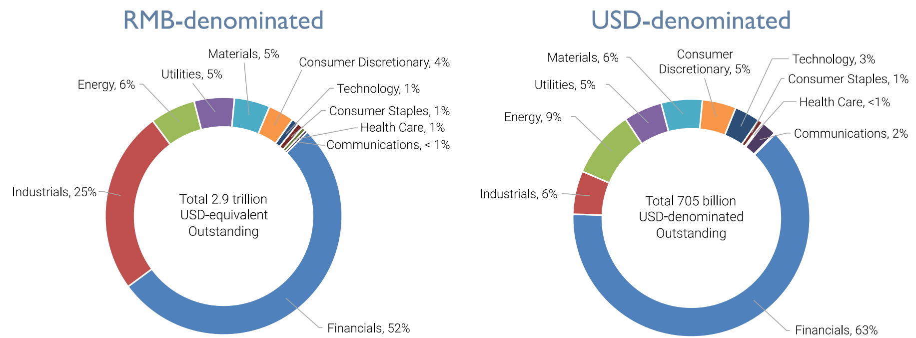
China has made significant progress on the internationalization of the renminbi, as evidenced by its 2016 inclusion as the third largest currency in the IMF's special drawing rights currency basket. Given the large stock of renminbi-denominated debt, opening up the bond market to foreign investors is a meaningful regulatory development and a logical next step in further internationalization of the renminbi.

Issuer Concentration

The vast majority of corporate debt in China is issued by entities with connections to the state. There are many different types of entities associated with local governments, central SOEs, and/or local SOEs. The controlling shareholder for these entities is typically the State-Owned Assets Supervision and Administration Commission (SASAC), or the provincial level equivalent. Only a small percentage of all corporate bonds in China are issued by private companies with no connection to the local or central government. This is why the Exchange market in China is so small in comparison to the Interbank market, as illustrated in Figure 4.

Issuance by industry is also concentrated, with the financial, industrial, and energy sectors accounting for most corporate bonds. This concentration by industry is true in both the renminbi-denominated corporate market and the U.S. dollar-denominated corporate market, as seen in Figure 6. As more companies become publicly listed in China and the regulatory environment for issuing and trading bonds evolves, one would expect the issuer concentration to diversify.

Figure 6. Corporate Debt Issuance by Industry
As of 6/30/18



Sources: Bloomberg, Seafarer.

Ratings Skew

Confusing local credit ratings are one of the largest hurdles to understanding China's bond market. China has nine domestic rating agencies, five of which are at least partly state-owned – a clear conflict of interest given the large percentage of state-connected bond issuers. Even the so-called independent rating agencies tend to fit the profile of many private companies in China; while technically "private" from an equity ownership standpoint, their origins are somehow connected to the government and they tend to be controlled by a still politically connected leader whose business model is closely aligned with the policy objectives of the state.[6] In addition to state connections at some agencies, one of the main problems has been unscrupulous business practices by rating agencies seeking to capture market share and profits and lacking the proper regulatory oversight. For example, Dagong Global Credit Rating Co. recently got into trouble for assigning high ratings to companies that subscribed to their expensive software packages.[23] It is therefore not surprising that the reliability and trustworthiness of China's credit ratings has been questioned.[24] One reason to question these ratings can be found in the instances of defaulted Chinese bonds not being downgraded until just days before their default, suggesting that the Chinese rating agencies lack an ongoing monitoring discipline.[25] These precipitous ratings downgrades, sometimes from AA or above straight to defaulted status, undermine investor confidence in ratings process. Credit ratings in China are heavily skewed toward the higher end of the ratings scale. Of the 11,000 Interbank listed and rated bonds outstanding as of August 2018, more than 95% of the bonds received ratings of AAA to AA at time of issuance, and just 0.11% received a rating of BBB+ or lower.[26]

Credit ratings in China are heavily skewed toward the higher end of the ratings scale.

Such a ratings skew is clearly not healthy. However, indications of change are afoot as two domestic Chinese rating agencies have formed business alliances with internationally recognized rating agencies, and, in a notable move, Fitch and S&P announced in May 2018 that they plan to launch their own Chinese rating units.[27] Chinese regulators granted approval to S&P to rate domestic bonds in January 2019.[28] International rating agencies are by no means without their own flaws; nevertheless, their arrival in China could introduce higher, international

standards to the rating process, and thereby draw greater foreign participation to the Chinese bond market.

