

Research

# Chinese bond market – Evolution and characteristics

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AUTHOR

**Robin Marshall**

Director, Fixed Income Research  
+44 0 208 8661907 [RMarshall@Lseg.com](mailto:RMarshall@Lseg.com)

CO-AUTHORS

**Zhaoyi Yang**

Fixed Income Research  
+852 2164 3286 [Zhaoyi.yang@ftserussell.com](mailto:Zhaoyi.yang@ftserussell.com)



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## Executive summary

Chinese financial markets have developed rapidly in recent years, both relative to the size of the domestic economy and the global economy. The Chinese government bond market currently has a market capitalization that exceeds that of UK gilts and German Bunds. Reforms in Chinese financial markets, and inclusion of Chinese equities and bonds in major global indexes, have improved access to, and increased foreign participation in Chinese markets, but the level remains low compared with emerging market peers. Remaining capital controls and concerns about secondary market liquidity may also be restraining foreign participation in the Chinese bond market. However, recent access reforms to the Chinese bond market, and inclusion in some global bond indexes, have helped to increase foreign participation in the market and reduce currency-hedging costs. Further deregulation and liberalization of the Chinese capital account would likely increase financial integration of Chinese markets with global markets.

Low foreign participation may have reduced the exposure of Chinese bond markets to the global financial cycle, and partly caused their relatively low correlation with G7 bond markets, giving portfolio diversification benefits. Chinese government bonds have offered investors favorable risk-adjusted returns in recent years and bond yields in renminbi still provide a significant yield premium over G7 yields.

The rapid issuance growth since the Global Financial Crisis is a risk to the broader Chinese debt market, as are credit risks lurking in the “shadow” banking sector and off-balance sheet. This is largely explained by the investment and credit boom after the GFC, when the Chinese authorities sought to restructure the economy away from net exports to domestic demand-driven growth. However, China’s shadow banking system is quite distinct from the US, and centered in the banking system, rather than securitization, giving regulators more control and reducing systemic risks.

China’s gross debt/GDP ratio remains a concern, but China’s economy is less exposed to traditional EM vulnerabilities (i.e., high external debt/GDP, commodity price dependency, and high exposure to the global financial cycle), and has a strong savings culture. This means a high share of domestic ownership of government bonds. In addition, Chinese government debt is virtually all onshore, denominated in renminbi (98.5%, as of May 29, 2020), and not in external US dollar debt, considerably reducing the risk of the classic EM sovereign default, caused by a currency asset/liability mismatch.

# Evolution and structure of the Chinese bond market

Since the free-market reforms of the late-1970s, the Chinese economy has been transformed from an agrarian base to a manufacturing led economy, averaging 9.5% GDP growth from 1979 to 2018.<sup>1</sup> China issued foreign bonds from 1861-1950 to finance military expeditions, and the first domestic government bonds were issued in 1950. But that issuance was then suspended until the liberalization reforms of 1979 paved the way for domestic government bond issuance in 1981.<sup>2</sup> A national secondary market in these securities began in 1990, and government bonds have been issued via an auction system since 1996.

The secondary market comprises (1) the interbank market (CIBM), (2) the exchange market, and (3) the over-the-counter (OTC) market. In the early days, the exchange market was the most active, but this has now been supplanted by the interbank market. As Table 1 shows, there are principally six types of instrument traded in the domestic (or onshore) bond market, from various public sector bonds through to corporate issues. The “policy” bank issuance market is about the same size as the government bond market. Policy bank securities are bonds issued by the three government-backed policy banks—the China Development Bank, the Agricultural Development Bank of China and the Export-Import Bank of China.

The other feature of Table 1 is the size of the local government bond market, which reflects the borrowing by local provinces and cities from local government financing vehicles (LGFVs) to finance infrastructure projects, many of which have proved unprofitable. This led to regulation in 2015 prohibiting local provinces and cities from bank borrowing and obliging them to issue debt on public bond markets. In fact, the thrust of Chinese regulation and reform in recent years has been to reduce the dependence on the banking system for finance, and particularly the shadow banking system, and to increase securitization through the bond markets (see the Risks section below).

**Table 1. Structure of the onshore Chinese bond market**

Asset class	Issuer	% of total onshore market*	Maturity	Amount outstanding (Renminbi, trillion)	Market
Government bonds	Ministry of Finance	16%	3m to 50yrs	16.1	CIBM & Exchange
Policy bank bonds	China Dev. Bank, Agricultural Dev. Bank of China, Export-Import Bank of China	16%	6m to 50yrs	16.0	CIBM & Exchange
Local government bonds	Provincials & municipalities	23%	1yr to 10yrs	23.2	CIBM & Exchange

<sup>1</sup> “China’s Economic Rise: History, Trends, Challenges, and Implications for the US,” Congressional Research Service, June 2019.

