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Chinese Bonds: Enhancing a European Fixed Income Portfolio

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Executive Summary

Improved access for foreign investors to China's large bond market has started a conversation around the place of Chinese bonds within a global portfolio. Investors are now evaluating whether to make an allocation and, if they do, what level of investment that should be. In the current low yield environment, Chinese bonds represent an attractive yield pick-up opportunity[1] while also offering good diversification benefits,* particularly for Europe-based investors. The ultra-low or even negative yields on offer in Europe and the low correlation of Chinese bonds to European bond returns are key factors in the decision mix.

Investors considering strategic allocations also need to take qualitative factors into account, such as credit risk, the level of market development, access and operational differences. Furthermore, the potential differences in liquidity versus more developed bond markets should also be borne in mind when deliberating on an allocation to Chinese bonds. On this basis, we believe that while there is a strong case for foreign investors to allocate to China's bond market, building such an allocation should be done gradually.

* Diversification does not ensure a profit or guarantee against loss.

Key Points

- **Diversification Benefits** Chinese bonds are lowly correlated with European bonds and therefore provide relatively attractive diversification benefits for European investors.

- **Yield Enhancement** Chinese bonds offer relatively attractive yield enhancement relative to European government and investment grade credit fixed income assets.

- **Higher Volatility** Chinese bonds could have potential higher volatility driven by currency movements.

- **Less Liquid, Less Mature** Investors should be mindful of the potential for lower liquidity in China bonds, while also noting the developing and improving dynamics and structure of China's fixed income markets.

Portfolio Benefits

- **Impact of Adding China Bonds to a EUR Unhedged Portfolio** Historical analysis, as detailed in this paper (pages 14/15), shows that incorporating a 10% allocation to Chinese bonds in a European bond portfolio reduced the portfolio risk and increased portfolio return. Looking forward, we expect Chinese bonds to generate higher returns than their European counterparts over the medium to long term[2]. This view is based on China's existing yield advantage versus European bonds as well as our constructive view on the outlook for the Chinese yuan (CNY). Therefore, we suggest that euro-based investors who are looking to take advantage of the yield differential and diversification benefits that a China bond exposure can bring to their European bond portfolios, should start with an allocation of around 10%. Investors with a higher return target and higher level of risk tolerance can consider a higher allocation.[3]

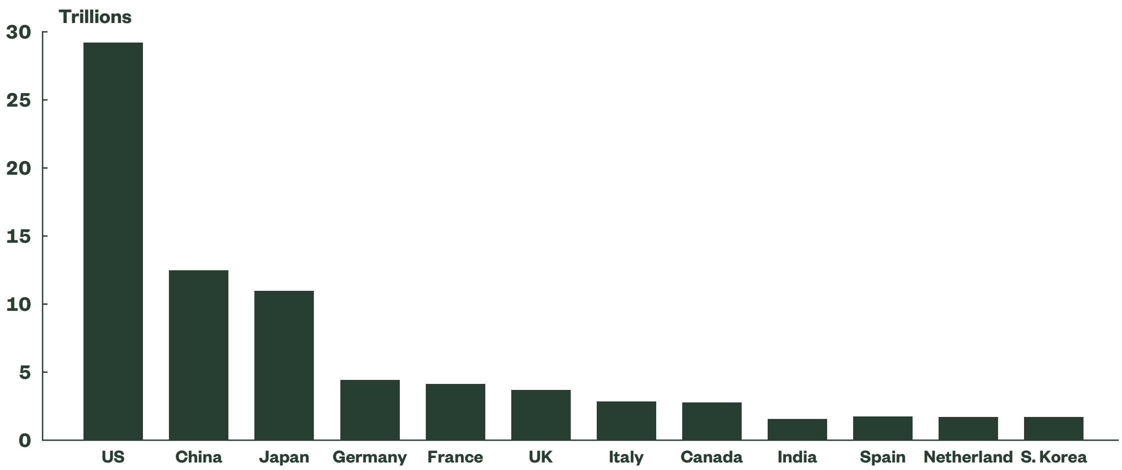
- **Impact of Adding China Bonds to a EUR Currency Hedged Portfolio** Investors who wish to hedge away the CNY currency exposure can enjoy strong diversification benefits and lower portfolio risk. However, current hedging costs more than eliminate the yield advantage of investing in Chinese bonds and reduce the all-in hedged yield and portfolio return. Given this, we do not recommend hedging the CNY currency risk for euro-based investors who can bear short-term currency volatility. Furthermore, we also hold a constructive view on the outlook for CNY over the medium to long term. Nevertheless, the currency-hedged approach remains relevant for more risk-focused euro-based investors seeking to further reduce the risk of their bond portfolios at the expense of lower returns.

China Opens to Foreign Investors

- **China's bond market has grown in near-isolation to become the world's second largest.**
- **The barriers that foreign investors have historically faced in accessing China's onshore bond market have largely been removed, paving the way for index inclusion and related investor flows.**

China's bond market has grown significantly to become the second-largest bond market globally (Figure 1). Until recently, it has been quite difficult for foreign investors to access the onshore China bond market due to investment restrictions, operational complexities and investor quotas. Consequently, foreign investors only accounted for 3.2% of the total onshore China bond market at the end of 2020 (Figure 2), although foreign ownership of government bonds is notably higher at around 10%.

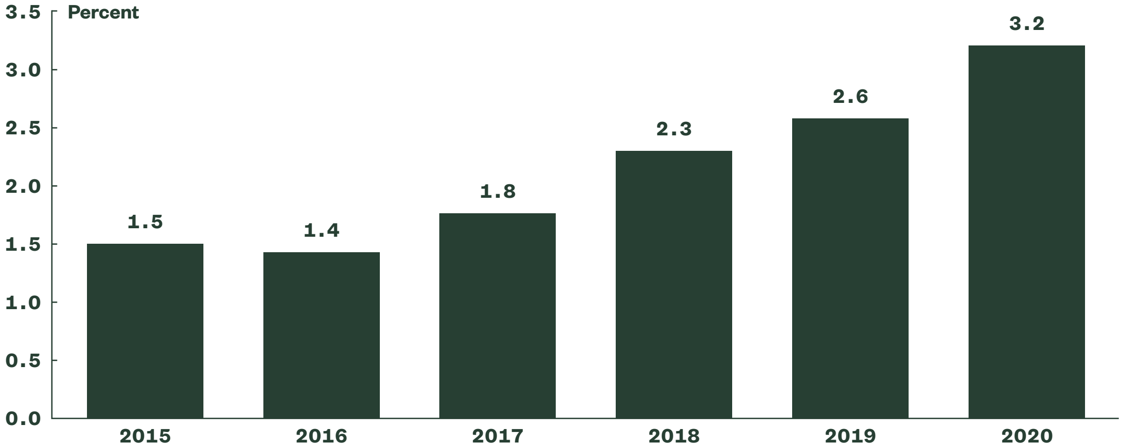
Figure 1
China Bond Market Now Second Largest (in EUR)



Source: State Street Global Advisors, Bloomberg Finance L.P., as of July 26, 2021.

Since 2016, China's policymakers have made a series of policy changes deliberately aimed at opening up China's onshore bond market, leading to the milestone inclusion of Chinese bonds in the Bloomberg bond indices in April 2019. Having satisfied all index inclusion criteria, Bloomberg officially began including Chinese yuan-denominated government and policy bank bonds into the Bloomberg Global Aggregate, Global Treasury and EM Local Currency Government indices, with weights phased in over a 20-month period.