Despite the use of the same rating symbols, onshore renminbi-denominated Chinese bond ratings are clearly higher than those that would be assigned by the likes of Moody's, S&P, or another nationally recognized statistical rating organization (NRSRO). In 2015, the PBOC released an illuminating paper that outlines the differences between domestic and international ratings.[29] In short, this paper explains the discrepancies as due to the way the agencies give weight to certain factors. Factors such as asset size, profitability, and state ownership carry much more positive weighting in a domestic Chinese bond rating. Conversely, leverage has a far less negative impact on ratings. The paper concludes by illustrating the resulting rating differences for a sampling of investment-grade bonds: credit ratings from agencies headquartered in China on average lay in the AAA and AA category, which is around six to seven notches higher on average than those assigned by ratings agencies headquartered outside of China.[29] Or put another way, a AA rating by a Chinese rating agency would generally parallel a BBB- rating from a NRSRO. Viewing Chinese bond ratings through this lens, Figure 7 shows Interbank bond ratings at time of issue and how these ratings might look if rated by one of the NRSROs.

Figure 7. Interbank Bond Ratings at Issuance

Actual Domestic Rating (At Issue)	# of Bonds	% Total	*6-notch Adjusted Rating (Hypothetical)*[29]
AAA (Aaa)	5,545	50.1%	*A- (A3)*
AA+ (Aa1)	2,165	19.6%	*BBB+ (Baa1)*
AA (Aa2)	2,612	23.6%	*BBB (Baa2)*
AA- (Aa3)	148	1.3%	*BBB- (Baa3)*
A+ (A1)	100	0.9%	*BB+ (Ba1)*
A (A2)	52	0.5%	*BB- (Ba3)*
A- (A3)	440	4.0%	*B+ (B1)*
BBB- (Baa3)	11	0.1%	*B- (B3)*
Total	11,073		

Sources: Wind Information, Seafarer.

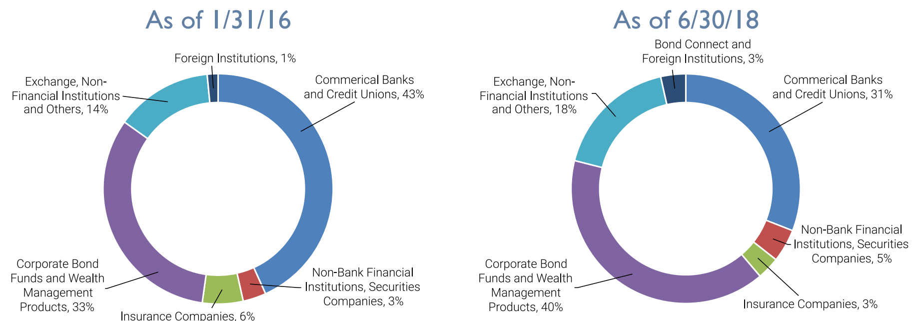
The lack of independence of the Chinese rating agencies is a significant concern for this asset class. However, once different ratings criteria and the notch difference relationship is recognized, local ratings can be at least partially useful when evaluating the credit quality of a Chinese bond.

Bond Holder Composition

The holder composition of Chinese bonds has evolved over the past couple of years. Whereas previously bonds were often held to maturity on banks' balance sheets, the development of a secondary bond market has enabled a transition to a broader investor base. Holders have shifted away from the commercial banks toward asset management products and foreign investors. While some asset

management products are still controlled by the banks, this diversification in bond holders has arguably helped enhance bond liquidity, as a broader bondholder base can more easily absorb or provide inventory from the segment of bond holders that are buying or selling. The continuation of this shift could be positive for the asset class if Chinese corporate bond funds and asset management products have longer-term investment objectives, as tends to be the case for pension funds, insurance companies, and other long-term investors. One segment that has considerable scope to increase ownership of onshore corporate bonds are pension funds, most of which are managed at the local government level today but may be increasingly managed by professional asset managers in the future.

Figure 8. Bond Holders of RMB-denominated Debt



Sources: Wind Information, China Central Depository & Clearing Co., Ltd., Seafarer.

Difficulties in identification of who is issuing bonds in China (mostly state-connected entities) and who is buying bonds (mostly commercial banks and wealth management products) raises considerable concern. Given this dynamic, one could be forgiven for concluding that these bonds are simply loans in disguise.

Chinese regulators are serious about diversifying the number of bond issuers and broadening the bondholder base.

Today's issuer and holder concentrations are clear indications that China is still in the initial stages of creating a robust and healthy bond market. Although, a close look at the changes underway – especially the increased participation of foreign investors – reveals that Chinese regulators are serious about diversifying the number of bond issuers and broadening the bondholder base. In fact, regulators have articulated a near-term goal of up to 15% foreign ownership of the Chinese bond market. This will necessitate greater liquidity, better disclosures, and improved ratings standards. Furthermore, issuer and holder diversification should continue to improve as supporting institutions become more influential, access to the bond market increases, and bank participation decreases.