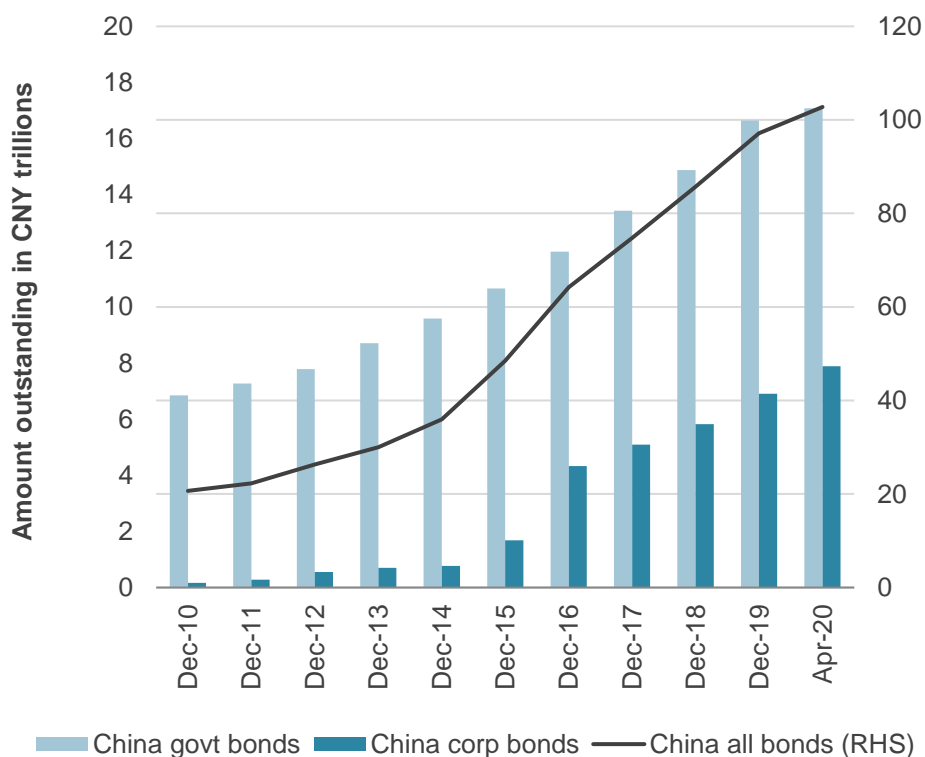
<sup>2</sup> “The Micro-structure of China’s Government Bond Market,” Jennie Bai, Michael Fleming, Casidhe Horan, Fed. Reserve Bank of New York, Staff Reports, May 2013.

Asset class	Issuer	% of total onshore market*	Maturity	Amount outstanding (Renminbi, trillion)	Market
Corporate bonds	Corporates	8%	3yrs to 30yrs & perpetuals	7.9	Exchange only
Financial bonds	Financials	6%	3yrs to 10yrs	6.3	CIBM & Exchange
Enterprise bonds	Corporates	4%	3yrs to 30yrs	3.7	CIBM & Exchange

Source: FTSE Russell, May 2020. \*Does not sum to 100, since asset-backed, commercial paper and certificate of deposits are not shown.

This has led to the scale of the onshore bond market being transformed in the last decade. As Chart 1 shows, the overall size of the market has increased by about five times, reflecting both a structural shift away from bank finance to securitization by local governments and municipalities, and a sharp increase in corporate issuance. The share of Chinese government bonds as a proportion of the overall bonds outstanding has also fallen sharply, from about 33% in 2010, to 16% in 2020 (but note that asset-backed securities are included in the overall total outstanding).

**Chart 1. Growth in issuance in the Chinese bond market**



Source: Wind, May 2020.

## Relative size and duration of the Chinese government bond market

As a result of the surge in issuance in recent years, the Chinese domestic government bond market is now larger than both German Bunds and UK gilts, as Table 2 shows. The maturity structure of the Chinese government bond market is skewed towards shorter maturities, hence the relatively short duration of the FTSE benchmark index, as the Table shows, which tends to dampen the volatility of the index. This issuance skew has also meant the yield curve is typically flatter than in other Asian markets. Government bonds are generally more liquid than corporate issues, as in most major bond markets. Foreign investor concerns about the methodology of local credit ratings may have reduced the appeal of domestic credit issues, relative to Chinese government bonds, which dominate foreign investor holdings. Rating agencies have been assessing offshore Chinese debt and government bonds for many years, but were unable to assess onshore Chinese corporate bonds until very recently. Fitch began rating Chinese government bonds in 2001, S&P in 2004 and Moody's in 2010.

**Table 2. Credit rating, size & duration of Chinese govt. bond market versus other markets**

Bond market	FTSE market index capitalization, (USD, trillion)	FTSE market index duration (years)	Credit rating	Current index yield (%)
China Govt., LC (CGBI)	\$1.57	6.14	A+	2.34
EM Govt., LC (EMGBI)	\$2.81	5.97	A	3.34
US Treasury, USD	\$8.75	7.02	AA+	0.50
Eurozone Govt Bond, LC	\$7.53	8.48	AA-	0.18
Japan Govt. Bond, LC	\$4.31	11.61	A+	0.10
UK Govt., LC	\$1.26	14.92	AA	0.33
German Govt., LC	\$1.41	8.25	AAA	-0.47

Source: FTSE Russell as of May 29, 2020.

Alongside the onshore Chinese bond market, an offshore bond market has developed in renminbi, as currency controls have slowly been lifted. This began in 2003, with offshore renminbi bonds in Hong Kong and banking services, and was followed in 2007 with restrictions being lifted on Chinese-based financial institutions issuing renminbi bonds in Hong Kong. These bonds are often referred to as “dim sum” bonds and are assigned the CNH code, to distinguish them from the CNY (yuan) bonds issued in the onshore bond market.

## Access to the Chinese bond market and internationalization of the renminbi

A series of measures since 2016 has substantially improved foreign access to the Chinese onshore bond market. (Investors can access offshore renminbi-denominated bonds through Hong Kong and the foreign currency bonds of Chinese corporates via other Asian trading venues.) Improved access to the onshore market started with the granting of quota-free access in February 2016 to overseas institutional investors using the Chinese Interbank Bond Market. Since about 90% of Chinese onshore bonds trade in this market, this was a major initiative in opening the market. Previously, only Qualified Foreign Institutional Investors (QFII), or Renminbi Qualified Foreign Institutional Investors (RQFII), could invest in the CIBM, which rationed levels of investment via quotas. Unsurprisingly, the share of foreign ownership in the Chinese onshore bond market was under 2% as a result. Further measures since 2016 have helped access to the onshore debt market, including the establishment of the China/Hong Kong Bond connect facility, and improved market facilities for overseas investors to hedge out currency exposure, as Table 3 outlines.