Figure 2
Foreign Investors Increase Chinese Bond Holdings from Low Base



Source: State Street Global Advisors, China Central Depository & Clearing, Shanghai Clearing, as of December 31, 2020. (Data will be updated annually).

More on China Policy Bank Bonds

China policy bank bonds have been included in the Bloomberg Global Aggregate bond index along with China government bonds since April 2019.

There are three policy banks: the China Development Bank, the Agricultural Development Bank of China, and the Export-Import Bank of China. They serve a policy function by helping to channel public sector funding and resources into important areas such as trade, infrastructure, and agriculture, and in many instances complement commercial lenders and private investors.

China policy bank bonds are rated as highly as China government bonds due to the strong implicit support provided by the government. The banks' roles are set by the China State Council and are backed by 100% government ownership. Furthermore, central government has a long history of supporting policy banks, including capital injections. The bonds are also treated identically to Chinese government bonds in bank portfolios, receiving a 0% risk-weighted capital charge.

As of September 24, 2021, China policy bank bonds provided a yield enhancement of 15–20 basis points relative to China government bonds. This can be mainly attributed to different tax treatments for local investors, who pay higher taxes on bank bonds. However, foreign investors currently benefit from a three-year tax exemption period (November 2018 to November 2021) that is expected to be rolled over and extended for a further three years or more.[4]

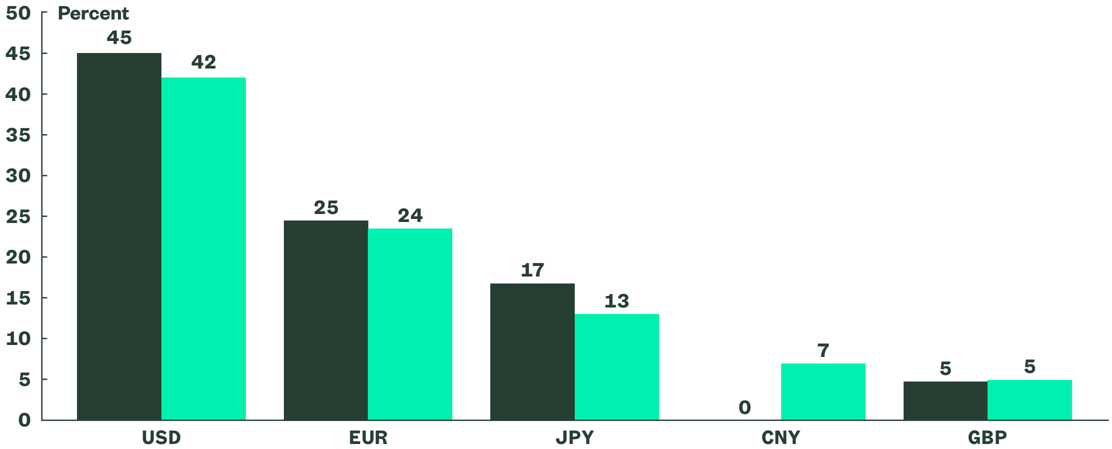
	No. of Bonds	Average Yield (%)	Average Duration (Years)	Rating (S&P/ Moody's/Fitch)
China Government Bond	139	2.82	7.4	A+ Stable/A1 Stable/A+ Stable
China Development Bank	83	3.01	4.8	A+ Stable/A1 Stable/A+ Stable
Agricultural Development Bank	47	2.99	4.3	A+ Stable/A1 Stable/A+ Stable
Export-Import Bank of China	33	2.97	4.1	A+ Stable/A1 Stable/A+ Stable

Source: Bloomberg, as of September 24, 2021. Past performance is not a reliable indicator of future performance.

Prior to the inclusion of CNY-denominated bonds, bonds denominated in USD, EUR, JPY and GBP were the biggest constituents of the Bloomberg Global Aggregate index, accounting for over 90% of the index at the end of 2018. After the phase-in period, CNY-denominated bonds have become the fourth-largest constituent in the index with a weight of around 7% as of June 2021 (Figure 3). Over the longer term, China could account for an even greater proportion of the index as issuance patterns change and also given the country's higher expected growth rate relative to developed markets.

Figure 3
Impact of Chinese Bond Inclusion in Bloomberg Barclays Global Aggregate Index

Before CNY Bond Inclusion
After CNY Bond Inclusion



Source: State Street Global Advisors, Bloomberg. The weights before CNY bond inclusion represent the index currency allocation as of December 31, 2018. The weights after CNY bond inclusion are based on the index currency allocations as of June 30, 2021.

Two of the other major government bond indices have also started to include onshore Chinese bonds. The JP Morgan Government Bond Index-Emerging Market (GBI-EM) started to phase in onshore Chinese bonds in February 2020 — this process has now completed, resulting in a 10% index weight. In March 2021, FTSE Russell confirmed that Chinese government bonds would be included in the FTSE World Government Bond Index (WGBI) — viewed as the most widely followed index — from October 2021 with a phase-in period of 36 months. Chinese government bonds are expected to account for a weight of 5.25% in the WGBI on completion. The inclusion in this flagship fixed income benchmark signifies the acceptance of China as a major bond market for global investors.

In the next section, we explore some of the key characteristics of Chinese fixed income and their potential impact on bond portfolios for euro-based investors.

Key Characteristics of Chinese Bonds

- **Onshore Chinese bonds may offer some unique characteristics for European bond investors compared to European, Global and other major regional exposures.**

- **China Government and Policy Bank bonds provide diversification benefits due to their lower correlation, along with relatively attractive yield enhancement.**

- **Chinese bond returns are subject to potentially higher volatility, primarily driven by currency movements.**

We believe that onshore Chinese bonds present unique characteristics for European bond investors, compared to European aggregate or credit bonds, and other major regional bonds. However, investors considering onshore Chinese bonds should be aware of the potential implications of such an investment.

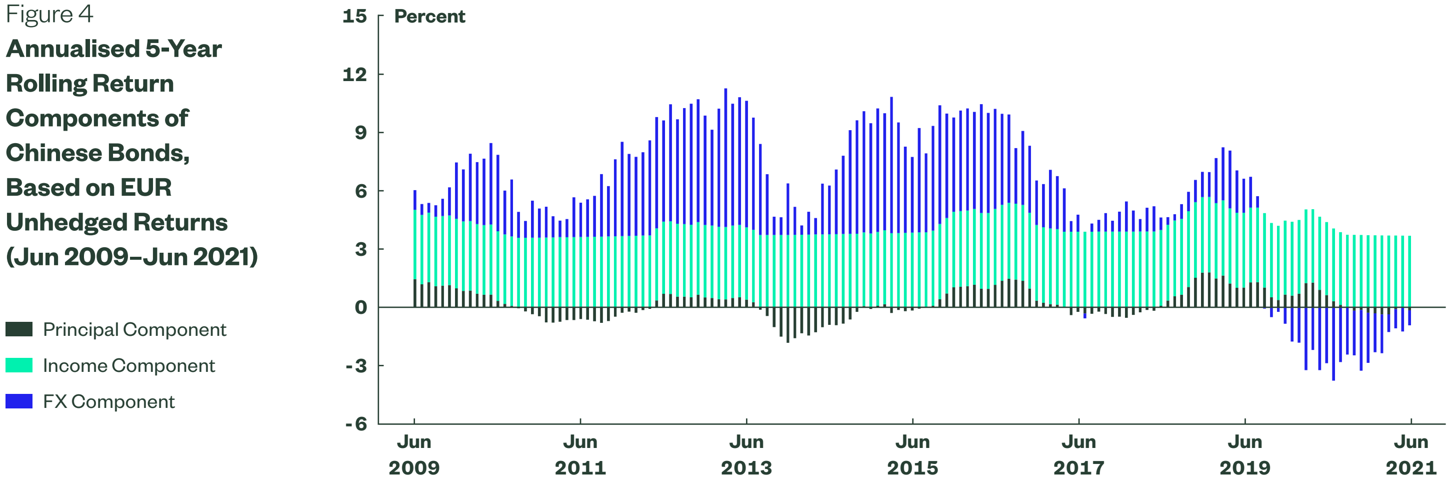
Income and FX are Key Drivers of China Bond Returns

As illustrated in Figure 4, we have decomposed Chinese bond returns and assessed the contributions from the various return components on a rolling five-year basis. For euro-based investors, income (returns from coupon income) and foreign exchange (FX) components (returns from CNY currency movements relative to the euro) are the main drivers, with some contribution from principal (returns from changes in the bond's price) as rates move up and down.

