The Frontier Line

Opting into China government bonds

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About us

Frontier has been at the forefront of institutional investment advice in Australia for over 25 years and provides advice over more than $490 billion of assets across the superannuation, charity, public sector, insurance and university sectors.

Frontier's purpose is to empower our clients to advance prosperity for their beneficiaries through knowledge sharing, customisation, technology solutions and an alignment and focus unconstrained by product or manager conflict.

Andrew Kemp

Principal Consultant

Andrew Kemp joined Frontier in 2016 as a Senior Consultant before being promoted to Principal Consultant in 2018. He is the head of the Debt and Currency Team, leading Frontier's fixed income and currency research program. Andrew has around twenty years of experience in the asset management industry both domestically and globally, having worked in Australia, Singapore and the UK. Andrew was Head of Fixed Income at DBS Asset Management (Singapore) for three years and prior to that spent a decade as Fixed Income Portfolio Manager at Alliance Bernstein Australia. Andrew joins Frontier from Chimaera Capital, where he was the Director of Asset Management, most recently in Melbourne, but chiefly in the Capital Management division in Singapore. Andrew holds a Bachelor of Commerce (Finance) from Otago University (NZ) and a Graduate Diploma of Applied Finance and Investment from Finsia.

Iain McMahon

Senior Consultant

Iain McMahon joined Frontier in 2019 and is a Senior Consultant in Frontier's Debt and Currency research team. He is currently responsible for investment manager research across Debt and Currency strategies. In addition to Debt strategies, his coverage also includes Alternatives strategies and Derivatives advice. Prior to joining Frontier, Iain spent seven years at J.P. Morgan in a range of risk management functions. Four of these years were based in London providing quantitative and qualitative portfolio analysis to a Multi-Asset trading desk. Prior to working in London, Iain worked in an operational capacity with a Fixed Income Derivatives trading desk. He holds a Bachelor of Commerce (majoring in Finance and Economics) and a Bachelor of Science (majoring in Statistics) from the University of Melbourne and is also a CFA charterholder.

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Background

On the eve of FTSE's inclusion of China government bonds into its World Government Bond Index (WGBI), the implementation of China bonds again comes into focus as it did in 2019 when Bloomberg added China's to its Global Aggregate Bond Index.

Amid geopolitical and bilateral economic risk, rising domestic regulatory risk and uncertainty around future Chinese government guarantees, it is understandable foreign investors are wary of investing in China. Yet despite the numerous headlines, a major structural shift is well underway as China's capital market liberalisation efforts extend to debt markets, now the second largest globally, making it more accessible to foreign investors than ever before.

Frontier has researched China bonds for a number of years and believes global fixed interest and alternative debt portfolios can benefit from the inclusion of China bonds. This paper will review the risk and reward offered by China government bonds, contrast China's inclusion into common fixed interest indices, and assess various considerations for inclusion within fixed interest portfolios, emerging market debt allocations, or even on a standalone basis.

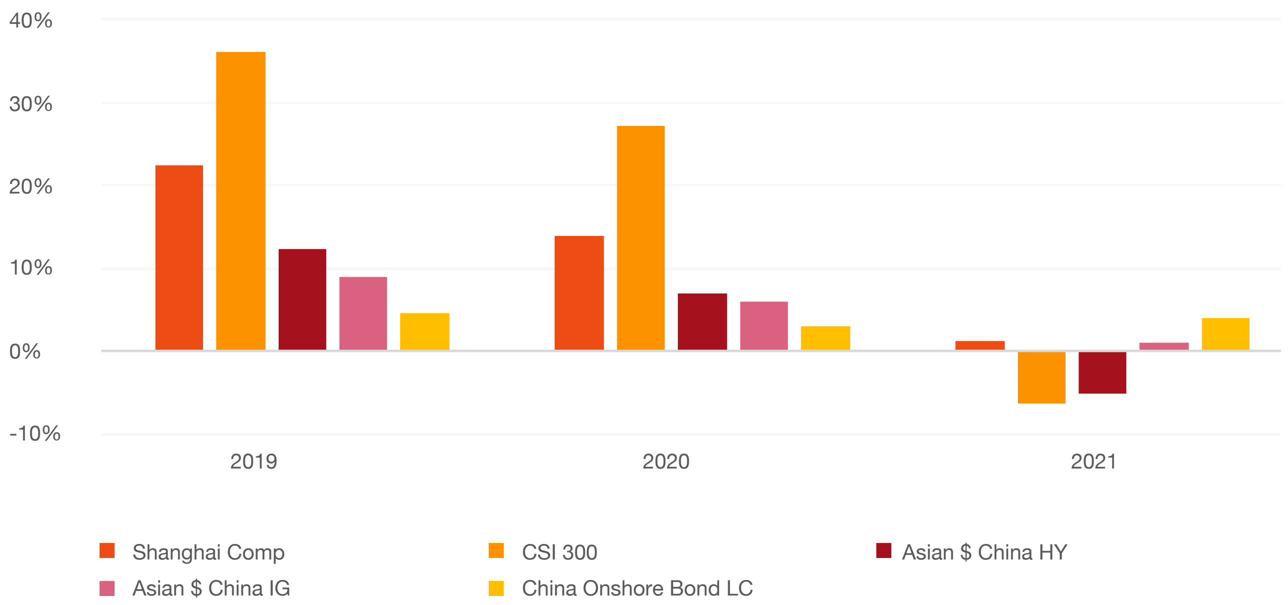
USD denominated Chinese credit exposure is an offshore market which has also felt considerable fallout from China's regulatory sweep. Whilst outside the scope of this paper, developments in this market have added to the negative news flow from China. USD Asian credit was covered as part of the Frontier International series – Opportunities in Asian debt.

China government bonds – a developed market response to negative news flow in 2021

Long labelled as an emerging market country, China's onshore fixed government bonds have highlighted their defensive properties in 2021.