New access routes for foreign investors, through the CIBM direct and the China/Hong Kong Bond connect facilities, are faster and also have currency conversion arrangements available, without quotas. This allows overseas investors to both invest in Chinese onshore bonds, and repatriate the proceeds when the bonds are sold, and is simpler than using the traditional QFII or RQFII route, so these tend to be the access routes chosen by overseas investors. It has been noted that reducing hedging costs would also help the development and successful liberalization of the Chinese bond market.<sup>3</sup>

Although the renminbi is not yet fully convertible, the wide discrepancy between onshore renminbi (CNY) and offshore renminbi (CNH) exchange rates has slowly disappeared, as the authorities have allowed market forces to play a bigger role in the setting of the onshore renminbi exchange rate. Allowable trading bands for the CNY have widened in recent years, as the authorities have moved towards an adjustable basket peg, and guidance on the exchange rate regime was increased to reduce depreciation expectations.<sup>4</sup> Easier settlement procedures and the IMF's decision to include the renminbi in the SDR in 2015/16 have given the internationalization of the renminbi a significant boost. For global reserve managers, the addition of the renminbi to the IMF Special Drawing Rights (SDR), with a weight of 10.9%, meant they would need to allocate reserves to the renminbi, in turn increasing the demand for assets like Chinese government bonds. Global currency reserves still show renminbi weightings of well below 11% however, although it is well known that holdings in reserve currencies tend to exhibit hysteresis, or inertia.

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<sup>3</sup> China's Bond Market and Global Financial Markets, Eugenio Cerutti and Maurice Obstfeld, IMF Working Paper, December 2018.

<sup>4</sup> See "China's Evolving Exchange Rate Regime," Sonali Das, IMF Working Paper, March 2019.

**Table 3. Key reforms for foreign investors in accessing Chinese bond markets since 2016**

<b>February 2016</b>	New investment channel for Overseas Institutional investors (OIs) giving quota-free access to the Chinese Interbank Bond Market (where approximately 90% of Chinese bonds are traded), known as CIBM direct. Expanded list of eligible investors, including banks, insurance companies, asset managers, pension funds, charities and endowment funds. Speculative investors excluded.
<b>October 2016</b>	Renminbi included in IMF Special Drawing Rights, with a weighting of 10.9%, helping its development as a reserve currency (October 2016).
<b>July 2017</b>	China/Hong Kong Bond connect established.
<b>June 2018</b>	SAFE announced the removal of repatriation and holding period restrictions for QFII/RQFII funds.
<b>January 2019</b>	S&P Global China Ratings was approved to make credit ratings in the domestic bond market (the first international credit rating agency to be approved).
<b>September 2019</b>	SAFE announced the removal of investment quota restrictions for Qualified Foreign institutional Investors (QFII) and Renminbi Qualified Foreign Institutional Investors (RQFII) (implemented in May 2020).
<b>February 2020</b>	SAFE allows CNY FX currency hedging to be conducted with up to three counterparties.
<b>March 2020</b>	Additional flexibility on settlement cycle longer than T+3, and special handling of failed trades for foreign investors are offered by CCDC and Shanghai Clearing House.
<b>May 2020</b>	Subsidiary of Fitch rating agency gains approval to do credit ratings on local bond issues in the interbank bond market, becoming the second major credit rating agency to do so after S&P.
<b>May 2020</b>	Implementation of the removal of quota restrictions for QFII scheme and yuan-denominated RQFII scheme, and simplified procedures for outbound remittances, first announced in September 2019. The two inbound investment schemes facilitate foreign investor flows, with only a registration process. Foreign investors may choose in which currency and when they remit money through QFII.

## Impact of introduction into global bond indexes

These access reforms have led to an increase in foreign participation in the onshore Chinese bond markets. Apart from improved foreign access to the onshore Chinese bond market, a key driver is the inclusion of Chinese bonds in some benchmark global bond indexes, in which Chinese bonds previously carried a zero weighting. Fund managers seeking to match, or outperform, benchmark indexes are therefore obliged to increase the weightings in Chinese bonds. As benchmark-driven portfolio flows have increased in recent years, inclusion in global bond indexes has become more important. Chart 2 shows that foreign ownership of Chinese government bonds has quadrupled in the last five years, from 2% to 8%, with the recent rise in ownership being well correlated with the inclusion of Chinese government bonds in some global indexes.