While return contributions from the income component have been very stable and positive, contributions from the FX component tend to be more volatile. Between 2009 and 2015, the Chinese yuan generally appreciated against the euro, and the FX component contributed positively. However, after 2016, the return contributions from FX have been mostly negative. This suggests that taking a view on the Chinese currency relative to the euro is an important consideration for euro-based investors when investing in Chinese bonds.

We believe that China's relatively resilient economic growth and the continued opening up of its financial markets will be supportive of the Chinese yuan over the long term. Please refer to "The Outlook for the Chinese Yuan" on page 17 of this paper for more discussion around our currency views.

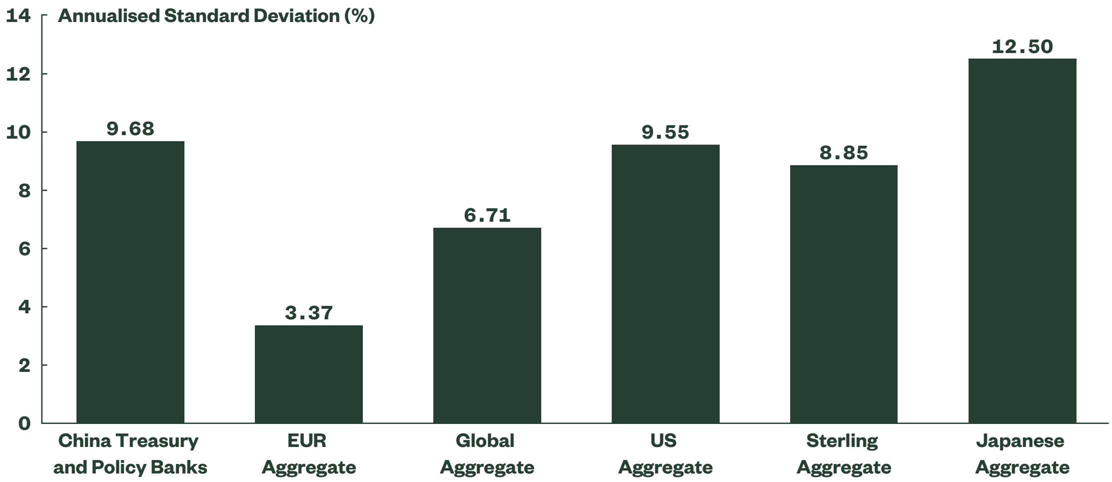
Figure 4
Annualised 5-Year Rolling Return Components of Chinese Bonds, Based on EUR Unhedged Returns (Jun 2009–Jun 2021)



Source: State Street Global Advisors, Bloomberg, as of June 30, 2021. China Treasury and Policy Bank = Bloomberg China Treasury and Policy Bank EUR unhedged index; Euro Aggregate = Bloomberg Euro Aggregate EUR index in EUR; Global Aggregate = Bloomberg Global Aggregate EUR unhedged index; US Aggregate = Bloomberg U.S. Aggregate EUR unhedged index; Sterling Aggregate = Bloomberg Sterling Aggregate EUR unhedged index; Japanese Aggregate = Bloomberg Japanese Aggregate EUR unhedged index. Past performance is not a reliable indicator of future performance. Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income as applicable.

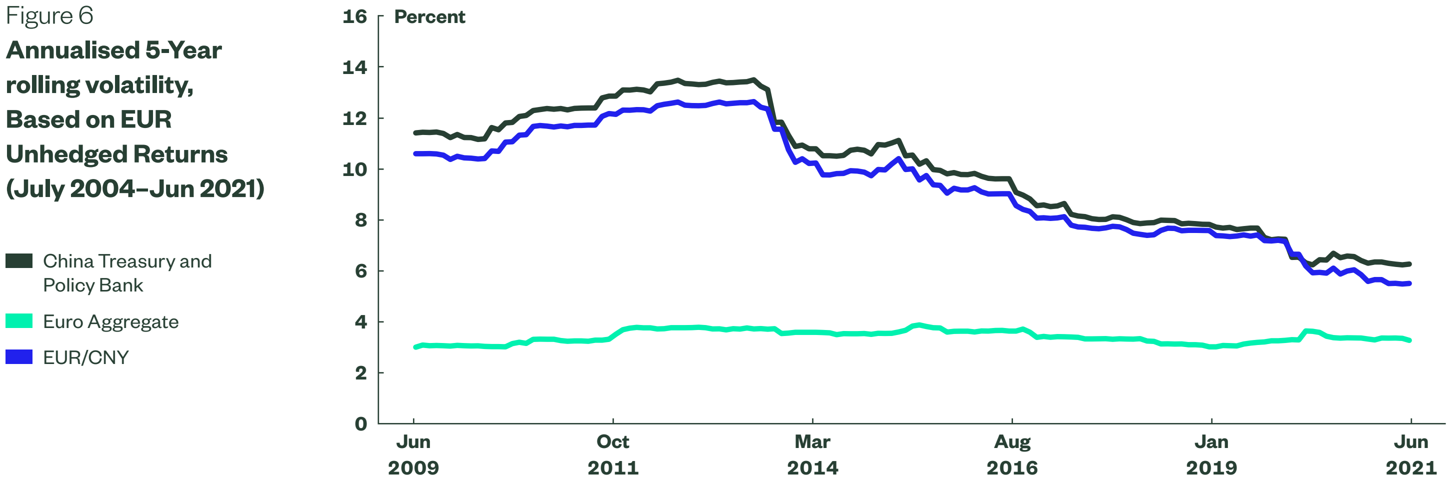
Over a long period, China Treasury and Policy Bank bonds have been more volatile than Euro Aggregate bonds (Figure 5), which is primarily due to its currency movements versus the euro. In recent years, foreign exchange market volatility has fallen — including the EUR/CNY pair — as the divergence among countries has generally narrowed. As a result, the volatility of onshore Chinese bonds has also decreased, albeit still higher than that of Euro Aggregate bonds (Figure 6).

Figure 5
Volatility of Major Bond Indices, Based on EUR Unhedged Returns (July 2004–Jun 2021)



Source: State Street Global Advisors, Bloomberg, as of June 30, 2021. China Treasury and Policy Bank = Bloomberg China Treasury and Policy Bank EUR unhedged index; Euro Aggregate = Bloomberg Euro Aggregate EUR index in EUR; Global Aggregate = Bloomberg Global Aggregate EUR unhedged index; US Aggregate = Bloomberg U.S. Aggregate EUR unhedged index; Sterling Aggregate = Bloomberg Sterling Aggregate EUR unhedged index; Japanese Aggregate = Bloomberg Japanese Aggregate EUR unhedged index. Past performance is not a reliable indicator of future performance.

