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China calling: The rise of Chinese bond markets

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FIXED INCOME MARKETS

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In this issue

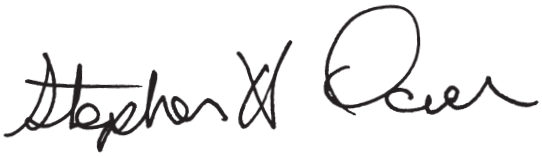
Introduction

Stephen Dover, CFA
Chief Market Strategist,
Head of Franklin Templeton
Investment Institute

In a year that saw record foreign inflows to Chinese bonds, 2020 was also a reflective year for me personally, having watched China's economy grow over the last 40 years. I first traveled to China in 1982 as a student studying Chinese economics and history. Years later, I returned to help launch a local joint venture—Franklin Templeton Sealand Fund Management Co., Ltd. (FT Sealand), which was established in 2004. In the following five chapters from our fixed income managers, we examine China's sovereign bonds, commercial banks, currency and corporates (state-owned and private). Here are a few of our key takeaways:

- Within a global framework, Brandywine Global believes China sovereigns fit better directly alongside traditionally perceived safe-haven bonds like US Treasuries, rather than inside an emerging market debt allocation. China bond analysis, however, starts with a clear recognition that China's capital markets aren't purely "market driven."
- China's economy is an evolving hybrid of top-down statecraft guided by policymakers and market-based capital allocations. In Chapter 2, Western Asset discusses how China's six largest commercial banks are helping China achieve high-quality growth by putting private companies on a more level playing field with state-owned enterprises (SOEs).
- One of China's biggest strategic advantages is its ability to rapidly scale and deploy technologies to modernize its financial system and increase corporate competitiveness. Recent examples include the digitalization of China's renminbi (RMB), discussed by Templeton Global Macro in Chapter 3, and high-tech industries like organic light-emitting diode (OLED) displays, an area where state resources can turn Chinese SOEs into global leaders, as discussed by FT Sealand in Chapter 4.
- Of course, China's top-down approach to boosting quality growth also produces regulatory headwinds that impact bottom-up credit analysis. In Chapter 5, Franklin Templeton Fixed Income reviews a flurry of rules from recent years meant to de-risk China's real estate sector; this alters the credit profiles of private property developers, who outnumber SOEs in this sector.

It's worth emphasizing that integrating China's top-down policies into credit analysis is hard work. New macroeconomic rules don't arrive in easy-to-read blueprints. Instead, policies written in Mandarin arrive in a matrix of interlocking documents from different Chinese agencies, impacting the broad bond market and individual corporates.



Knowing how China's policymakers think

In a tumultuous year for global bonds, China offered investors a bright alternative in 2020. With its resilient economy, sovereign bond yields reaching 3.3%[1] and a rising currency,[2] China's sovereign bonds had one of the world's highest total returns in 2020. Becoming a dominant player on the global stage has been one of the Chinese government's chief goals this century. Back in 2000, China's bond market trailed far behind developed countries like Japan and the United States by size.[3] Today, the scale of China's bond market is second only to the US bond market.

Franklin Templeton was an early investor in Chinese equities, researching companies as early as 1987. While foreign investment into China has historically been on the equity side, our independent investment managers have been developing their expertise and exposure to Chinese bonds for many years. To make the case for placing Chinese bonds inside global portfolios, each of the following chapters explain how our investment managers integrate China's macroeconomic innerworkings into sovereign, quasi-sovereign and currency analysis along with bottom-up credit analysis across corporate SOEs and private enterprises. Navigating Chinese bonds requires unpacking past reforms following the global financial crisis (GFC) and a raft of new policymaker guidelines—all aiming to achieve China's goal of becoming the world's largest economy by 2035.