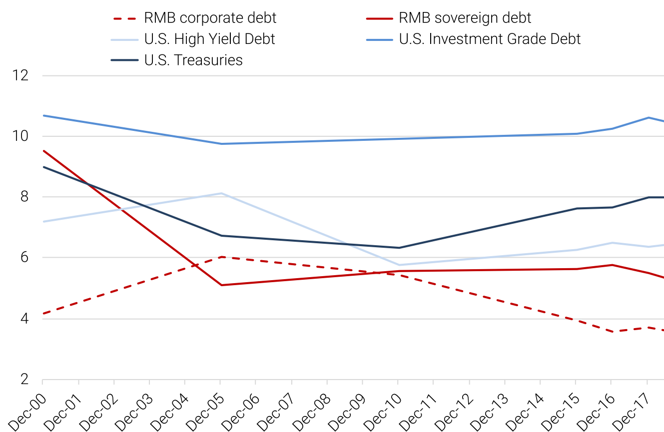
Maturity Profile

When investing in fixed income instruments, companies with less short-term debt are preferable to those with more, all else being equal. While the use of short-term funding tends to lower the cost of capital, it exposes the borrower to refinancing risk. Refinancing risk takes two forms: one is that capital markets may be closed when short-term obligations need to be refinanced; the other is that the cost of capital may increase dramatically, exposing the borrower to much higher interest rates. Given the short-term maturity profile of Chinese bonds, this risk should not

be underestimated. One of the hallmark characteristics of a financial downturn is a contraction in the availability of financing, making companies and sovereigns with longer-term maturity profiles preferable from a credit risk perspective.

Longer maturities generally mean less near-term default risk. Unfortunately, China's corporate issuers have not been able to extend maturities; these companies therefore have greater credit risk in the event of unexpected earnings volatility or a contraction in financing. Corporate bonds issued in renminbi are one sub-segment of the global bond universe which have seen years to maturity contract meaningfully since the global financial crisis (as shown in Figure 9). This is largely due to the number of bonds that have been issued by Chinese corporates over the past ten years, particularly those issued in the financial sector. How, when, with whom, and under what terms this debt is refinanced will profoundly impact financial markets.

Figure 9. Weighted Average Years to Maturity
12/31/00 – 6/30/18



Sources: Seafarer, Bloomberg.

The opening of Bond Connect may be one way the Chinese government is working to facilitate the extension of short-term maturities. The centralized nature of the Chinese financial system reduces the likelihood that a sudden decline in capital availability will spread throughout the economy; this risk would be at the forefront for any other emerging market in possession of a similarly short maturity profile. While the short duration of China's bond market is suboptimal, the flip side is that this short duration is a highly effective tool that can be employed by the government, through changes in short-term benchmark interest rates, to alter interest burdens, change credit demand, impact capital allocation decisions, and thereby raise or lower economic activity with very short lead times. Ironically, the short-term nature of China's liabilities is perhaps the largest risk mitigant to the excess leverage in the Chinese economy.

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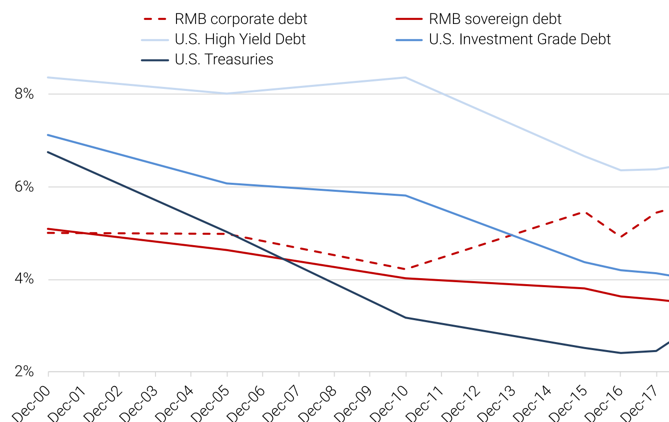
Yields

The low cost of credit in China has clearly affected debt issuance trends. State-owned or state-linked entities have better access to the bond market than private firms.[6] This preferential access to low-cost capital for state-connected entities is problematic as it can result in the misallocation of resources. Analysis of yields by type of issuer and debt instrument illustrates, perhaps unsurprisingly, that the lowest yields are enjoyed by bonds issued by central SOEs, followed by those of local SOEs, then local government financing vehicles (LGFVs), and finally private corporations.[6] While it certainly has been historically true that an implicit guarantee for government-related entities means lower default risk, this may be changing as the government allows some poorly run state-connected entities to fail. This topic is further discussed in the Default Rates section.