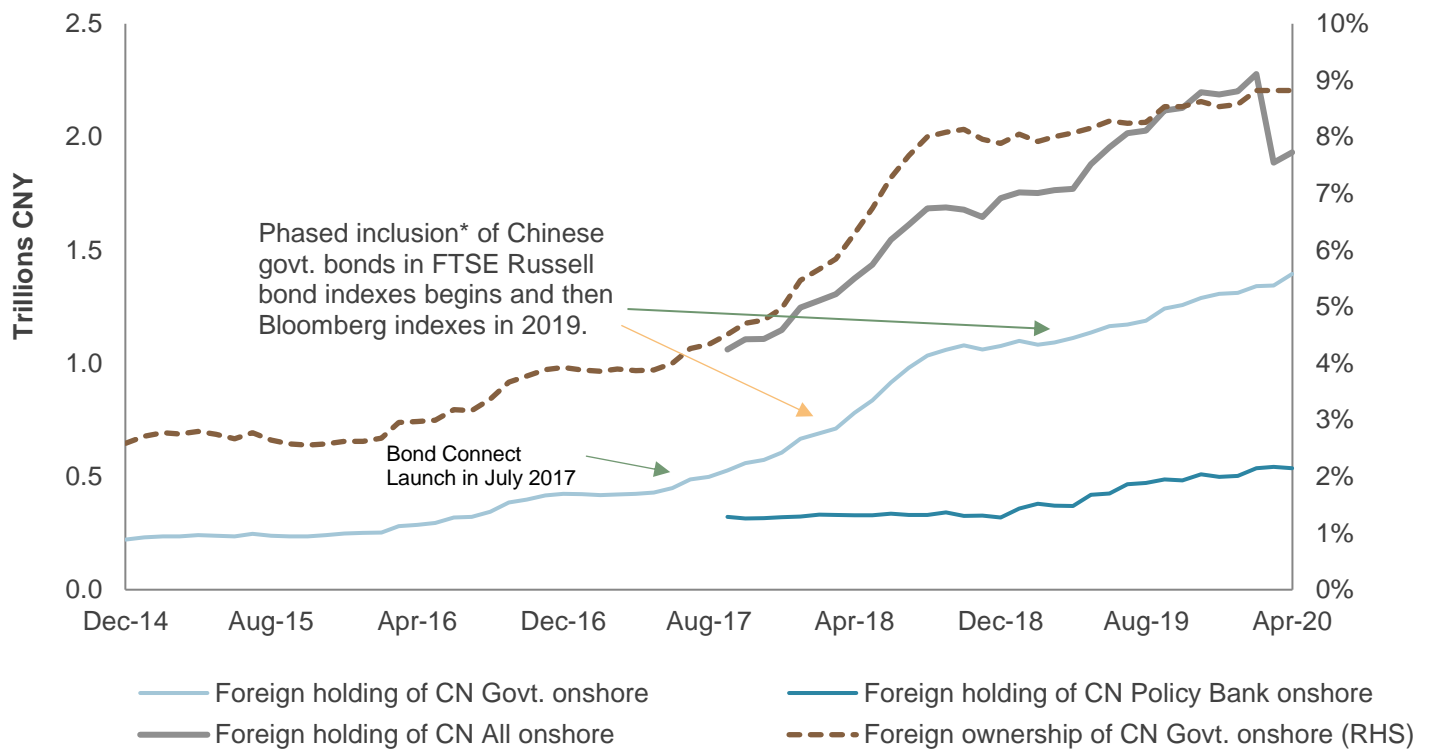
FTSE Russell became the first major index provider to include Chinese government bonds in its emerging market, Asian and Asia Pacific government bond indexes in 2017/18. It has been estimated that inclusion in global indexes could generate flows of up to \$450 billion into Chinese bonds in the next two to three years. Also, it has been noted that the relative high yield of the Chinese



government market might induce investors to take an overweight position, relative to benchmark, as well.<sup>5</sup>

Other potential sources of foreign capital inflow are foreign central banks and sovereign wealth funds, which currently have low weights in Chinese bonds and equities. Responses to the Reserve Asset Management Practices survey of central banks in 2019 suggest that renminbi eligibility for reserves had reached 49% of all respondents, compared to 55% for the yen and 98% for the US dollar. The inclusion of the renminbi in the composition of the IMF’s Special Drawing Rights in October 2016 significantly boosted the appeal of renminbi bonds and equities as reserve assets for central banks.<sup>6</sup>

**Chart 2. Foreign participation in the Chinese government bond market**



Source: Wind, May 2020.

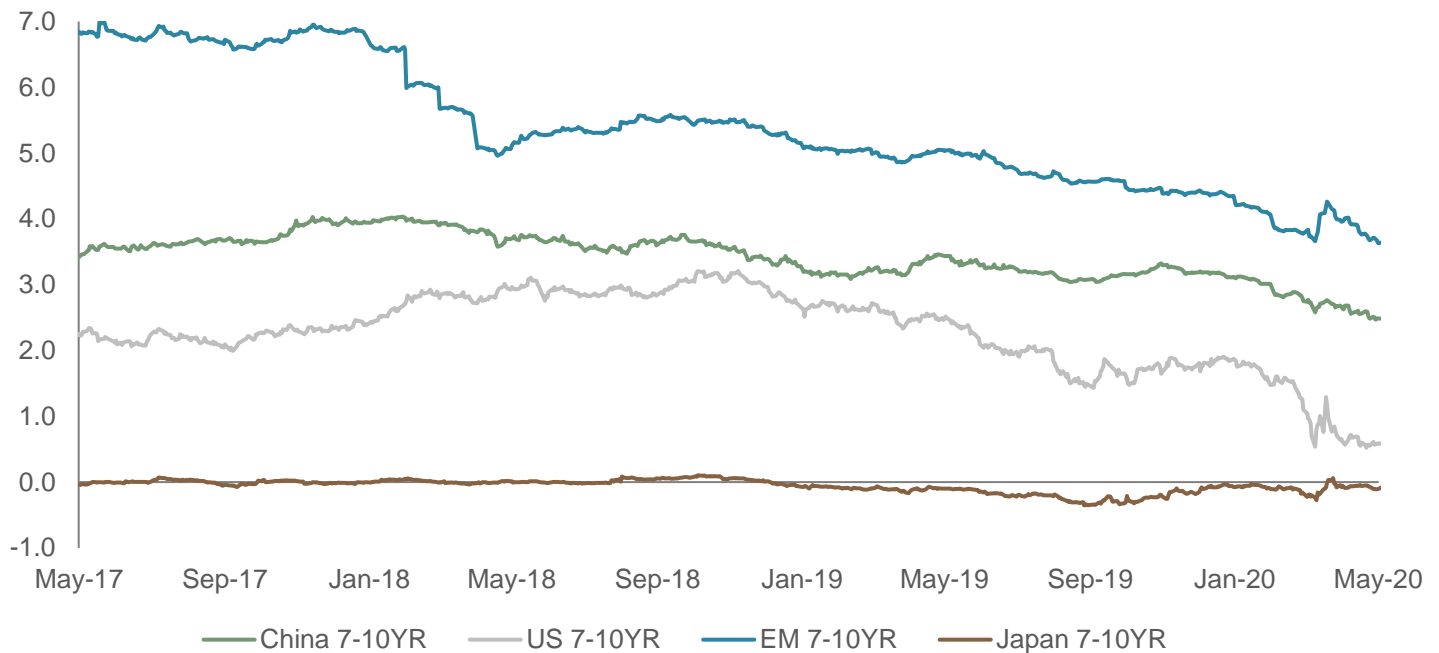
<sup>5</sup> See “China deepens global finance links as it joins benchmark indexes,” Chen, Drakopoulos and Goel, IMF blog, June 19, 2019.