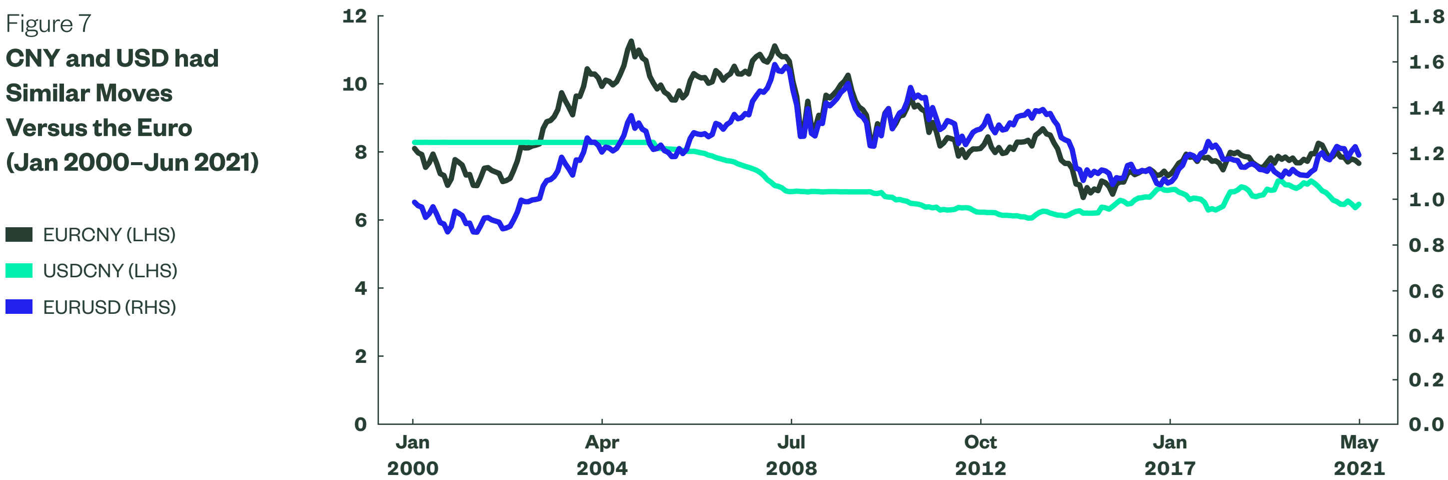
Figure 6
Annualised 5-Year rolling volatility, Based on EUR Unhedged Returns (July 2004–Jun 2021)



Source: State Street Global Advisors, Bloomberg, as of June 30, 2021. China Treasury and Policy Bank = Bloomberg China Treasury and Policy Bank EUR unhedged index; Euro Aggregate = Bloomberg Euro Aggregate EUR index in EUR; EUR/CNY is the currency exchange rate. Past performance is not a reliable indicator of future performance. Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income as applicable.

For euro investors, the volatility of Chinese bonds is more in line with US Aggregate bonds, as the CNY has had a relatively stable currency exchange rate with the US dollar; this led to similar movements in these two currencies against the euro (see Figure 7).

Figure 7
CNY and USD had Similar Moves Versus the Euro (Jan 2000–Jun 2021)



Source: State Street Global Advisors, FactSet, as of June 30, 2021. Past performance is not a reliable indicator of future performance.

Special Note About China's Currency

Unlike most advanced economies, China does not have a floating exchange rate that is determined by market forces. China pegged its currency, the Chinese yuan (CNY), to the US dollar for over a decade from 1994. Since 2005, China has gradually moved towards a "managed float" system against a basket of currencies, although it re-pegged the CNY to the dollar for several years during the Global Financial Crisis. As China has continued to widen the CNY trading band, and with the inclusion of the CNY in the International Monetary Fund's Special Drawing Rights (SDR), there has been more of a two-way CNY/USD currency movement in recent years.

Low Correlation Indicates Strong Diversification Benefits in Bond Portfolios

Over the past 17 years, China Treasury and Policy Bank bonds have had a lower correlation relative to Euro Aggregate bonds than to Global Aggregate bonds or other major regional developed bond markets (US, UK and Japan) (Figure 8). This historically-low correlation suggests that onshore Chinese bonds may provide strong diversification benefits for euro investors.

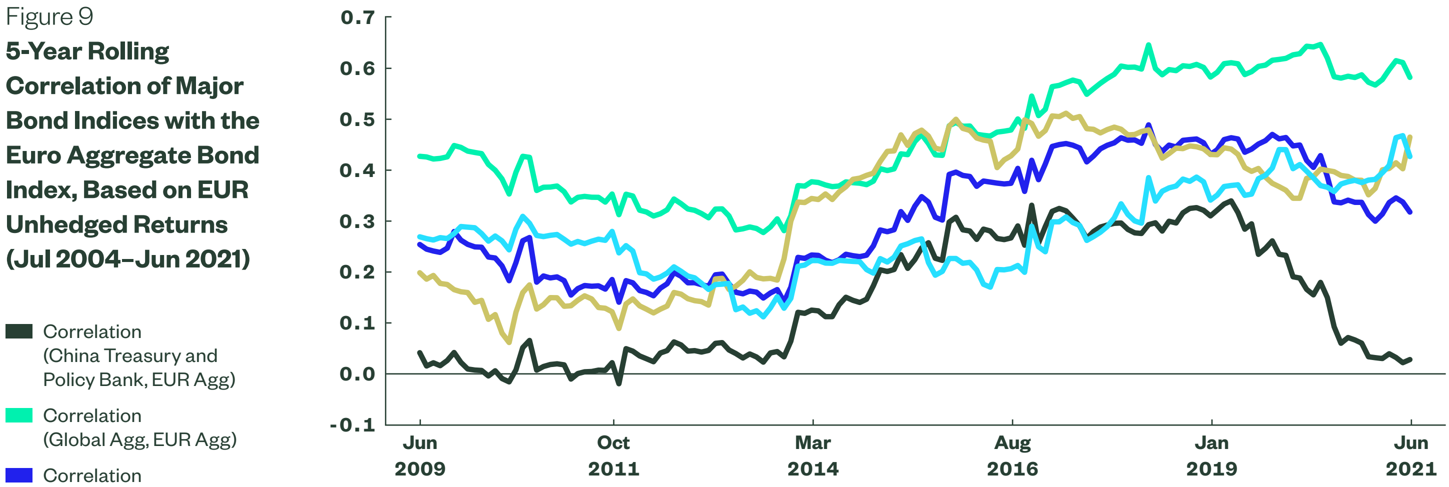
Figure 8
Asset Correlation, Based on EUR Unhedged Returns (Jul 2004–Jun 2021)

	China Treasury and Policy Banks	Euro Aggregate	Global Aggregate	US Aggregate	Sterling Aggregate	Japanese Aggregate
China Treasury and Policy Banks	1.00	0.12	0.81	0.88	0.48	0.63
Euro Aggregate	**0.12**	1.00	**0.47**	**0.30**	**0.36**	**0.29**
Global Aggregate	0.81	0.47	1.00	0.95	0.62	0.85
US Aggregate	0.88	0.30	0.95	1.00	0.57	0.71
Sterling Aggregate	0.48	0.36	0.62	0.57	1.00	0.35
Japanese Aggregate	0.63	0.29	0.85	0.71	0.35	1.00

Source: State Street Global Advisors, Bloomberg, as of June 30, 2021. China Treasury and Policy Bank = Bloomberg China Treasury and Policy Bank EUR unhedged index; Euro Aggregate = Bloomberg Euro Aggregate EUR index in EUR; Global Aggregate = Bloomberg Global Aggregate EUR unhedged index; US Aggregate = Bloomberg U.S. Aggregate EUR unhedged index; Sterling Aggregate = Bloomberg Sterling Aggregate EUR unhedged index; Japanese Aggregate = Bloomberg Japanese Aggregate EUR unhedged index. Past performance is not a reliable indicator of future performance.