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China's economic reforms

One standout feature of China's economy in 2020 was its disciplined use of stimulus to recover from the economic tailspin of the COVID-19 pandemic. Most of the world's major central banks dropped interest rates and increased quantitative easing, while many governments dramatically increased fiscal spending and their already gargantuan deficits. In contrast, China's quick containment of COVID-19 meant it could resume its previous glidepath of deleveraging. As Brandywine Global explores in Chapter 1, China's disciplined approach to stimulus coupled with relatively high bond yields attracted record foreign inflows into China's government bonds. Brandywine Global makes a compelling case for why China's sovereigns now belong inside a developed market bond allocation rather than lumped with emerging market peers.

Since the start of Xi Jinping's presidency in 2013, China aimed to improve productivity growth by injecting more market-based discipline into capital and credit allocations. In Chapter 2, our credit team from Western Asset explains why offshore bond exposure to China's largest state-owned commercial banks offers a levered play on China's sovereigns. China's sprawling banking system plays a key role in China's pivot away from money-losing, debt-laden "zombie" SOEs, and increasing support for private enterprise. To grasp how far China's banks have evolved means examining the role they played in pumping credit (much of it wasteful) into China's economy after the GFC. Today, China's policymakers are telling banks to reorient loans toward privately owned companies whose organic (not debt-driven) innovations can generate high-quality growth. For China's six largest banks, these risks are manageable given their ample exposure to systemically important SOEs.

China's forward-looking innovations

Across the investment teams featured in this piece, all five agree one of China's biggest strategic advantages is its ability to rapidly scale and deploy technologies. For our Templeton Global Macro team, that technological edge is

manifest in the upcoming launch of China's new digital currency, outlined in Chapter 3. Under development since 2014, the digitalization of China's renminbi will likely accelerate the internationalization of China's currency.

In Chapter 4, the team at FT Sealand—our Shanghai-based joint venture—explains how national policies like "Made in China 2025" helped jumpstart China's push into OLED displays used in premium mobile phones. FT Sealand explains why a major part of its credit analysis involves understanding how SOEs fit inside China's evolving industrial policies. Turning to privately owned enterprises in Chapter 5, our Franklin Templeton Fixed Income team examines China's drive to de-risk the overheated real estate sector. New regulations are forcing property developers to shed assets and boost near-term cash flows, in some cases by selling new homes at fire-sale prices. Looking ahead to 2035, China's policymakers are guiding property developers to build giant "city clusters," each with capacity to house 100 million urban residents.

China bond categories

To help orient readers to our five fixed income chapters, Exhibit 1 illustrates how the bulk of last year's foreign inflows went into ostensibly "risk-free" Chinese government and policy bank bonds.

For our chapters on bonds with incrementally higher credit risks, such as commercial banks and corporates (both state-owned and private), we note that except for FT Sealand, most of our bond exposures in these categories are through China's offshore US-dollar bond market.

RECORD CHINA BOND INFLOWS

Exhibit 1: 2020 foreign inflows into China's onshore RMB bonds

As of March 2021

Total 2020 foreign inflows US$155 billion (RMB¥1.1 trillion)	US$89 billion (RMB¥571 billion)	US$65 billion (RMB¥421 billion)	US$30 million (RMB¥2 billion)	US$3 billion (RMB¥17 billion)	US$7 billion (RMB¥46 billion)	US$2 billion (RMB¥12 billion)
	Central government bonds	**Policy bank bonds**	**Certificates of deposit (CDs)**	**Commercial bank bonds**	**Corporates**	**Other**
Bond risks	Risk-free sovereign			Quasi-sovereign big-six banks	State and privately owned enterprises	Local government bonds
	Lower bond risks		**RISK SPECTRUM**			**Higher bond risks**

Source: Institute of International Finance, March 2021.

China's sovereign bonds: The alternate safe haven

Tracy Chen, CFA, CAIA
Portfolio Manager
Brandywine Global

Against a dreary backdrop of low, zero or negative yields from traditionally perceived safe-haven bonds like US Treasury notes and bonds (US Treasuries), China's sovereign bonds offer an alternative way to diversify a global portfolio, in our analysis. By combining higher yields relative to developed market bonds and lower volatility relative to emerging market bonds, Chinese sovereign bonds have produced high risk-adjusted returns with low correlations over the past 10 years.