<sup>6</sup> See “Inaugural RAMP survey on the reserve management practices of central banks, Results and Observations,” World Bank, 2019.

## Relative valuations versus other bond markets

Turning to relative valuations, yields show the Chinese bond market has been rated between emerging market and developed market sovereigns in recent years as Chart 3 shows. Such a rating is broadly in line with respective credit ratings.

**Chart 3. Chinese government bond yields versus other bond markets**



Source: FTSE Russell, data as of May 19, 2020. Past performance is no guarantee to future results. Please see the end for important disclosures.

Prima facie, China's foreign net asset position, huge currency reserves, low government debt/GDP ratio and low dependency on external financing, suggest its sovereign credit ratings are conservative. However, increased debt issuance in recent years explains rating agency caution (see Table 5 and Risks below). However, China's balance of payments data shows the country remains a net creditor to the rest of the world, with a significant net positive asset position of approximately 15% of GDP.

## Risk-adjusted returns in Chinese government bonds versus other asset classes

Compared with other international fixed income asset classes, risk-adjusted returns in the FTSE Chinese (local currency) Government Bond Index have been favorable in the period 2009-2020, as Table 5 shows, and correlation with other asset classes has been low (see Table 6). The standard deviation of the returns has also been the lowest of all major bond markets, reflecting the relatively low duration of the Chinese government bond index, compared with other markets. The low standard deviation result is particularly notable given that G7 central banks were pursuing QE purchase programs of government bonds during the

period to which the data applies (2009-2020), which tends to dampen standard deviation of returns.

Of the other government bond indexes, only the local currency Emerging Market Government Bond Index (EMGBI) generated higher returns, but currency effects dampened them in that index more substantially. The Chinese Onshore Corporate Bond Index in local currency offered favorable returns in the same period, with an even lower standard deviation. However, Chinese credit rating information is relatively sparse, with domestic rating agencies generally rating companies at much higher ratings than US agencies, so a note of caution on this asset class is appropriate.

**Table 4. FTSE Index key to indexes used in data analysis**

<b>CGBI</b>	Chinese government bond index, in local currency
<b>China Corporate Index</b>	Chinese corporate bonds, in local currency
<b>China Corporate (USD) Investment. Grade Index</b>	Chinese investment-grade corporate bonds, in US dollars
<b>EMGBI</b>	Emerging market government bonds, in local currency (16 countries in index)
<b>EMUSDGBI</b>	EM US dollar government bonds, in US dollars
<b>EGBI</b>	Eurozone government bonds, in euros
<b>Japan Govt. Bond Index</b>	Japanese government bonds (JGBs), ex Bank of Japan holdings and Ministry of Finance buybacks, in local currency
<b>UK Govt. Bond Index</b>	UK gilts, ex Bank of England holdings, in local currency
<b>German Govt. Bond Index</b>	German bunds, in local currency
<b>US Treasury Index</b>	US Treasury, ex Fed purchases, bonds < 1yr to maturity, in US dollars
<b>US BIG Corporate Index</b>	US investment-grade corporate bonds, in US dollars
<b>US High Yield Index</b>	US high yield bonds of US & Canadian companies, in US dollars
<b>FTSE USA Index</b>	US equities, in US dollars

**Table 5. Risk-adjusted returns in Chinese government bonds vs other asset classes**

Asset Class	Annualized return (%)	Standard deviation (%)	Risk-adjusted return (%)	Monthly return (%)	Standard deviation (%)	Risk-adjusted return (%)
<b>China Govt., LC</b>	3.97	2.71	1.46	0.32	0.78	0.42
<b>China Corporate, LC</b>	6.25	2.42	2.59	0.51	0.70	0.73
<b>China Corporate Inv. Grade, USD</b>	6.34	3.73	1.70	0.51	1.08	0.48
<b>US Treasury, USD</b>	3.54	3.76	0.94	0.29	1.09	0.27
<b>Eurozone Govt., LC</b>	4.30	4.27	1.01	0.35	1.23	0.29

<b>EM Govt., LC</b>	7.77	3.55	2.19	0.63	1.02	0.61
<b>EM Govt., USD</b>	7.17	7.73	0.93	0.58	2.23	0.26
<b>US Corporate Inv. Grade, USD</b>	6.81	5.10	1.34	0.55	1.47	0.37
<b>US High Yield, USD</b>	9.58	8.18	1.17	0.77	2.36	0.32
<b>FTSE USA (equity), USD</b>	15.49	14.1	1.10	1.21	4.07	0.30

Source: FTSE Russell; monthly data from 2009-May 2020, apart from China corporate bonds 2014-May 2020. Past performance is no guarantee to future results. Please see the end for important disclosures.

## Correlations of Chinese government bond returns with other asset classes

Turning to the correlation of the FTSE Chinese Government Bond Index (in local currency), with other asset classes, the results are shown in Table 6. The most striking feature of the correlations, for the period since 2009, is how low they are across a wide range of asset classes, including both risk-on and risk-off assets. Thus, against both the FTSE USA Index (the most risk-on asset class) and the US Treasury Index (the most risk-off), the correlation of the index is low, and particularly versus equities and other risk-on asset classes. Only against the Chinese corporate index in local currency, and the EMGBI, is the correlation significant, and the correlation of 0.23 with EMGBI returns is boosted by China joining the EMGBI in 2018 (of which it now comprises 55% of the index). But it is worth noting that China is not a typical EM government bond market, given the low external debt financing requirements, and substantial foreign exchange reserves, which may help explain the lower correlation.