Looking at the correlation between onshore China Treasury and Policy Bank bonds and Euro Aggregate bonds on a five-year rolling basis (Figure 9), they appear low when compared to correlations between the other major markets and the Euro Aggregate. We did see correlations rise during 2014 and 2016 when the People's Bank of China (PBoC) cut interest rates to boost the slowing domestic economy, but it has declined again to a low level in recent years.

Figure 9
5-Year Rolling Correlation of Major Bond Indices with the Euro Aggregate Bond Index, Based on EUR Unhedged Returns (Jul 2004–Jun 2021)



Source: State Street Global Advisors, Bloomberg, as of June 30, 2021. China Treasury and Policy Bank = Bloomberg China Treasury and Policy Bank EUR unhedged index; Euro Aggregate = Bloomberg Euro Aggregate EUR index in EUR; Global Aggregate = Bloomberg Global Aggregate EUR unhedged index; U.S. Aggregate = Bloomberg US Aggregate EUR unhedged index; Sterling Aggregate = Bloomberg Sterling Aggregate EUR unhedged index; Japanese Aggregate = Bloomberg Japanese Aggregate EUR unhedged index. Past performance is not a reliable indicator of future performance.

In our view, the main reason for the low return correlations of Chinese bonds with Euro Aggregate bonds is that China's interest rate movements are heavily driven by domestic factors, and relatively independent from those of the eurozone and other major economies. Given the domestically-driven nature of China's economy and the relatively early stage of its global market integration, we believe that Chinese bonds may continue to present strong potential diversification benefits for the foreseeable future.

Investment Grade Bonds: Chinese Bonds Offer Yield Enhancement

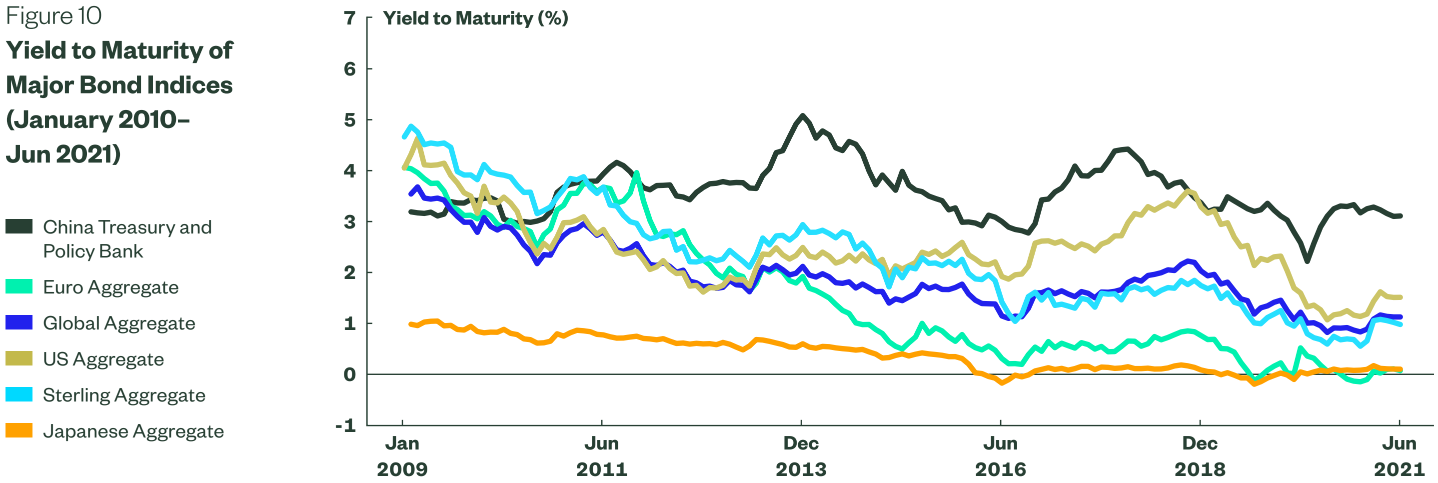
As illustrated in Figure 10, the yields of Euro Aggregate bonds, Global Aggregate bonds and the other major regional aggregate bonds have largely trended downwards over the past decade, mainly driven by the accommodative monetary policies of major developed market central banks.

Yields on Euro Aggregate bonds have generally declined over the past decade, as the European Central Bank cut rates to historical lows and maintained them there. Yields on US Aggregate bonds rose significantly from 2016 to 2018, reflecting the series of rate hikes implemented by the US Federal Reserve. However, they trended downwards again from 2019 as the Fed reversed course and cut interest rates to zero to stimulate the US economy. In the UK, yields on Sterling Aggregate bonds stabilised briefly in late 2017 and 2018 as the Bank of England tentatively began the interest rate normalisation process. However, yields dropped again from 2019 as the BoE paused the rate normalisation process and then cut rates significantly in early 2020 to support the economy as the Covid-19 pandemic unfolded. Yields on Japanese Aggregate bonds have remained at very low levels as the Bank of Japan has maintained an easy monetary policy.

Compared to developed markets, yields on the China Treasury and Policy Bank bonds rose during the first half of this period and then trended downwards from 2014 to 2016 as the PBoC cut rates to support the slowing domestic economy. In line with the brighter outlook in 2017, yields then rose once again. Since 2018, yields have generally fallen as earlier non-monetary tightening measures weighed on growth before the onset of the Covid-19 pandemic sent yields even lower. However, yields soon rebounded to pre-Covid levels as China's containment of Covid-19 allowed the economy to quickly recover.

What is very clear from the experience of the last decade is that developed market government bonds have become increasingly correlated with each other, while China government bond returns have remained largely independent of these.

Figure 10
Yield to Maturity of Major Bond Indices (January 2010–Jun 2021)



Source: State Street Global Advisors, Bloomberg, as of June 30, 2021. China Treasury and Policy Bank = Bloomberg China Treasury and Policy Bank EUR unhedged index; Euro Aggregate = Bloomberg Euro Aggregate EUR index in EUR; Global Aggregate = Bloomberg Global Aggregate EUR unhedged index; U.S. Aggregate = Bloomberg U.S. Aggregate EUR unhedged index; Sterling Aggregate = Bloomberg Sterling Aggregate EUR unhedged index; Japanese Aggregate = Bloomberg Japanese Aggregate EUR unhedged index. Past performance is not a reliable indicator of future performance.

As of June 2021, the yield to maturity of the China Treasury and Policy Bank bonds was significantly higher than those of Euro Aggregate bonds, Global Aggregate bonds and major regional aggregate bonds. Its credit rating is similar to the Euro Aggregate and Japanese Aggregate and slightly lower than the US Aggregate, Global Aggregate and Sterling Aggregate, but with a shorter duration. When compared to Euro Aggregate Corporate bonds, China Treasury and Policy Bank bonds still offer much higher yields with a similar duration, and a higher credit rating. Therefore, we believe that China's higher relative yields and (generally) lower duration is an attractive combination for many investment grade investors. The current yield/duration ratio for China bonds also presents a bigger cushion against the potential for rising rates, and hence better breakeven points.