Chinese regulatory constraints on technology companies and education providers, and an ongoing limitation on China's domestic property development sector debt levels, have together had a material negative impact on Chinese risk asset prices this year. Recent volatility in China's corporate credit market has added to the uncertainty and has impacted both onshore and offshore credit markets. Yet through it all, China government bonds have provided a safe haven for investors delivering positive returns when they've needed it most.

Chart 1: Weakness in Chinese risk assets relative to government bonds in 2021



Source: Bloomberg, Frontier. Data as at 24th Aug 2021

Foreign ownership growing from a very low base to over US $500 billion

Once the hunting ground for Asian central banks and sovereign wealth funds, China government bonds are now held across an increasingly broad investor base. Bloomberg's decision to admit eligible bonds to the Bloomberg Barclays Global Aggregate Index starting in April 2019 paved the way for other index providers to follow.

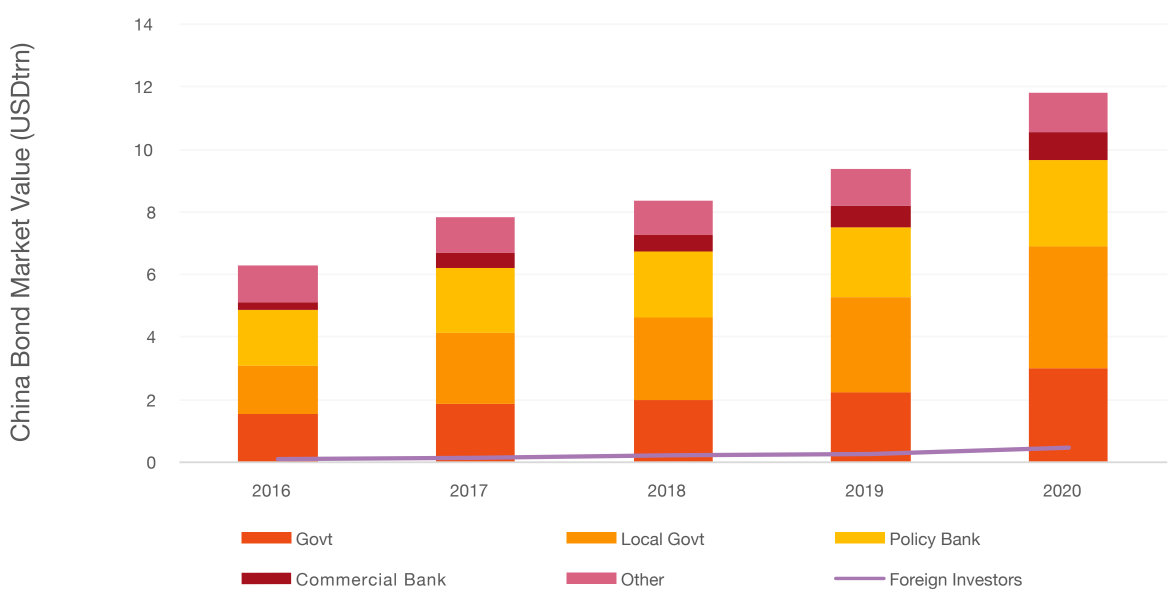
JP Morgan has also introduced China government bonds into its key local currency emerging market sovereign debt indices. The exposure has now reached its capped maximum weighting of 10% and importantly this remains a key access point for investors considering China government bonds from an unhedged currency standpoint.

Benchmark inclusion, coupled with improvements in various operational access methods, is likely to see an increase in bond market investment by foreigners, particularly as negative nominal and real bond yields in other major markets force a rethink of allocations.

Don't expect any capital market fireworks following FTSE's announcement that China bonds will become eligible for the World Government Bond Index.

Whilst this index does have a large volume of AUM tracking it either actively or passively, FTSE 's approach will see China bonds slowly trickle in over 36 months starting from October 2021.

Chart 2: Foreign investors remain a small, but growing market participant



Source: CCDC, Frontier

With an estimated 3.5% of China's onshore bond market held by foreign investors, foreign capital is significantly under-represented relative to other global bond markets. It is difficult to determine which Chinese debt issuers foreign investors hold, yet we believe most foreign capital resides in government bonds and policy bank bonds, which if accurate, equates to approximately 10% foreign ownership of these markets.

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Types of exposure investors get through the major indices

Fixed interest investors using diversified benchmarks such as the Bloomberg Barclays Global Aggregate Index will be benchmarked to a broader set of securities which includes government bonds and China's three policy banks.

Whilst Bloomberg has a range of sub-indices for investors requiring targeted exposure, local government bonds (SOEs) and credit securities will remain ineligible in major indices at this stage.

Of the major government bond indices, the FTSE World Government Bond Index and JP Morgan Government Bond Index - EM, will include only China government bonds, yet compositional and weighting differences between the two are notable.

While a range of sub-indices are again available for investors wanting to tailor exposures, comparing the most common forms of these benchmarks highlights large differences in eventual weights and inclusion methodologies. Importantly the status of currency hedging strategy is also a key differentiator, with emerging market local currency approaches typically managed on a currency unhedged basis.

Table 1: Global bond indices used by investors to access Chinese fixed interest

	Developed market		EMD
	Bloomberg Barclays Global Agg Index	**FTSE WGBI**	**JP Morgan GBI - EM**
China government bonds – Bonds issued directly from the China government	✓	✓	✓
Policy bank bonds – The combination of three banks: China Development Bank, Agricultural Development Bank and Export-Import Bank.	✓	✗	✗
Local government bonds – Bonds focussed on provincial based projects (i.e. infrastructure funding).	✗	✗	✗
Inclusion start date and # months to full inclusion	April 2019 (20 months)	October 2021 (36 months)	February 2020 (10 months)
Current weight % (projected at full inclusion)	~7.5%	0%	~10%
Approx. weight % (at full inclusion)	~7.5%	~5.5%	~10% (capped)

Source: BIS, Russell. Duration is based on FTSE indices updated on April 2021.