Correlation of returns with domestic Chinese corporate bonds issued in local currency is higher, at 0.78, reflecting similar drivers in domestic interest rates and PBOC monetary policy. This is much higher than the correlation of the US Treasury Index and the US (IG) Corporate Bond Index returns of 0.39. But the decline of the credit quality of the US corporate bond index over the data period may help to explain this. Unsurprisingly, the US High Yield Index returns have a much lower correlation, indeed it is negative, with the US Treasury Index returns, being a risk-off asset class.

Why does the FTSE Chinese government bond index (CGBI) have such low correlations with international markets? The best explanation would appear to be low foreign participation rates in, and poor access to, the Chinese bond market until recently. Chinese market reforms improving access for foreign investors did not develop apace until 2016, so foreign participation in the Chinese bond market was only 2% before these reforms. This would also have reduced the exposure of the Chinese local currency government bond index to the global financial cycle and spillover effects from G7 QE programs, which have boosted correlations between the US Treasury Index, and the EMGBI to 0.44, as Table 6 shows.<sup>7</sup> Therefore, this evidence suggests that further capital account liberalization in China would likely increase the impact of monetary policy adjustments in the US, Eurozone and Japan on capital inflows to and outflows from China, judged by

<sup>7</sup>See our paper "Emerging Market fixed income: evolution and characteristics of the asset class," FTSE Russell, May 2020.

other EM bond markets. Similarly, inclusion of Chinese bonds and equities in more global benchmark indexes is also likely to increase foreign ownership (see below). However, current low correlations with other asset classes offer portfolio diversification benefits for investors, if combined with other fixed income portfolios.

**Table 6. Correlations of Chinese government bond index returns with other asset classes**

Asset class	China Govt., LC	China Corporate, LC	US Treasury, USD	Eurozone Govt., LC	EM Govt., LC	EM Govt., USD	US Corp., USD	US High Yield, USD	FTSE USA (equity), USD
China Govt., LC	1.00								
China Corp, LC	0.78	1.00							
US Treasury, USD	0.23	0.08	1.00						
Eurozone Govt., LC	0.14	0.06	0.49	1.00					
EM Govt., LC	0.24	0.29	0.44	0.44	1.00				
EM Govt., USD	-0.01	0.10	0.06	0.39	0.65	1.00			
US Corp., USD	0.02	0.06	0.39	0.53	0.56	0.73	1.00		
US High Yield, USD	-0.14	0.02	-0.30	0.12	0.33	0.75	0.61	1.00	
FTSE USA (equity), USD	-0.12	0.06	-0.43	-0.01	0.19	0.53	0.31	0.75	1.00

Source: FTSE Russell; monthly data from 2009-May 2020, apart from China corporate bonds 2014-May 2020. Past performance is no guarantee to future results. Please see the end for important disclosures.

## Risks to the Chinese bond market

### Debt levels and shadow banking

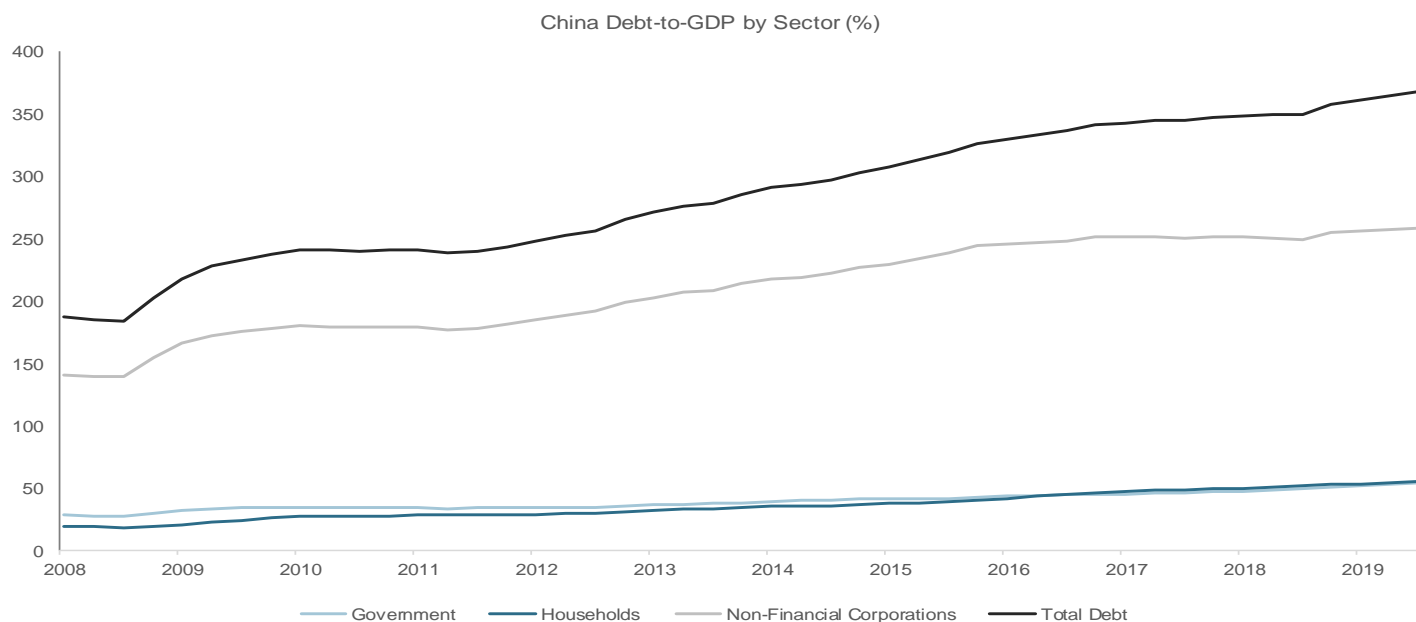
The key risk to the broader Chinese bond market is the build-up in debt, particularly in off-balance sheet vehicles and/or the “shadow” banking system, and over-capacity in the economy, caused by the credit and investment boom since the GFC. However, this is much less of an issue for the Chinese government bond market in renminbi, unless it causes further sovereign credit rating downgrades (both Moody’s and S&P did downgrade Chinese sovereign debt from AA- to A+, citing debt levels in May and September 2017), but growth in shadow banking assets has subsequently slowed (see below).