Figure 11
Bloomberg Bond Index Characteristics, as of June 30, 2021

	Yield to Maturity (%)	Index Rating*	Modified Duration	Yield/Duration (%)
China Treasury and Policy Bank	3.10	A1	5.6	0.5
Euro Aggregate	0.08	AA3/A1	7.7	0.0
Global Aggregate	1.13	AA3/A1	7.5	0.2
US Aggregate	1.51	AA1/AA2	6.6	0.2
Sterling Aggregate	0.98	AA3/A1	11.4	0.1
Japanese Aggregate	0.10	A1/A2	9.7	0.0
Euro Aggregate — Corporates	0.33	A3/BAA1	5.4	0.1

Source: State Street Global Advisors, Bloomberg, as of June 30, 2021. * Bloomberg use the middle rating of Moody's, S&P and Fitch. China Treasury and Policy Bank = Bloomberg China Treasury and Policy Bank EUR unhedged index; Euro Aggregate = Bloomberg Euro Aggregate EUR index in EUR; Global Aggregate = Bloomberg Global Aggregate EUR unhedged index; U.S. Aggregate = Bloomberg US Aggregate EUR unhedged index; Sterling Aggregate = Bloomberg Sterling Aggregate EUR unhedged index; Japanese Aggregate = Bloomberg Japanese Aggregate EUR unhedged index. Past performance is not a reliable indicator of future performance.

China's sovereign credit rating outlook is currently stable, although it was cut by a notch by Moody's in May 2017 and S&P in September 2017, with both citing increased risks after a prolonged period of strong credit growth. China has been rated A+ by Fitch since November 2007.

When they cut China's ratings, Moody's said that Chinese authorities face challenges in implementing policies that limit or reduce leverage and improve the allocation of capital in the economy, while preserving robust GDP growth, and economic and financial stability. We believe that China has the necessary flexibility to manage any deleveraging process in a controlled and gradual way, thereby making China's debt and fiscal situation a manageable one.

Narrowing Liquidity Gap Between China Bond Market and Developed Markets

While the onshore China bond market is large, it is quite fragmented and may not be as reliably liquid as its developed market peers. Notwithstanding a recent improvement, a liquidity gap still persists between newly-issued bonds and older bonds. Newly-issued bonds remain relatively liquid for at least a year after issue, and in some cases for up to two years — thereafter, market flow and secondary demand begins to taper off as Chinese domestic investors generally have more of a buy-and-hold approach.

Recently, the government has reopened existing bonds to build up larger outstanding issue size and reduce the number of new issues per year. This concentrates market liquidity into these on-the-run bonds, while also increasing the period over which these bonds can be actively traded in the secondary market. In addition, recent Bloomberg and JP Morgan index inclusions have gone smoothly and proven that investors can now successfully gain exposures without any material liquidity challenge.

Growing Market: China's Bond Market Still Less Mature

China is still a developing country and the bond market has been open to foreign investors for a relatively short period of time. As such, the market is not yet as mature as its developed market peers and operational differences exist in areas such as trading requirements and settlement.

Nevertheless, investors are encouraged by efforts of the Chinese authorities to continually engage market participants on how to improve its market practices to be more aligned with global standards. Electronic trading has been successfully introduced in China bond trading over recent years, further reducing the operational challenges that investors have faced.

There are two main access routes for new entrants to the market: Bond Connect and the China Interbank Bond Market (CIBM) direct access program. Government bond futures are currently unavailable to foreign investors as a hedging tool, although we expect that this and other operational issues will be addressed over time.

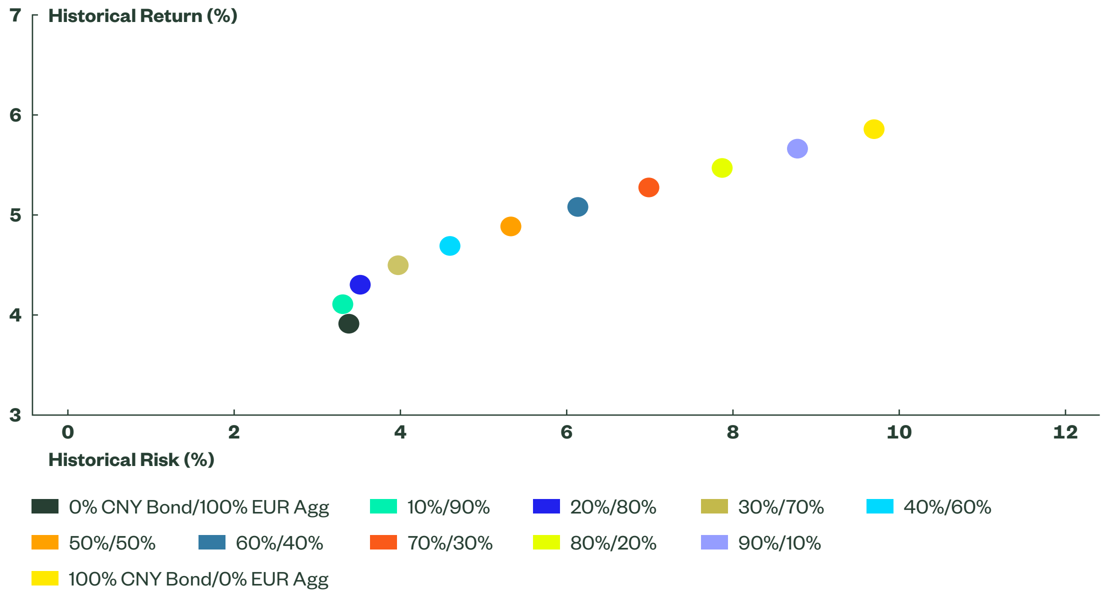
Including Chinese Bonds in European Fixed Income Portfolios: The Impact

- **Our analysis shows that a small allocation to Chinese bonds may provide diversification benefits for European bond investors.**
- **Incorporating 10% Chinese bonds in a Euro Aggregate bond portfolio may generate a higher portfolio return with a similar or lower portfolio risk over the long term.**
- **Chinese bonds may still provide strong diversification benefits on a hedged basis, but the cost of hedging can more than eliminate the yield advantage of investing in Chinese bonds.**

Using long-term historical return and risk metrics, we assessed the impact on the return and risk of a European bond portfolio by replacing part of the Euro Aggregate bond exposure with Chinese bonds.

As illustrated in Figure 12, a 10% allocation to Chinese bonds generated a lower portfolio risk and higher portfolio return than a 100% Euro Aggregate bond portfolio. However, further increasing the Chinese bond allocation led to both higher portfolio risk and return. Although the outcome is purely based on historical return and risk metrics, this analysis shows the inherent diversification benefits of adding a small amount of Chinese bonds to a European bond portfolio, despite its higher historical volatility. The diversification benefits have also been consistent over different historical time horizons.

Figure 12
Historical Portfolio Return & Risk with Different China/ Euro Aggregate Bonds, Based on EUR Unhedged Returns (Jul 2004–Jun 2021)



Source: State Street Global Advisors, Bloomberg, as of June 30, 2021. Chinese bonds (CNY Bond) = Bloomberg China Treasury and Policy Bank EUR unhedged index; Euro Aggregate (EUR Agg) = Bloomberg Euro Aggregate index in EUR. For illustrative purposes. Past performance is not a reliable indicator of future performance. Returns do not represent those of a fund but were achieved by mathematically combining the actual performance data of the Bloomberg Barclays China Treasury and Policy Bank EUR unhedged index and the Bloomberg Barclays Euro Aggregate index in EUR. The performance assumes no transaction and rebalancing costs, so actual results will differ. Past performance is not a reliable indicator of future performance. Index returns reflect capital gains and losses, income, and the reinvestment of dividends.