The relevance of policy banks in China's debt markets

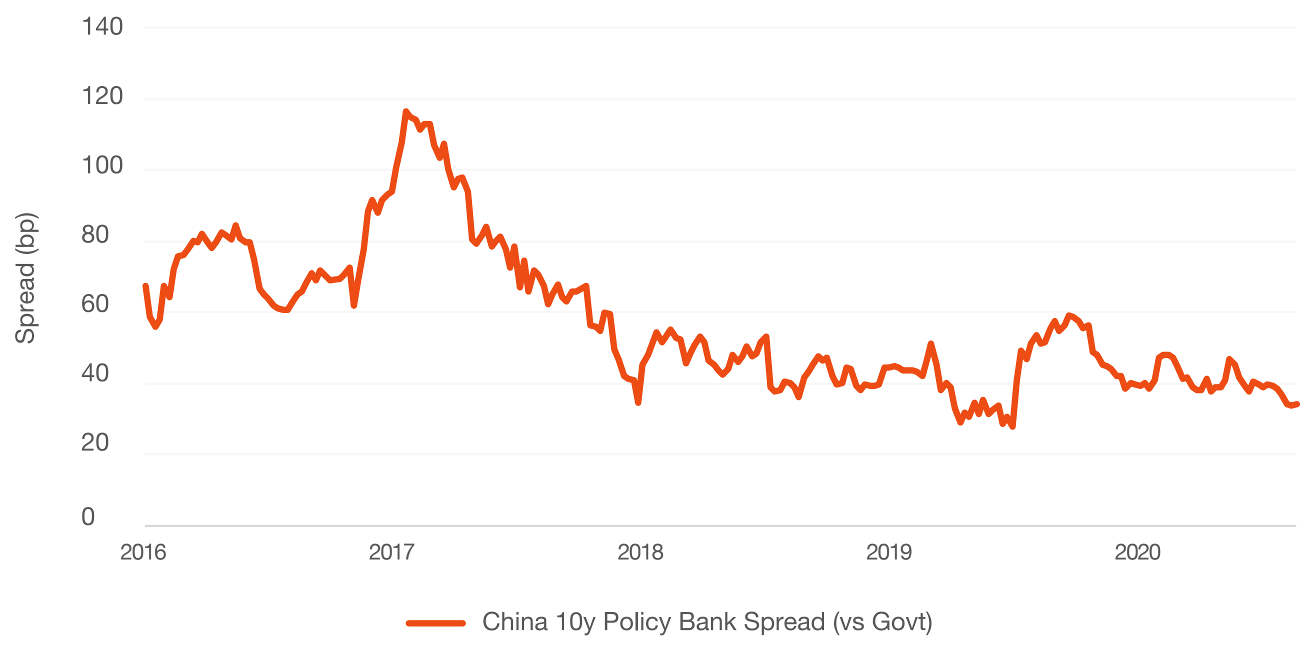
Policy banks are quasi-government institutions: China Development Bank, Agricultural Development Bank and Export-Import Bank. Their debt issuance is designed to assist in implementing economic policies and infrastructure development in China.

Managers report that policy bank bonds are the trading instrument of choice amongst onshore Chinese investors, and accordingly the liquidity of these instruments tends to be deeper than government bonds in secondary markets. This liquidity, however, can be compromised in times of market stress (namely January 2020, China's COVID-19 peak) resulting in wider bid/ask spreads.

The yield premium available partially reflects taxes levied on domestic investors in policy bank bonds. While this yield differential represents a "tax spread", there have been periods where spreads have widened relative to government bonds, suggesting implicit credit quality decisions are incorporated by policy bank investors. Foreign bond investors have benefitted from this additional spread given current exemptions from onshore Chinese income taxes for a three-year period. This exemption is expected to end (or be reviewed) in November 2021.

The Bloomberg Global Aggregate Index holds China's three large quasi-government policy bank bond issuers, whereas the FTSE's World Government Bond Index focusses solely on sovereign issuance. Collectively, these issuers are larger than the government bond sector and are more liquid. Unusually, these bonds also trade at a yield premium to government bonds which is partially explained through taxes levied on domestic investors.

Chart 3: Average 10-year policy bank spread vs China government bond



Source: Frontier, Bloomberg

Shedding the emerging market label

Irrespective of which index investors use to benchmark their fixed interest allocations the sheer size of China's debt markets and growth in issuance means a material (and increasing) allocation which is ultimately hard to ignore. Positively, China government bonds offer a similar defensive profile to other developed market bonds (e.g. US) which typically comprise major weights in investor fixed interest portfolios.