Chinese policy makers responded to the GFC with a stimulus program that dwarfed those in the G7, of 12.5% of GDP, as they sought to replace the 7% fall in net exports as a share of GDP, by boosting domestic demand and investment. Investment rose to 48% of Chinese GDP in 2010 (from 41% of GDP before the crisis) but GDP growth slowed, as the efficiency of investment fell (measured by the increase in the ICOR, or incremental capital/output ratio<sup>8</sup>). This surge in

<sup>8</sup> See Martin Wolf, “China’s debt threat; time to rein in the lending boom,” Financial Times, July 24, 2018.

investment led to a substantial build-up of debt, since much of the investment in infrastructure projects was debt-financed by local authorities, with the gross debt/GDP ratio rising from 171% in Q4 2008, to 299% in Q1 2018<sup>9</sup> (see Chart 4).

**Chart 4. Chinese debt/GDP ratios**



Source: FTSE Russell/Refinitiv May 2020.

Parallels have been drawn with Japan's over-investment boom/bust in the late-1980s, and severe banking crisis, which ushered in a long period of very low growth and deflation. An IMF paper in 2018 underscored the risks after a long credit boom, stating that "Historical precedents of safe credit booms of such magnitude and speed are few, and far from comforting."<sup>10</sup>

Concerns about Chinese debt leverage have been compounded by the opacity of the Chinese financial system, and the rapid growth in "shadow" banking. Shadow banking, or shadow credit intermediation is the provision of off-balance sheet funds, or loans, often to borrowers unable to secure normal bank loans, and at higher interest rates than on standard loans. Some of these products are then sold onto other investors. Shadow banking grew rapidly in China after the monetary policy tightening in 2010, as banks sought to evade credit restrictions and regulatory controls on deposit rates, and demand for credit boomed, with much of the credit directed towards State-owned enterprises (SOEs) and local government financing vehicles.

### Differences between US and Chinese shadow banking

However, shadow banking in China is very different from traditional shadow banking, which is built on securitization of assets like loans, leases and mortgages, as in the US. Indeed, high credit ratings for securities (sub-prime

<sup>9</sup> Institute for International Finance data.

<sup>10</sup> "Credit booms – is China different?" Sally Chen, Joong Shik Kang, IMF Working Paper, January 2018.

MBS) gave investors a false sense of security ahead of the GFC, and the complexity of off-balance sheet lending may have led to US regulators underestimating systemic risks. The Chinese authorities have sought to address the debt build-up since 2015, after credit growth of 20% per annum between 2009 and 2015 and have monitored the growth in shadow banking since 2009.<sup>11</sup> Financial regulations were tightened in 2017, following establishment of the Macro Prudential Assessment Framework (MPA), with all off-balance sheet products to be included within it, including trusts and entrusted loans.

In the midst of the COVID-19 crisis, PBOC Governor Yi Gang recently stated that “the normal monetary policy should be kept as long as possible”<sup>12</sup> to avoid a further increase in debt finance, so the PBOC has only reduced policy rates by 30bp since the crisis began, far less than G7 central banks. Because shadow banking is centered in the Chinese banking system, Chinese regulators have at least been able to exert some control over the growth of shadow banking assets in recent years, led by the China Banking and Insurance Regulatory Commission, and financial stability risks may be lower. As a result, broadly defined shadow banking assets fell to a year low in H1 2019, at Rmb 59.6 trillion<sup>13</sup>, and domestic credit growth slowed to 13% in April 2020, from a peak of over 25% y/y in 2016.

Although the build-up of Chinese debt presents a clear risk to the economy, including further downgrades, and particularly to corporate credit, a number of China-specific factors reduce the risks of a major crisis. The true extent of Chinese public ownership is difficult to establish, but is likely to be higher than the US, before the GFC, and particularly within the banking system. China’s share of external debt is low, relative to renminbi debt, the current account surplus remains substantial, despite the COVID-19 recession globally, and domestic savings are very high, which is reflected in high domestic ownership of Chinese government bonds. The PBOC is aware of the need to de-leverage debt levels, and the authorities retain strong control over the financial system with plenty of room to stimulate demand if required, since its government debt/GDP ratio is 50%. Low foreign participation in Chinese financial markets also means the international investment position of China shows relatively low liabilities to foreigners, relative to GDP, of 40%, compared with 160% of GDP in the US, 115% of GDP in Japan, 65% of GDP in Korea, and 55% in India.

None of these factors guarantees a soft landing from the credit boom for the Chinese economy, as Japan’s high savings rate and current account surpluses proved. However, if there were a “financial crisis” and recession, it is hard to see the G7 permitting a sharp renminbi devaluation as an exit route for the Chinese authorities. Therefore, this would leave boosting private or public consumption as the likely policy response to stimulate demand, and not mean higher domestic interest rates.

## Currency and policy risks

Chinese government bonds issued in renminbi leave investors exposed to currency risk, if based in other currencies, which they can hedge, or choose to accept. Currency hedging costs will vary according to the home currency of investors, but also the liquidity, and extra cost of using renminbi forwards. Recent

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<sup>11</sup> “China’s shadow banking: Banks’ shadow and traditional shadow banking”, Guofeng Sun, BIS Working Paper No 822, November 2019.

<sup>12</sup> Article in “Economic Research”, PBOC Governor Yi Gang, April 26, 2020.

<sup>13</sup> Moody’s October 2019.