Interest rates paid by corporate borrowers have been coming down for many years. One notable exception to this trend is the yield on local currency corporate debt issued out of China. After trending down in step with the rest of global fixed income markets, the weighted average coupon for local currency Chinese corporate debt has increased since 2010 from 4.21% to 5.55% as of June 2018. (dotted red line in Figure 10). The increase in coupon levels for local currency corporate debt out of China has many contributing factors but a driving force is domestic interest rates. The benchmark Chinese two-year bond yielded 1.65% at the start of 2010 and increased to an average of 3.24% over the subsequent five years, with a peak of 4.37% in 2013.[30] As of June 30, 2018, this benchmark two-year bond yield stood at 3.22%. Issuance trends are also at play, with a large amount of bank debt termed out into the bond market where higher interest rates are generally expected, given the capital structure preference. Figure 10 shows that coupons are becoming more correlated with the credit risk of the underlying issuer in China, a trend that will likely continue with the opening of local bond markets, increased participation from international investors, and more private companies issuing debt.

Figure 10. Weighted Average Coupon (%)
12/31/00 – 6/30/18



Sources: Seafarer, Bloomberg.

Default Rates

When investing in any fixed income instrument, one must assess the underlying credit quality of the issuer and realistically estimate the chances of default. Until recently, very few defaults in China have involved entities connected to the state. Central and local SOEs, LGFVs, and National Development and Reform Commission (NDRC)-approved private companies that are engaged in advancing national industrial policies have historically held an implicit guarantee from the government. The government has generally allowed issuers to default for two reasons: one, the expected societal impact is minimal; or two, if political support for the company has waned, due to scandal (as was the case with China Milk Products[31] and real estate entity Kaisa[32]) or because the company is in an industry suffering from overcapacity (as was the case with the solar panel company Suntech[33]).[6] Furthermore, most cases of Chinese bond defaults have involved relatively small amounts – levels that are unlikely to cause instability at a major, or even regional, Chinese bank.

The skewed nature of credit ratings in China makes analysis of credit quality a great deal more challenging. In the absence of strong institutions (rating agencies, an independent judiciary) to protect bond investors, it is not uncommon for bonds issued in developing countries to possess implicit guarantees from the state – guarantees that generally reduce the likelihood of a default due to implied state backing. For the past 15 years, this has been true in China. However, the meaning of an implicit guarantee in China changed in the spring of 2015 when the government allowed an SOE to default.

Up until that time, only private sector companies had defaulted in the domestic market, despite, as pointed out earlier, SOEs issuing the clear majority of debt. Power equipment manufacturer Baoding Tianwei defaulted in April of 2015, an event viewed as a milestone for market discipline in the Chinese corporate bond market.[34] The Tianwei case is particularly interesting as the number of bond holders was small and they were all SOEs, including large state-connected banks. Legal efforts by these bondholders proved unsuccessful and Tianwei ultimately applied for reorganization through China's bankruptcy process. Tianwei's bankruptcy filing was the first clear indication that the government is beginning to accept the formal bankruptcy process as a mechanism to resolve corporate debt problems, at least where the societal impact is manageable.[6] Since then, several other state-linked entities have been allowed to fail. Chinese authorities have begun shifting away from the model of implicit guarantees, and this is an important development for the bond market in China.

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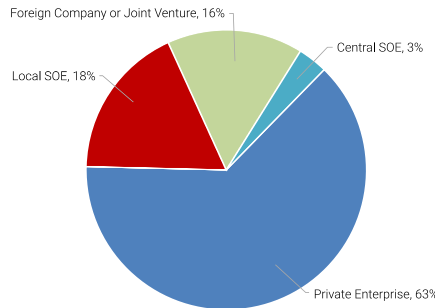
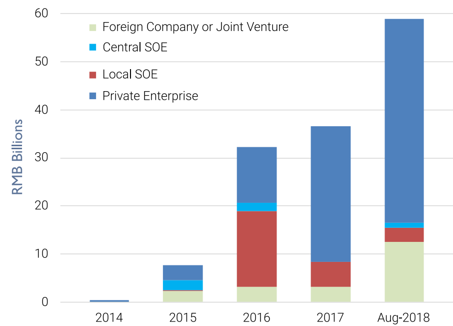
An examination of default trends over the past ten years shows it is not just private enterprises that can fail in China. Figures 11 and 12 illustrate bond defaults by issuer type and industry.