Bond returns can be difficult to predict, but taking current yields as proxies for bond return forecasts we believe it is reasonable to assume that the medium- to long-term return forecast of China Treasury and Policy Bank bonds would be higher than that of Euro Aggregate bonds. Our constructive long-term currency views on the CNY relative to the euro support this return assumption.

We suggest that euro-based investors looking to take advantage of the yield differential and diversification benefits that Chinese bonds can bring to their European bond portfolios, should start by making an allocation of around 10%. Investors with a higher return target and higher level of risk tolerance can consider allocating more to Chinese bonds.

Aside from the quantitative factors, investors should consider qualitative factors such as credit risk, the level of market development, access and operational differences, as well as potential differences in liquidity compared to more developed markets. On this basis, we propose that foreign investors build onshore China bond exposures gradually.

Does Currency Hedging Make Sense?

On an EUR-hedged basis, China Treasury and Policy Bank bonds will continue to provide diversification benefits to European bond portfolios, given their relatively low correlation with Euro Aggregate bonds (Figure 13).

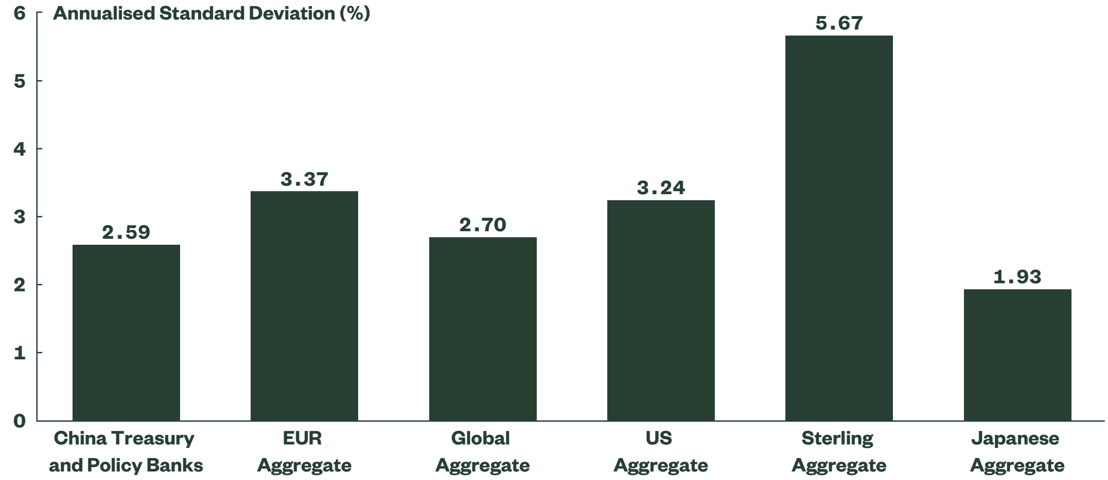
Figure 13
Asset Correlation, Based on EUR Hedged Returns (Jul 2004–Jun 2021)

	China Treasury and Policy Banks	Euro Aggregate	Global Aggregate	US Aggregate	Sterling Aggregate	Japanese Aggregate
China Treasury and Policy Banks	1.00	0.12	0.19	0.16	0.17	0.23
Euro Aggregate	**0.12**	1.00	**0.85**	**0.64**	**0.63**	**0.47**
Global Aggregate	0.19	0.85	1.00	0.93	0.80	0.64
US Aggregate	0.16	0.64	0.93	1.00	0.71	0.51
Sterling Aggregate	0.17	0.63	0.80	0.71	1.00	0.46
Japanese Aggregate	0.23	0.47	0.64	0.51	0.46	1.00

Source: State Street Global Advisors, Bloomberg, as of June 30, 2021. China Treasury and Policy Bank = Bloomberg China Treasury and Policy Bank EUR hedged index; Euro Aggregate = Bloomberg Euro Aggregate EUR index in EUR; Global Aggregate = Bloomberg Global Aggregate EUR hedged index; US Aggregate = Bloomberg U.S. Aggregate EUR hedged index; Sterling Aggregate = Bloomberg Sterling Aggregate EUR hedged index; Japanese Aggregate = Bloomberg Japanese Aggregate EUR hedged index.

The main benefit of currency hedging is that it eliminates the impact of currency movements, thus reducing the risk of owning Chinese bonds. As we can see in Figure 14, the long-term volatility of Chinese bonds has been lower than that of Euro Aggregate bonds on a EUR-hedged basis.

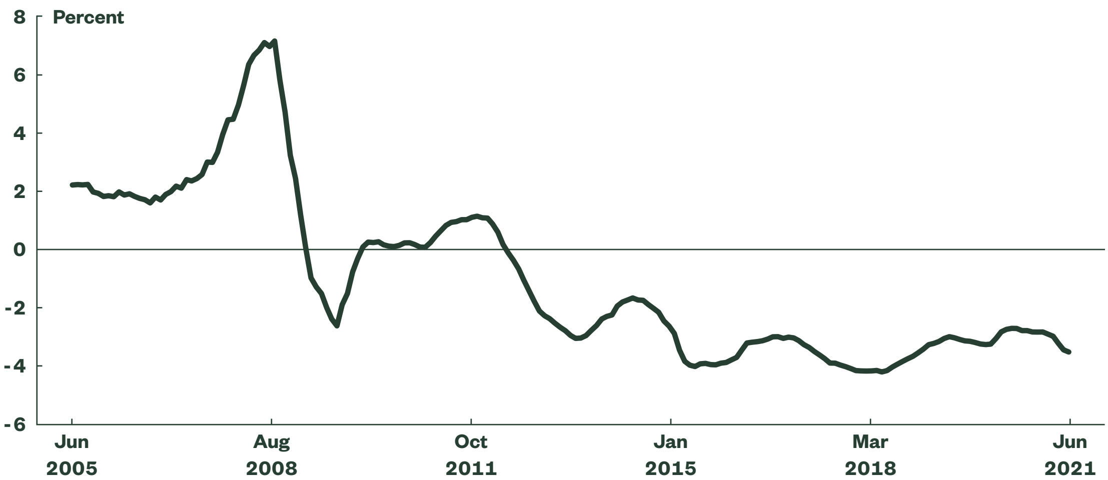
Figure 14
Volatility of Major Bond Indices, Based on EUR Hedged Returns (July 2004–Jun 2021)



Source: State Street Global Advisors, Bloomberg, as of June 30, 2021. China Treasury and Policy Bank = Bloomberg China Treasury and Policy Bank EUR hedged index; Euro Aggregate = Bloomberg Euro Aggregate EUR index in EUR; Global Aggregate = Bloomberg Global Aggregate EUR hedged index; US Aggregate = Bloomberg U.S. Aggregate EUR hedged index; Sterling Aggregate = Bloomberg Sterling Aggregate EUR hedged index; Japanese Aggregate = Bloomberg Japanese Aggregate EUR hedged index.

However, currency hedging has become costly in recent years. As shown in Figure 15, hedging China bond currency exposures to EUR would cost about 3.5% per annum, as of June 30, 2021, which more than eliminates all the yield advantage that would be captured by investing in Chinese bonds.