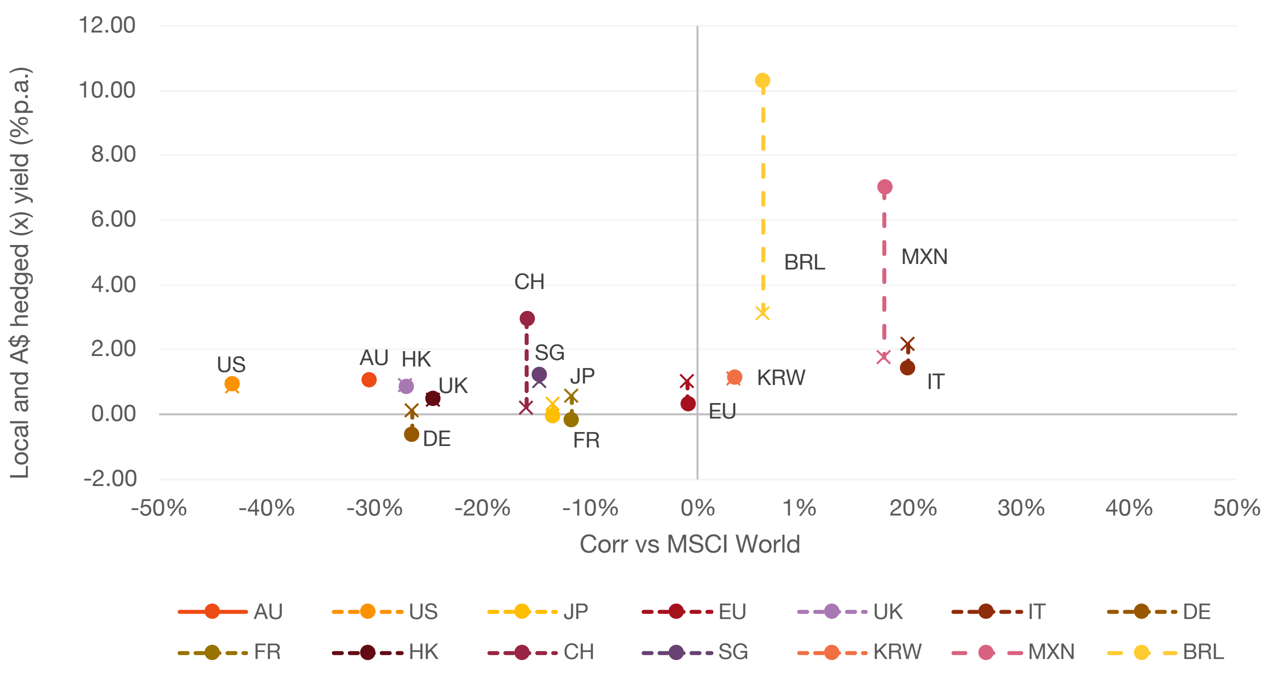
Higher yield and negative correlation to risk assets

Major global developed sovereign markets have been characterised by stimulatory monetary and fiscal policies coupled with surging investor haven flows. The resultant policy environment and abundance of debt issuance creating low or negative yields in some countries. Chart 4 contrasts Chinese 10-year government bond yields against other major markets. Nominal yields are not only higher in China, but a positive real yield also currently exists.

Whilst this yield advantage is striking for Australian investors, the majority of the yield advantage is lost through the currency hedging process which would likely occur should the allocation reside within a typical fixed interest sector.

Higher local currency yields on Chinese longer duration bonds certainly provide increased capital gains potential, given yields have further room to fall in stressed environments, and on that basis, China is a comparative outlier particularly relative to other major bond markets, where current yields remain compressed.

Chart 4: China government bonds diversify versus equities but hedging crimps yield

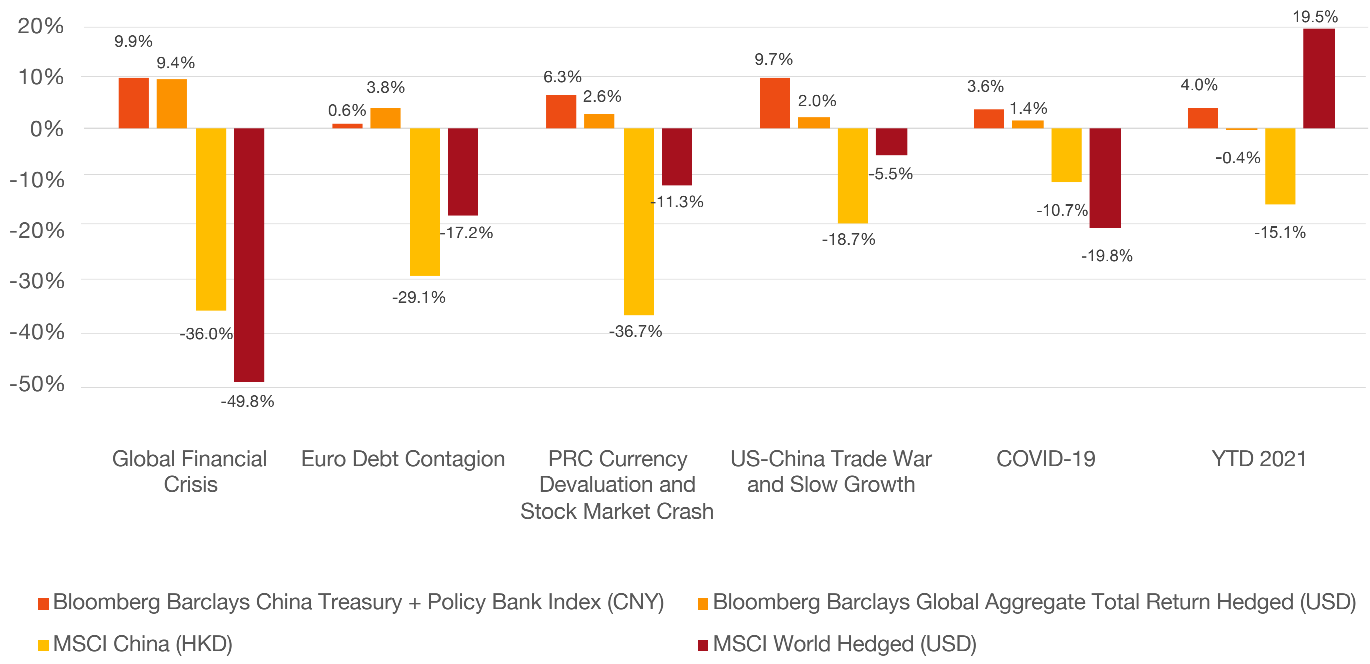


Source: Frontier, Bloomberg. X = denotes hedged yield in AUD terms

Has the negative correlation to equities persisted over time?

China government bonds have typically helped diversify balanced portfolios in periods of market stress yet appear more responsive to domestic Chinese factors than global macroeconomic influences. High beta emerging bond markets typically fall when risk aversion hits. Yields can rise as currency values fall when capital is repatriated and this limits the defensive characteristics. China's government bonds have however, delivered on their defensive promise, with a precedent of yields falling when Chinese and global equities are under downward pressure.