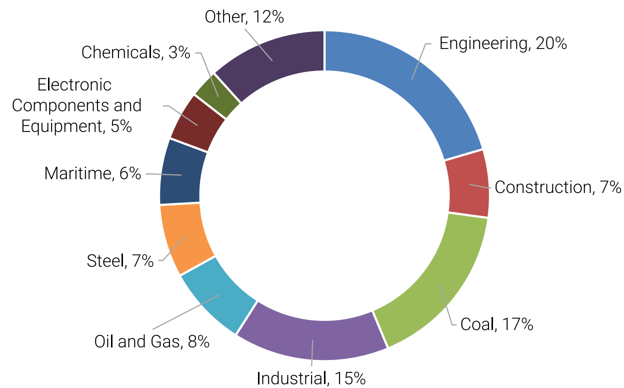
Figure 11. Bond Defaults by Issuer Type 1/1/14 – 8/31/18





Sources: Wind Information, Bloomberg, Seafarer. Includes Private Placements.

Figure 12. Bond Defaults by Industry 1/1/14 – 8/31/18



Sources: Wind Information, Bloomberg, Seafarer. Includes Private Placements.

In a market where the concept of bond defaults is relatively new, it is not surprising that recovery rates to the bondholder are low. Of the bonds that have defaulted in China since 2014, the recovery rate has been less than 20%; this compares to a recovery rate of 53% for senior unsecured bonds globally, according to Moody's Investor Services.[35,36] The thin trading in defaulted bonds and the low recovery rates on defaulted securities in China are meaningful deterrents to investing in the onshore bond market. Developing a more liquid secondary trading market for distressed and defaulted debt would enable investors to more accurately gauge the credit risk of a bond through its full life cycle. China's Interbank market rules stipulate that secondary trading in a bond should cease at the maturity date. For Exchange bonds, a missed payment results in the immediate suspension of secondary trading.[35] Add to these rules the fact that local governments sometimes step in to prevent liquidation of distressed companies who are large local

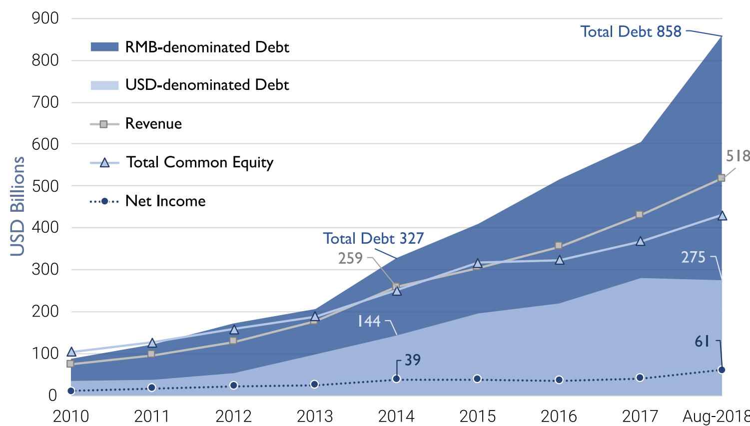
employers and where a business shutdown may cause significant economic and/or social instability, and the low recovery rates are not surprising.

China's financial regulators are committed to a program of deleveraging while carefully managing risks to the overall economy. A reduction in bank financing and an increase in the role of market forces in many sectors has resulted in solvency issues for more and more Chinese companies. Given the short-term maturity profile of the bond universe, we should expect to see more bond defaults, especially for smaller companies.

The Property Sector

The health of the Chinese property sector[37] is a much-discussed topic among global investors and economists. It is a grossly indebted sector: publicly-listed Chinese property developers have aggregate total debt of 858 billion USD-equivalent.[2] This has grown particularly rapidly over the past three years, up from 409 billion USD-equivalent at year-end 2015.[2] While the property developers often justify the leverage as necessary in order to supplement and grow land reserves, the absolute and ever-growing amount of debt issued by these companies is alarming. Perhaps the only thing more alarming is the meager profits of the sector. Figure 13 illustrates the total revenues, common equity and net income of all publicly listed home builders in China alongside the sector's total debt, as well as the portion of that total debt which is denominated in U.S. dollars.[2]

Figure 13. Listed Chinese Property Developers and Home Builders
1/1/10 – 8/30/18



Sources: Bloomberg, company filings. Amounts are USD-equivalents in billions.
Includes all listed Chinese homebuilders with a market capitalization above USD 250 million.
Note: USD denominated debt includes both bank debt and bonds issued. Total USD bonds issued by the sector exceed USD 116 billion as of 30 September 2018.

China Evergrande Group is one of the most startling examples of the expanding balance sheets evident across the sector. China Evergrande's total debt has grown from 25 billion as of year-end 2014 to over 112 billion USD-equivalent as of year-end 2017.[38] This kind of corporate balance sheet growth has few precedents, but what is even more concerning is the short-term maturity profile of Evergrande's

debt. Of this 112 billion USD-equivalent in debt, 74% is due inside of two years. While Evergrande is just one of more than 300 publicly-listed property developers operating in China, it is one of the largest by market capitalization and has more than twice the amount of debt as the next largest Chinese property developer.