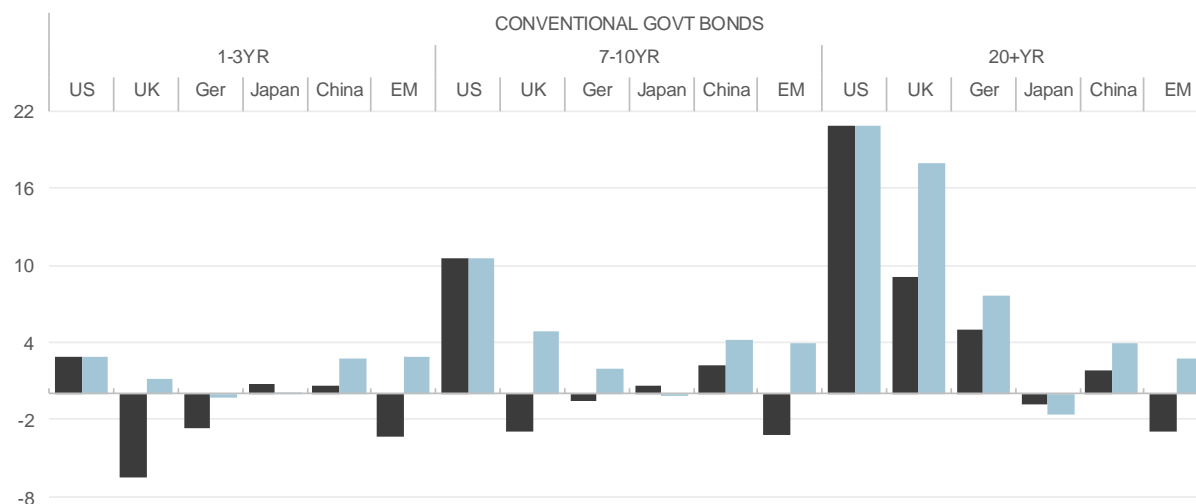
reforms improving the access of foreign investors to FX derivatives should assist bond investors in hedging currency risk. Given their direction, the risk of an abrupt reversal and imposition of capital controls would appear low, particularly given how low foreign ownership of the bond market still is. The other factor is the renminbi itself. China has been accused of currency manipulation by the Trump administration in the US, in holding the renminbi exchange rate at artificially low levels, although the Chinese current account surplus has fallen from approximately 10% of GDP in 2007 to only 0.5% in 2019 according to IMF data. But China still ran a substantial trade surplus of \$345 billion per annum with the US alone in 2019<sup>14</sup> and previous currency weakness in the renminbi rapidly attracted criticism from G7 trading partners, led by the US.<sup>15</sup>

The Balassa/Samuelson effect also suggests upward pressure on the real exchange rates of lower wage emerging economies, due to their lower wages and comparative cost advantages in tradeable goods. Research suggests this adjustment has generally taken place via a higher rate of inflation in the EM economy, including China.<sup>16</sup> Nominal exchange rate depreciation would offset this adjustment effect and could distort trade imbalances further.

## The impact of the COVID-19 shock

Risks to the Chinese onshore bond market from COVID-19 are either internal, via the Lockdown impact on activity, or external, via the impact on EM economies, to which China is the largest international creditor. Overall, the government bond market is less exposed than the corporate credit market, with credit spreads versus government bonds widening sharply in the early stages of the pandemic, reflecting increased default risks. Furthermore, the Chinese government bond market has offered positive returns (in both US dollars and local currency) as a safe haven versus other major markets in the year-to-date, as Chart 5 shows.

**Chart 5. Major market bond returns 2020 YTD, in local currency and US dollars**



Source: FTSE Russell as of May 2020; Past performance is no guarantee to future results. Please see the end for important disclosures.

<sup>14</sup> US Census Bureau data.

<sup>15</sup> US President Donald Trump tweet, August 5, 2019.

<sup>16</sup> See "China's rapid growth and real exchange rate appreciation: Measuring the Balassa-Samuelson effect," Hiroyuki Imai, Journal of Asian Economics, February 2018.



How far China is exposed as a sovereign to the medium and longer-term impact of the virus will depend on: (1) how far global supply chains are adjusted; (2) whether global consumption declines sharply; and (3) whether China suffers severe loan losses as a creditor to other EM economies. At this stage, these factors are unknowns, but identifiable risks. High relative yields, low international weightings and portfolio diversification benefits offset these risks, as does China's substantial current account surplus and high level of foreign exchange reserves.

## Conclusions

An increased pace of market reform and internationalization of the renminbi has led to higher foreign ownership of Chinese government bonds, but this remains low by international standards (at only 8% today compared to 2% in 2016).

The correlation of the FTSE Chinese Government Bond Index (in local currency) is low with other market indexes, both against emerging markets and the G7.

Chinese government bonds offer portfolio diversification benefits to global investors because of this low correlation, particularly as the correlation of other G20 government bond markets has increased with the US during the COVID-19 crisis.

It also means the Chinese government bond market is less exposed to the global financial cycle, and spillover effects from G7 monetary policy, than other EM economies.

The Chinese government bond index has delivered favorable risk-adjusted returns since 2009, with low standard deviations, reflecting the shorter duration of the index compared to other markets.

The key risk to Chinese debt and the economy is the high gross debt/GDP ratio, raising the risk of another sovereign downgrade.

However, China's shadow banking system is quite distinct from the US version, and centered in the banking system, giving regulators more control and reducing systemic risks.

How far China is exposed as a sovereign to the medium and longer-term impact of COVID-19 will depend on how far global supply chains adjust, how global consumption adjusts and whether China suffers loan losses as an EM creditor. High relative yields, low international weightings and diversification benefits offset these risks.

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### EMEA

+44 (0) 20 7866 1810

### North America

+1 877 503 6437

### Asia-Pacific

Hong Kong +852 2164 3333

Tokyo +81 3 4563 6346

Sydney +61 (0) 2 8823 3521

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