Chart 5: China bonds typically perform well during stressed environments



Source: Frontier, Bloomberg

The correlation of China bonds against other global bond markets is low

Despite being somewhat synchronised in stressed environments, China government bonds typically exhibit a low correlation with other major global bond indices. This suggests China bonds react more to onshore rather than global macroeconomic factors. This low correlation means onshore China bonds can offer diversification benefits within an investor's fixed income portfolio.

The reasons for the low return correlations of China bonds with global bonds may lie with the differentiated approach to interest rate policy in China relative to other central banks, and the largely domestic investor base. However, as China becomes more integrated with global capital markets and foreign ownership grows, correlations may converge with other markets over time. Nevertheless, given China's domestically driven economy and relatively early stage of its global market integration, we believe this will not materially alter the existing dynamics and expect China bonds to continue to provide decent diversification benefits for the foreseeable future.

Table 2: Correlation of China government bonds versus global markets

Correlation Matrix	FTSE WGBI (USDH)	MSCI World (LC)	EM Sovereign Debt (LC)	China Treasury Index (CNY)	China Treasury + Policy Bank Index
FTSE WGBI (USDH)	1.00	-	-	-	-
MSCI World (LC)	-0.15	1.00	-	-	-
EM Sovereign Debt (LC)	0.42	0.45	1.00	-	-
China Treasury Index (CNY)	0.19	-0.04	0.18	1.00	-
China Treasury + Policy Bank Index	0.24	-0.04	0.24	0.97	1.00

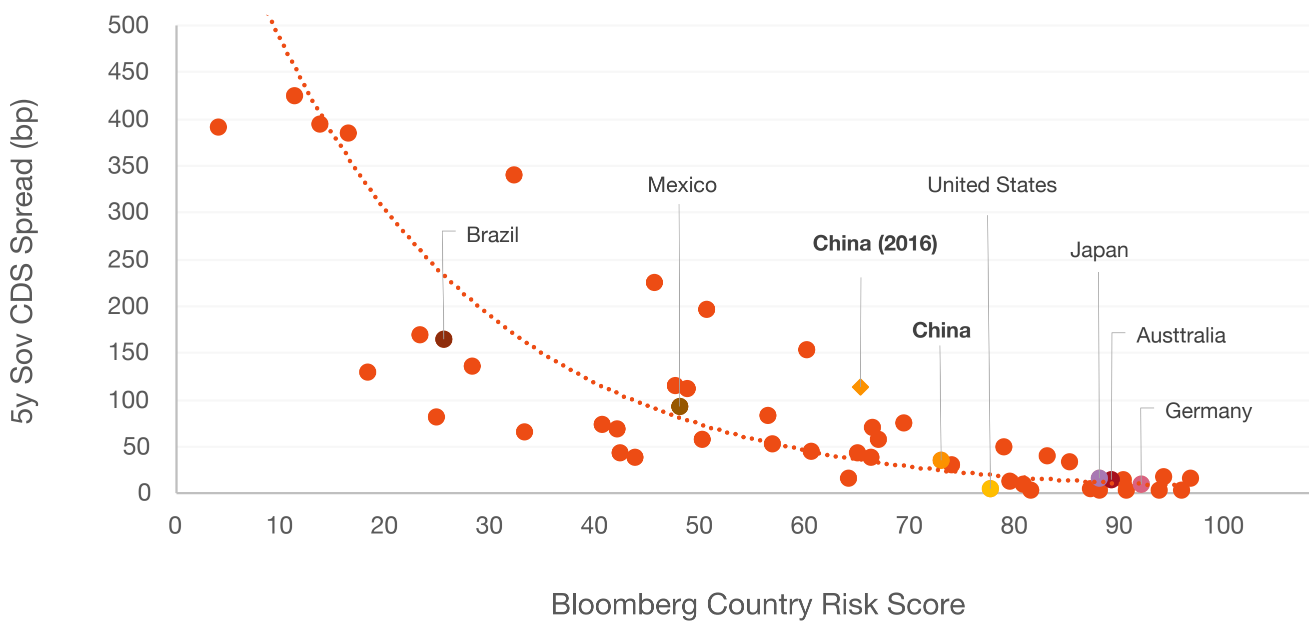
Source: Frontier, Bloomberg. Data using weekly returns from 30 Aug 2011 to 30 Aug 2021.

And what about China's country risk and ESG considerations?

One of the most difficult assessments for investors is around the trajectory of country risk in China as it continues to transition its economy and society. Geopolitical tensions (trade war, humanitarian issues and Hong Kong for example) and regulatory intervention (namely in technology, education, and property development) are currently heightened and constitute meaningful ESG risks which investors should rightly continue to interrogate.

While ESG risks remain elevated, sovereign risk, as measured by global sovereign credit default markets, implies greater stability supported by robust economic fundamentals and ongoing capital market liberalisation. The market's perception of China continues to evolve. Bloomberg's China country risk score, driven more by financial markets and economic factors, has converged towards developed market precedent. This is best evidenced by comparative currency stability (with lower implied CNY volatility) and compressing credit spreads (China sovereign CDS). While headwinds still exist, financial deregulation and global scrutiny have resulted in greater ease of conducting business and improving levels of corporate governance in China.

Chart 6: Bloomberg's China country risk score has converged with developed countries



Source: Bloomberg, Frontier. Data as at June 2021. Bloomberg country risk representation is a composite of 29 indicators representing financial, economic and political risks scored from zero to 100, where zero represents a higher risk jurisdiction.