Chinese property developers have growing cross-currency risk on their balance sheets. As of August 2018, more than 25% of all bonds issued in the sector were U.S. dollar-denominated.[2] With nearly all of property developers' revenues and costs denominated in renminbi, this cross-currency debt represents a significant financial risk for these companies. Property developers are a sizable segment of the Chinese economy, and they are reliant on foreign currency financing; this funding is often secured through special purpose vehicles or shell companies domiciled in tax havens. A clear claim on assets is critical to making a successful bond investment, and such legal structures would make it difficult for offshore creditors to make claims on the underlying assets of a bond issuance. Tack on to these concerns the overall leverage in the sector as well as the questions surrounding the quality of local bond ratings, and it is hard to envision how the balance sheet growth of the property developers in China ends well. Having said that, there are four possible moderating trends that may keep the property market and the levered property developers on an even (and solvent) keel:

1. China's housing policy includes initiatives to build housing that will lure young professionals to tier 2 and tier 3 cities and thereby enhance these cities' competitiveness and attract corporations.
2. The regulators are allowing more bond issuance in the property sector to refinance the near-term liabilities (as we have seen with July and August 2018 issuance trends).[39,40]
3. Some state-run banks have the ability to selectively offer attractive mortgage rates to buyers (as Industrial and Commercial Bank of China (ICBC) in Shanghai did in August 2018).[41]
4. Authorities are granting sale permits on new units with less stringent price cap requirements (as some listed developers have reported on their most recent calls).[41]

Sceptics of the Chinese property market should at least consider the potential power of such levers and the ability of the government to quickly employ property-related policy shifts.

Potential Mitigating Factors

There are several important potential mitigants to the numerous concerns articulated in this paper. A high savings rate, China's creditor-nation status, capital account controls, and the centralized nature of the economy all mean that China's fixed income markets are navigating a different path. Let's take these in order.

1. First is China's exceptionally high household savings rate. Although it has come down recently, China's national savings rate as of year-end 2017 is 47% of GDP, with a large percentage of this coming from households. This compares to 24.5% for the world overall (on par with the emerging markets average).[42] High household savings rates aid in economic recoveries as consumers can dig into savings rather than defaulting on obligations.
2. China benefits from being a creditor nation—a positive net international investment position (NIIP) is a meaningful factor when assessing the creditworthiness of a nation or its companies.
3. China's controlled capital account makes it less vulnerable to heavy redemptions by foreign lenders.
4. Finally, it is important to acknowledge the command nature of the Chinese economy. China has a powerful and well-run central bank, substantial control over the banking system, and extensive ownership of domestic assets. Some have argued that China's state-centric approach to the economy and the strong ties between local and central government act as a substitute for the formal institutions that exist in most mature bond markets. There are many distinguishing characteristics of Chinese state capitalism that are manifest in the bond market. While strengthening state capitalism and maintaining social stability are themes that seem to underlie policy choices in China, the corporate bond market is being established to diversify the financial system and develop more market-based reforms.[6] Having said that, China's ability to steer lending to selected sectors and companies as well as manipulate via economic stimuli are unique and arguably the key reasons for the astounding growth and remarkable stability of the Chinese economy over the past decade.

Conclusions

China's progress toward a large and well-functioning bond market in the absence of mature supporting institutions and regulations generally considered integral to that task is a significant victory. This paper has sought to illustrate the growing scale and changing composition of China's bond markets as well as to highlight the differentiated stream of income that Chinese bonds may offer. Investors may dismiss this asset class due to the associated risks, but it is clear that China's policymakers are serious about connecting the world's third largest bond market with the international financial system. Furthermore, the momentum for index inclusion is mounting. Concern about the growth of this market is warranted, but several important points remain: China's bond issuance is predominantly in local currency, minimizing currency mismatch-related defaults; a wide range of financial and regulatory reforms are underway; and the seeds of creditor rights are emerging (as evidenced by failed ventures proceeding through a bankruptcy process). These developments are all helping to foster the continued evolution of China's bond market.

China's progress toward a large and well-functioning bond market in the absence of mature supporting institutions and regulations is a significant victory.

Developing a corporate bond market to supplement and support a bank-oriented financial system has been a critical undertaking for China, but there remains a long path ahead. The first large hurdle is implicit guarantees, which have long been a common feature in nascent bond markets (as happened in both Korea and Japan).[43,44] These guarantees are important in getting a bond market off the ground, but the continued use of implicit guarantees has repercussions: the pricing mechanism for bonds becomes distorted, moral hazard creeps into the financial system, the establishment of a credit culture is compromised, and market activity is negatively impacted.[6] The main institutions needed to sustain a functional bond market are hamstrung by the limitations associated with the implicit government guarantees: credit ratings lack reliability, participation in secondary trading markets is low, and the bankruptcy process has been only selectively invoked to address insolvency. In light of these deficiencies, it is clear that China's bond market has not yet become a "spare tire" of liquidity.