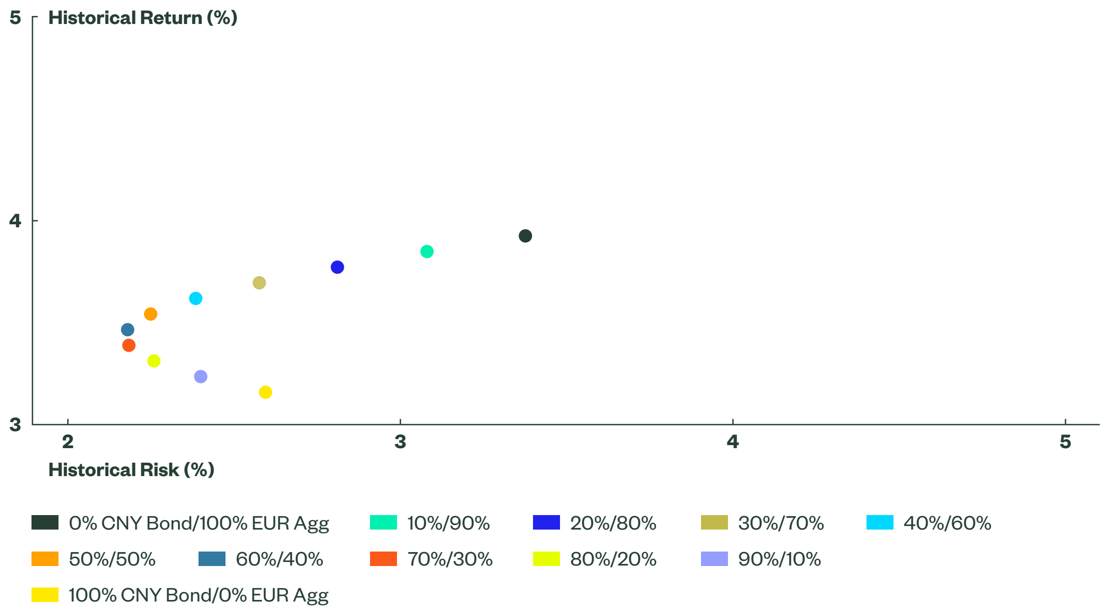
Figure 15
Estimated Return to Hedge China Bond Currency Exposures to EUR



Source: State Street Global Advisors, Bloomberg, as of June 30, 2021. Estimated return to hedge China bond currency exposures to EUR is calculated based on the EUR hedged returns and local returns of the Bloomberg China Treasury and Policy Bank index.

Figure 16 illustrates a similar portfolio analysis to the one referenced earlier, but based on EUR-hedged returns. We observe that the mix of 60% China Treasury and Policy Bank bonds/ 40% Euro Aggregate bonds provided the lowest portfolio risk, suggesting that allocating to Chinese bonds can provide strong diversification benefits. However, the portfolio return was lower with Chinese bond allocations because currency hedging costs more than eliminated the yield advantage of Chinese bonds.

Figure 16
Historical Portfolio Return & Risk with Different Combinations of Chinese Bonds and Euro Aggregate Bonds, Based on EUR Hedged Returns (Jul 2004–Jun 2021)



Source: State Street Global Advisors, Bloomberg, as of June 30, 2021. Chinese bonds (CNY Bond) = Bloomberg China Treasury and Policy Bank EUR hedged index; Euro Aggregate (EUR Agg) = Bloomberg Euro Aggregate index in EUR. For illustrative purposes. Past performance is not a reliable indicator of future performance. Returns do not represent those of a fund but were achieved by mathematically combining the actual performance data of the Bloomberg Barclays China Treasury and Policy Bank EUR hedged index and the Bloomberg Barclays Euro Aggregate index in EUR. The performance assumes no transaction and rebalancing costs, so actual results will differ. Past performance is not a reliable indicator of future performance. Index returns reflect capital gains and losses, income, and the reinvestment of dividends.

We do not recommend that euro-based investors who can bear short-term currency volatility should hedge the currency risk, given the high currency hedging cost and our constructive long-term outlook on the CNY. Currency hedging will be relevant for risk-focused euro-based investors, who look to further reduce the risk of their bond portfolios at the expense of lower returns.

The Outlook for the Chinese Yuan

Attempting to actively position for short-term currency movements of any currency can be very difficult. As a developing market, China is still subject to fluctuating investor sentiment and short-term volatility. Active investors may choose to hedge if they have concerns about near-term risks such as China's slower growth, the PBoC's easing stance, the tensions with the United States and the risks in the country's credit sector. However, it is important for potential hedgers to be mindful of the costs as EUR-based hedgers have to pay nearly 3.5% per annum in hedging costs.

In the long term, we hold a constructive view on the CNY due to China's resilient growth relative to major DM/EM markets. This view is bolstered by the continued opening up of Chinese financial markets (e.g. the global bond index inclusion) and an increase in its international currency functions (e.g. the Chinese currency's market share as an international reserve currency has risen since its inclusion in the International Monetary Fund's SDR basket of five currencies). In our view, the onshore Chinese bond market provides a relatively conservative way of accessing these longer-term currency tailwinds.

Currency Hedging for the Chinese Yuan

The mechanics of hedging Chinese currency exposures are different to developed market currencies. The liquidity to hedge in the CNY market using offshore non-deliverable forward contracts ("NDFs") has been relatively poor, with a high implied cost of hedging.

More investors have been using the deliverable offshore CNH market, where liquidity is better, rather than the CNY market to hedge. CNH is a fully deliverable currency and the mechanics of hedging are the same as traditional developed market currencies. The CNH market has reasonable liquidity for contracts out to a 12-month tenor. The daily average forward volume of CNH (USD25–30bn), according to HSBC estimates, is already comparable to or greater than Norwegian krone (NOK), Swedish krona (SEK) and New Zealand dollar (NZD).

Foreign investors are likely to continue to monitor the option of hedging Chinese currency exposures onshore. Considerations would include restrictions in its use and best execution.

Conclusion

The significant improvements in accessing China's large domestic bond market has started a conversation among global investors about allocating to Chinese bonds. In the current low yield environment, Chinese bonds may provide an attractive yield pick-up for European bond investors while also offering diversification benefits given the low correlation to European bonds.

As presented in this paper, historical analysis shows that incorporating 10% Chinese bonds to a European bond portfolio on an unhedged basis reduced the portfolio risk while increasing the portfolio return. Over the medium to longer term, we expect Chinese bonds to generate higher returns than European bonds. Therefore, we suggest that Europe-based investors looking to take advantage of the yield differential and diversification benefits that Chinese bonds can bring to their European bond portfolios, should start by adding an allocation of around 10%. Investors with a higher return target and higher level of risk tolerance can consider allocating a larger allocation.**

Investors who want to hedge back to EUR can enjoy strong diversification benefits and lower portfolio risk. However, currency hedging eliminates the yield advantage of Chinese bonds and can potentially reduce the portfolio return. We do not encourage euro-based investors who can bear short-term currency volatility to hedge Chinese bond exposure, given the high currency hedging cost and our constructive long-term outlook on the CNY. Currency hedging will be relevant for risk-focused euro-based investors who look to further reduce the risk of their bond portfolios at the expense of lower returns.

** This information should not be considered a recommendation to invest.

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Endnotes

1 Source: Bloomberg Finance L.P., as of 20 September 2021.

2 The above targets are estimates based on certain assumptions and analysis made by State Street Global Advisors. There is no guarantee that the estimates will be achieved.

3 This information should not be considered a recommendation to invest.

4 Source: State Street Global Advisors, MoF, Standard Chartered Research, as of July 2021.

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* Pensions & Investments Research Center, as of December 31, 2020.
† This figure is presented as of June 30, 2021 and includes approximately $63.59 billion of assets with respect to SPDR products for which State Street Global Advisors Funds Distributors, LLC (SSGA FD) acts solely as the marketing agent. SSGA FD and State Street Global Advisors are affiliated.

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