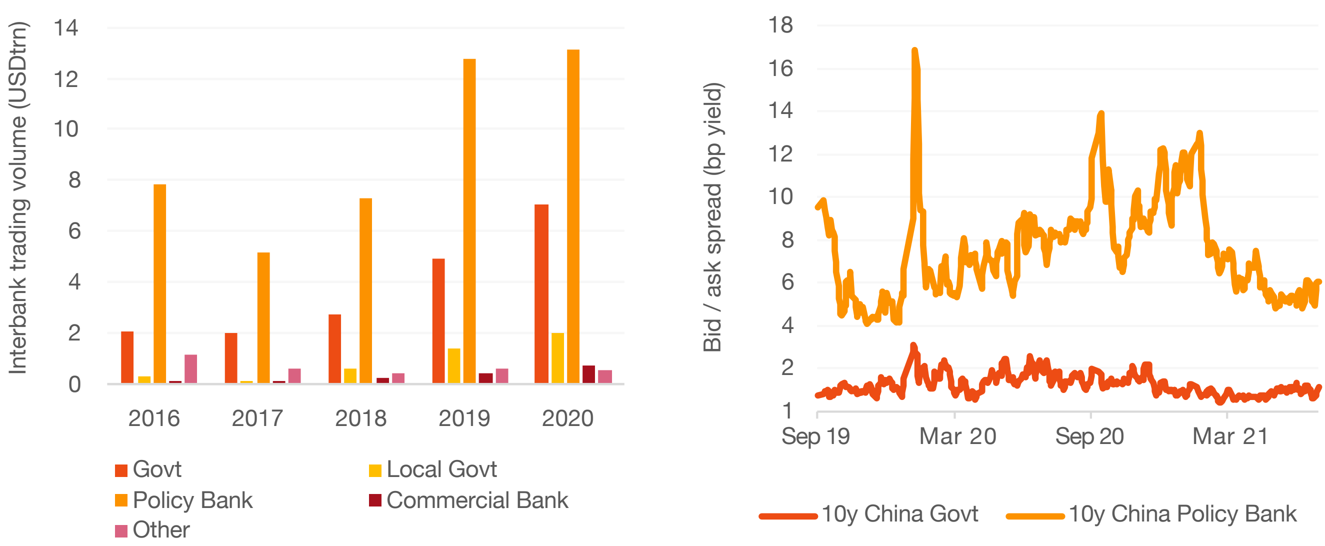
Liquidity appears adequate, but policy banks are better

In most markets government bonds are typically the largest and most liquid securities. In China however, a much larger turnover occurs across its three policy banks, which, as shown in chart 7 & 8, trade typically more than twice the volume of the government sector.

Managers queried about market liquidity noted that within the secondary market for government bonds, liquidity varied between ‘on-the-run’ and ‘off-the-run’ bonds. The lack of liquidity in off-the-run bonds can be attributed to commercial banks, domestic insurance and pension funds being primary buyers of these securities and engaging in buy-and-hold strategies.

Managers also noted that Bond Connect liquidity is lower than CIBM Direct (domestic investors) due to fewer available counterparties.

Chart 7 & 8: Secondary market volume and bid/ask spreads



Source: CCDC, Frontier, Bloomberg

Bond Connect for foreign investors

The ability to easily repatriate money from China is often identified as a key risk when investing in onshore Chinese assets. Capital controls are an unfortunate reality of investing in certain offshore jurisdictions as currency stability is targeted by central banks in stressed environments. China's financial market liberalisation efforts have sought to overcome this trust deficit with the creation of channels for foreign investors to directly invest onshore using existing custodial relationships.

Replacing the historical quota system which was once used to control foreign capital inflows, a bridge was built between mainland markets and foreign investors and their custodial institutions. Bond Connect is a Hong Kong based platform that facilitates capital flow into China's onshore bond markets, on a delivery for payment basis with custody banks that reside in Hong Kong, presumably beyond control of Chinese authorities.

Foreign investors can also access onshore markets via CIBM Direct which in essence supports the market structure for domestic investors. Both access methods appear operationally intensive, time consuming to set up, and differ in both custody arrangements and counterparty access. Cashflows from bond maturities and coupons are also swept to offshore custody accounts and converted from CNY to CNH in the bond connect system, and this can create additional basis risk.

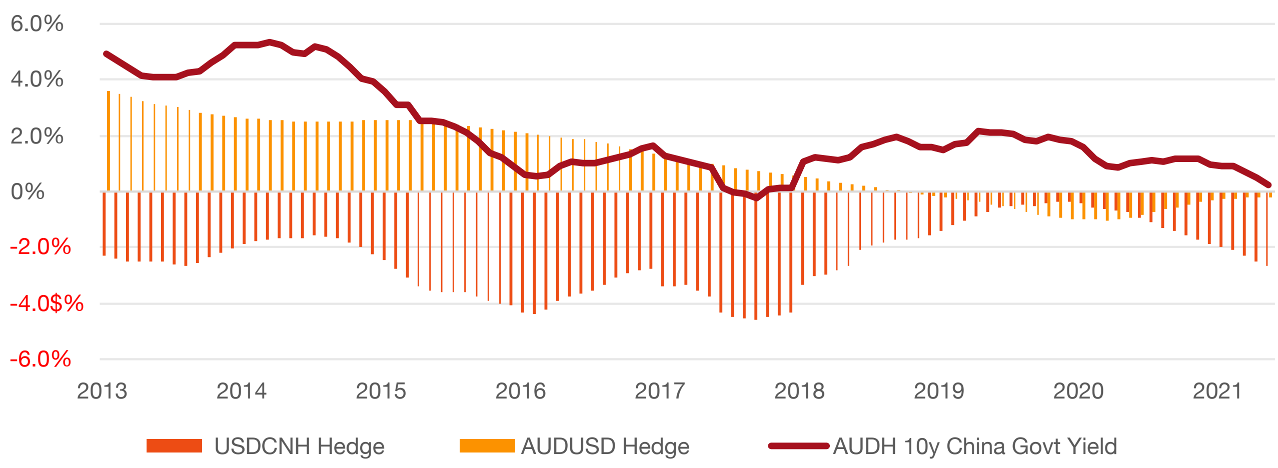
The cost of hedging CNY/ CNH denominated exposures

Hedging out CNY/CNH exposure has become more expensive over time, with the USD/CNH hedging cost virtually zero in 2019, but now nearing ~3%.