Developing a corporate bond market to supplement and support a bank-oriented financial system has been a critical undertaking for China, but there remains a long path ahead.

The financial markets in China are at an historic juncture. 2018 marked the 40th anniversary of Deng Xiaoping's market reforms and opening up, yet the country's stated goals of stabilizing leverage and allowing markets a greater role are at odds with the continued growth in debt and the dominant role of the state in the economy.[21] Opening the bond market to international investors, extending bank debt and bonds maturities, establishing credible credit ratings for all issuers, and the invocation of reliable bankruptcy and reorganization processes will all be instrumental to the success of China's fixed income markets.

This is a young market and the hazards of measuring it against standards of older and more mature markets are plentiful. The continued development of well-functioning local currency bond markets with the help of an active and diverse investor base will strengthen and stabilize the Chinese economy and global financial system. The size and growth of the Chinese bond market together with ongoing structural and institutional developments indicate that the inclusion of renminbi-bonds into global benchmarks is expected to result in significant capital inflows. China is navigating a different path as it develops its bond market and it is a path worthy of attention.

Endnotes

[1] By way of comparison, China's GDP in 2000 was 1.2 trillion USD equivalent.

[2] Bloomberg, Seafarer. Data as of 30 June 2018.

[3] Comprehensive statistics on global bonds markets are not readily available from any single source. I used information from the Bank for International Settlements (BIS), the International Monetary Fund (IMF), Bloomberg, Wind Information and others to compile the data presented in this paper.

[4] For the purposes of clarity, this paper focuses on bonds only; the statistics herein do not include bank loans or the shadow banking system unless expressly specified. Sovereign bond statistics include government agency and government development bank bonds. Bonds issued and outstanding in the financial sector are included.

[5] A currency mismatch arises when a borrower's revenues and/or assets are denominated in local currency (which is usually the case), but borrowings are in U.S. dollar or another hard currency. The consequences of a currency mismatch can be severe for the bond issuer: if a bond is denominated in U.S. dollar and the renminbi depreciates by 20%, unless hedged, that issuer's debt burden effectively increases by 20%. This applies to corporate and sovereign issuers alike.

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Glossary

Bank for International Settlements (BIS): an international financial institution established in 1930 that fosters international monetary and financial cooperation and serves as a bank for central banks.

Belt and Road Initiative: an international program to spur investment and trade links between China, central Asia, and Europe. The initiative was announced by China's President Xi Jinping in 2013. The official name for the initiative is the "Silk Road Economic Belt and the 21st Century Maritime Silk Road."

Bond Connect: a market trading link that allows certain investors from Mainland China and overseas to trade in each other's bond markets through a special mechanism that was designed and implemented by the Hong Kong Stock Exchange. Currently, only Northbound trading is allowed, meaning that foreign investors are able to buy and sell Chinese bonds. Chinese investors are not yet able to trade Hong Kong and overseas bonds, known as Southbound trading.

China Exchange Traded Market: a bond market that trades bonds via the Shenzhen and Shanghai stock exchanges. It is smaller in size than the China Interbank Bond Market and trades mostly corporate bonds.

China Interbank Bond Market (CIBM): an OTC market outside the Shanghai and Shenzhen stock exchanges. The major instruments traded in the CIBM are Chinese government bonds, PBOC bills, Policy Bank bonds and others.

China Securities Regulatory Commission (CSRC): the national regulatory body that oversees the securities and futures exchanges of the country. It is the functional equivalent of the Securities and Exchange Commission (SEC) of the U.S.

Chinese State Council: the chief administrative authority of the People's Republic of China. The State Council is chaired by the premier and includes the heads of each of the cabinet-level executive departments.

Chinese City Tier System: an unofficial hierarchical classification of cities in mainland China reflecting population size, political administration, and development level. Tier 1 cities – the largest – commonly include Beijing, Shanghai, Guangzhou, and Shenzhen. Tier 2 cities are wealthy provincial capitals and special administrative cities. Tier 3 cities generally refer to less developed provincial capitals, county-level capitals, and other cities with more than one million residents.

Delivery-Versus-Payment: a securities industry settlement protocol in which the buyer's payment for a security or securities is due at the same time as delivery.

Derivative: a contract whose value is based on the performance of an underlying financial asset, index, or other investment.

Disintermediation: the withdrawal of funds from intermediary financial institutions, such as banks, to invest them directly and usually yield a higher return. This removal of the middleman connects borrower and lender directly.