This cost reduces the hedged yield on China government bonds for Australian investors as shown in chart 9. Hedging CNY exposures directly to AUD is not particularly efficient at this point in time. Hence, the hedging back to AUD still operates through the USD leg.

The decision to hedge Chinese currency risk will typically be a function of the currency hedging strategy of the portfolio sector to which China is being added. For example, China bonds within a global bond allocation are more likely to be hedged alongside other fixed interest investments.

Chart 9: Hedging costs have risen reducing A$ hedged yields



Source: Frontier, Bloomberg

The basis risk dispersion between CNY and CNH has been ironed out

Chinese Currency (Renminbi) is a unique case relative to other global currencies in that there are two markets; when trading onshore it is traded as CNY, when trading outside of China (offshore) it is CNH.

A combination of central bank intervention and investment flows has at times created dispersion between onshore (CNY) and offshore rates (CNH), especially during periods of market stress. Pricing differentials can also be sensitive to broader macro factors and pricing can widen sharply in stressed market conditions, although we note much lower dispersion of returns between these markets in the last two to three years.

Onshore CNY has been the dominant market, both from a daily volume perspective and tightness of bid-ask spreads, yet not all participants have access at this point. Historical restrictions for offshore investors appear to be a key rationale for using CNH to hedge Chinese based exposures for offshore investors.

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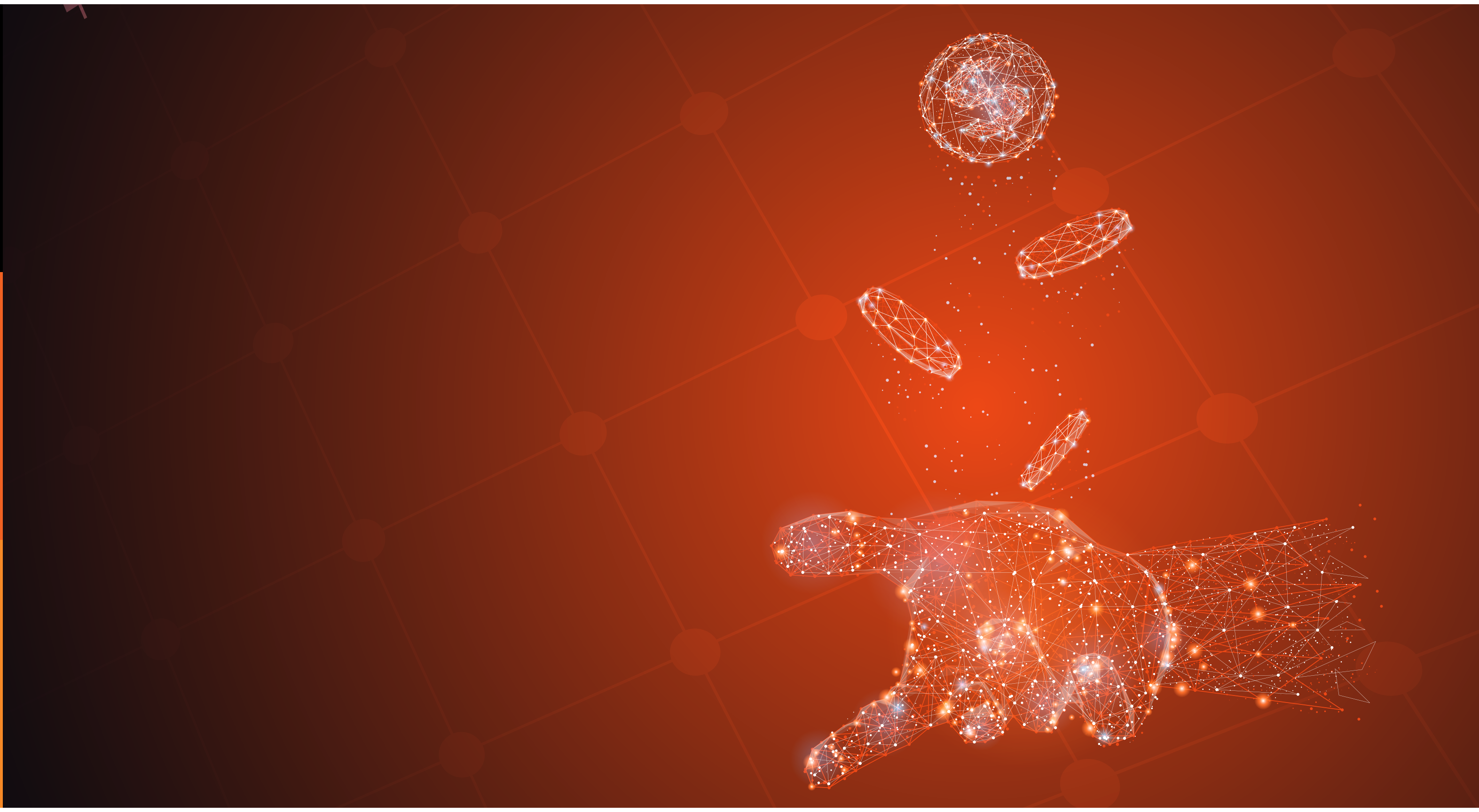
Corporate debt and local government bonds are opaque and should be avoided

Chinese domestic rating agencies provide independent ratings on Chinese debt and typically award higher ratings subject to the likelihood of government support. The historic precedent of government support of China's institutions may have incentivised excessive risk taking amongst indebted companies, which in aggregate could constitute a systemic economic risk. This is contrary to the government's regulatory reform efforts, which target capital market liberalisation.

In recent years the Chinese government has decided to exercise its right to bail out corporate and State Owned Entities (SOEs) more selectively. Instances of SOE defaults have increased evidenced by 2020 defaults of AAA-rated Yongcheng Coal and Electricity and Tsinghua Unigroup. These defaults suggest onshore credit ratings may misrepresent the credit risk associated with Chinese corporates. Global rating agencies such as S&P are now permitted to operate in China, although at this juncture, coverage of onshore corporate entities is limited.