Gross Domestic Product (GDP): a macroeconomic measure of the value of a country's economic output. GDP includes only those goods and services produced domestically; it excludes goods and services produced abroad, even if such goods and services are produced by factors of production (i.e. companies) owned by the country in question.

Hard Currency: a monetary system that is widely accepted around the world as a form of payment for goods and services.

Indenture: a legal and binding contract among multiple parties. Between bond issuers and bondholders, an indenture specifies important features of a bond, including maturity date and interest payments.

International Monetary Fund (IMF): an organization of countries whose primary purpose is to ensure the stability of the international monetary system—the system of exchange rates and international payments that enables countries (and their citizens) to transact with each other. Created in 1945, the IMF is governed by and accountable to the countries that make up its near-global membership.

Local Government Financing Vehicles (LGFVs): special purpose vehicles that borrow funds on behalf of local governments to finance projects ranging from infrastructure to real estate development.

Market Capitalization: the value of a corporation as determined by the market price of its issued and outstanding common stock. It is calculated by multiplying the number of outstanding shares by the current market price of a share. (Source: Barron's Dictionary of Finance and Investment Terms, 1995)

Maturity Date: date on which the bond principal comes due for repayment, as defined in the bond indenture. Also called redemption date.

National Development and Reform Commission (NDRC): a macroeconomic management agency under the Chinese State Council, which has broad administrative and planning control over the Chinese economy.

Nationally Recognized Statistical Rating Organization (NRSRO): a credit rating organization that provides an assessment of the creditworthiness of a firm or financial instrument(s), and is registered with the U.S. Securities and Exchange Commission (SEC). Not all credit rating organizations are NRSROs.

Net International Investment Position (NIIP): the value of overseas assets owned by a nation minus the value of domestic assets owned by foreigners.

Over the Counter (OTC): a security that is not listed and traded on an organized exchange. In an over the counter market, securities transactions may be conducted through a dealer network. (Source: *Barron's Dictionary of Finance and Investment Terms*, 1995)

People's Bank of China (PBOC): the central bank of the People's Republic of China, located in Beijing.

Policy Banks: three banks in China (Agricultural Development Bank of China, China Development Bank, and Export-Import Bank of China) that were established in 1994 to finance state-invested projects, as well as economic and trade development priorities.

Prime Rate: the interest rate that commercial banks charge their most creditworthy customers. The prime rate serves as a basis for determining most other interest rates lenders make available to borrowers.

Qualified Foreign Institutional Investor (QFII): a program that permits certain licensed global institutional investors to participate in China's renminbi-based mainland capital markets, subject to a quota.

Renminbi (RMB): the official currency of the People's Republic of China. The name literally means "people's currency." The yuan (sign: ¥) is the basic unit of the renminbi, but is also used to refer to the Chinese currency generally, especially in international contexts.

Renminbi Qualified Foreign Institutional Investor (RQFII): a modified version of QFII; RQFII participants can invest in the same range of investment products as QFIIs and are subject to the same restrictions, but RQFII uses renminbi to purchase securities, while a QFII participant uses their domestic currency.

Shadow Banks: financial intermediaries that conduct maturity, credit, and liquidity transformation without explicit access to central bank liquidity or public sector credit guarantees. Examples of shadow banks include finance companies, asset-backed commercial paper conduits, structured investment vehicles (SIVs), credit hedge funds, money market mutual funds, securities lenders, limited-purpose finance companies, and government-sponsored enterprises. (Source: Federal Reserve Bank of New York Staff Report, "Shadow Banking," July 2010, revised February 2012)

Special Drawing Rights (SDR): an international reserve asset created by the International Monetary Fund in 1969 to supplement its member countries' official reserves. SDRs can be exchanged for freely usable currencies. As of October 1, 2016, the value of the SDR is based on a basket of five major currencies — the U.S. dollar, Euro, Chinese renminbi, Japanese yen, and pound sterling.

State-owned Assets Supervision and Administration Commission (SASAC): a special commission, directly under the Chinese State Council, set up in 2003 to manage the state-owned assets of enterprises under the supervision of the central government, in accordance with the company law of the People's Republic of China.

State-owned Enterprise (SOE): a legal entity that is created by the government in order to participate in commercial activities on the government's behalf. A state-owned enterprise can be either wholly or partially owned by a government.

Value Added Tax (VAT): a tax assessed incrementally based on the increase in value of a product or service at different stages of production or distribution.

The Bloomberg Barclays Global Aggregate Bond Index is an index of global investment grade debt securities from local currency markets. This multi-currency benchmark includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging markets issuers. Index code: LEGATRUU.

It is not possible to invest directly in an index.

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