China's credit fallout is not confined to onshore markets. Credit spreads in USD credit markets have surged in recent months as uncertainty spooks investors. Huarong Asset Management, a likely default candidate in the USD credit market, was recently bailed out by a consortium of onshore Chinese institutions, yet large property developer Evergrande's fate is yet to be known, and likely runs counter to Chinese efforts to allow the market to play a greater role in disciplining risky behaviour.



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Your Future, Your Super

The Australian Government's recently introduced 'Your Future, Your Super' comparative benchmarks currently use the Bloomberg Barclays Global Aggregate Index as the benchmark for global bonds and the default position includes China government and policy bank exposure. Investors wishing to opt-out of China bonds are likely to run tracking error risk, as shown in table 3.

Whilst China has only been included sequentially since 2019, the performance differential of including China on a backwards looking basis has been negligible. Indices constructed by Bloomberg which comprise China at its full replication weight, also indicate a negligible performance differential over longer periods, this largely due to duration differences and currency hedging impacts.

For investors looking to exclude China bonds, expect greater disparity in returns and rising tracking error going forward as increasing market share of China's bond market results in higher weightings in global bond indices.

Table 3: Global aggregate index risk and return metrics with and without China

Benchmark mix	Barclays Global Aggregate + China (full weight) USD hedged	Barclays Global Aggregate ex China USD hedged
1-yr return (% p.a.)	0.22%	0.09%
8-yr return (% p.a.)	3.85%	3.91%
Tracking error (% p.a.)	-	0.21%

Source: Bloomberg, Frontier. Data as at 31July2021. USD index data used due to lack of AUDH ex China index data.

Targeting higher bond exposures through a standalone exposure

Investors with strong conviction, specific portfolio construction objectives, or desire for greater portfolio flexibility, might seek a higher allocation to China's bond market than current exposures within global benchmarks. Frontier researches a range of well credentialled managers in this space who can implement various onshore Chinese fixed interest strategies.

Traditionally, fixed interest sector allocations have been broadly split between Australian and global bond components. A targeted allocation to China would typically require a larger tilt toward global markets which is appropriate in our view. Currency hedging alignment with the sector the standalone allocation resides in is also a key consideration, and therefore a dedicated China bond exposure in the fixed interest sector would likely be hedged consistent with other global bonds.

Should China bonds be targeted within the alternative debt sector, the higher return objectives and risk tolerance in this sector is likely better aligned with unhedged CNY/CNH currency exposures and also active management. Yet, this presents another quandary for investors who will need to determine whether the longer-term return potential from China government bonds (unhedged), is sufficient to meet the return targets common to alternative debt sectors. This is evident in some emerging market debt strategies which use China government bonds as a risk mitigation strategy rather than a return seeking one, simply because there are other higher returning options available across the emerging market universe. Equally, the volatility of the return stream will be heavily influenced by the direction of the CNY/AUD, and this is likely to drive a large component of the risk, as highlighted in table 4.

Table 4: Comparing index risk and return statistics

	Return (%p.a.)				Volatility (%p.a.)				Sharpe ratio			
Benchmark	**1-Yr**	**3-Yr**	**5-Yr**	**7-Yr**	**1-Yr**	**3-Yr**	**5-Yr**	**7-Yr**	**1-Yr**	**3-Yr**	**5-Yr**	**7-Yr**
BBG AusBond Govt	-1.37	4.29	3.08	4.09	4.66	3.99	3.54	3.44	-0.32	0.73	0.51	0.91
FTSE WGBI Ex-Aus (AUDH)	-1.56	3.84	2.52	4.20	2.91	3.48	3.10	3.23	-0.58	0.70	0.40	1.00
BBG China Treasury and Policy Bank (AUDH)	-0.42	3.03	1.88	3.18	1.57	2.5	2.62	2.79	-0.35	0.66	0.23	0.79
BBG China Treasury and Policy Bank (AUDUH)	3.00	5.08	3.92	7.50	8.89	9.89	8.64	9.27	0.32	0.37	0.31	0.70

Source: Bloomberg, Frontier. Data as at 30 June 2021.

The final word

It is a somewhat unique event for such a large bond market to become available to foreign investors, particularly given the backdrop of extraordinarily low developed market yields. China's inclusion to global bond indices broadens the developed market bond universe, and also provides emerging market investors a large, liquid and higher quality component which down weights some of the riskier parts of the emerging markets.

We find there is a lot to like about investing in China government and policy bank bonds although there are trade-offs to consider. Some of these include:

- The negative correlation to equity markets stands out as a highly desirable quality and this looks to be at odds with China's emerging markets label.
- Yields on China bonds are often held out as an attractive quality and justification for inclusion, but for Australian fixed interest investors, that yield advantage is lost if currency exposure is hedged.
- A higher yield base, however, could be beneficial given greater capacity for yields to fall (and generate capital gains) in stressed environments, particularly relative to other liquid bond markets which are close to or below the zero-yield bound.
- Liquidity appears to be adequate in government bonds but stronger in policy bank bonds, the latter not included in FTSE's WGBI index. Foreign investors using the Bond Connect access route, are also limited to a finite number of counterparties which may reduce liquidity.
- The approach to currency hedging will typically be associated with the hedging strategy of the investor's sector to which China is being added. For investors wanting an unhedged currency exposure, China bonds may better align with an emerging market debt allocation, or on a standalone basis.
- Concern over Chinese capital controls appears to have been addressed through Bond Connect's offshore custody arrangements.
- Tax uncertainty is set to rise given China's Ministry of Finance income tax exemption for foreign investors is due to expire in November 2021.

Want to learn more?

We hope this paper has generated lots of ideas for your own portfolios. If this is the case, please reach out to Frontier to discuss how we can work with you in this space.

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