Within a global framework, we believe China's government bonds now compare more closely to developed markets (DM) than to emerging markets (EM). However, there are several major trends impacting the world's largest developed bond markets and reducing their ability to hedge portfolios during risk-off periods. We review these trends and demonstrate how their impact on China may differ.

We also discuss how the opening of China's onshore market equates to a "Big Bang" event in global fixed income, on par with China's 2001 entry into the World Trade Organization (WTO). Faced with the structural decline of its current account surplus, China needs more foreign capital to fund its future growth, upgrade its manufacturing value chain and promote its currency globally. As China seeks to pivot away from an export-driven economy, its more welcoming stance could benefit foreign investors in its onshore bond market.

Lastly, we examine the information and price risks to our China bond safe-haven investment thesis. On the back of China's strong post-pandemic, V-shaped recovery, we expect growth momentum will taper off later in 2021 as policy-makers return to the delicate process of deleveraging financial risks and asset bubbles while avoiding a policy cliff. We review what we believe are solid fundamentals and favorable valuations, plus a structural tailwind from pending China sovereign bond index inclusion—all boosting foreign momentum into the onshore market.

Global sovereign bonds: The case of missing "real" yields

Following the global financial crisis (GFC), successive rounds of quantitative easing (QE) from the world's major central banks to reflate the global economy have resulted mainly in ballooning global debts, anemic economic growth and stubborn deflation. Driven by structural factors like high debt burdens, aging demographics and persistent deflation, global sovereign bond yields have been on a steady decline, with over US$12.87 trillion (RMB¥82 trillion) of bonds bearing negative yields (Exhibit 2 on the next page). With nominal yields so low and real yields already negative, traditionally perceived safe havens like US Treasuries, German bunds, Japanese government bonds and United Kingdom government bonds (UK gilts) are no longer able to hedge investor portfolios during risk-off periods. The prevalent mantra of "lower interest rates for longer" also poses huge challenges for yield-starved pension funds and insurance companies.

The shock of COVID-19 has exacerbated this trend, triggering massive monetary and fiscal stimulus around the globe. Major central banks have been cutting interest rates, dusting off QE programs, and even turning to unconventional methods or new tactics, like yield curve control, modern monetary theory and average inflation targeting to shore up financial markets and fund more fiscal stimulus. These market interventions are now more the norm rather than the exception, distorting government bond valuations and diminishing or even canceling the role bond yields used to play as macroeconomic indicators and measures of an economy's true pulse.

Coordinated QE programs among central banks have also increased correlations between sovereign bond markets, making it more difficult for bond investors to diversify their bond risks. For governments, these interventions may come with an unintended consequence of a cyclical flare-up in inflation, triggering a sharp steepening of yield curves. Furthermore, governments face financial risks and an eventual reckoning from this relentless stimulus largess and explosive increase in debt. There is, however, one government that stands out as an exception: China.

China's yields stand out

China's successful containment of the COVID-19 outbreak has given the People's Bank of China (PBOC) the freedom to be more disciplined and restrained in its stimulus measures relative to its economic peers (Exhibit 3). Indeed, the PBOC already embarked on normalizing its policies last year. At the pandemic's height, China's 10-year yield bottomed in April 2020 to a low of 2.4% but has since returned to pre-COVID-19 levels of around 3.1% (Exhibit 4). The PBOC's more rational monetary stance renders Chinese sovereign bonds increasingly attractive, in our view, including as a potential alternative safe-haven asset.

Chinese government bond yields, however, have bucked the declining yield trend for some time. Yields on 10-year bonds have largely remained at their 2006 levels, in the low-to-mid 3% range, despite China's economy slowing from double-digit growth to mid-single digits since that period. In stark contrast, yields on sovereign bonds from developed economies like the United States, the United Kingdom, Japan and Germany have been on an incessantly declining trajectory over the past 15 years (Exhibit 4).

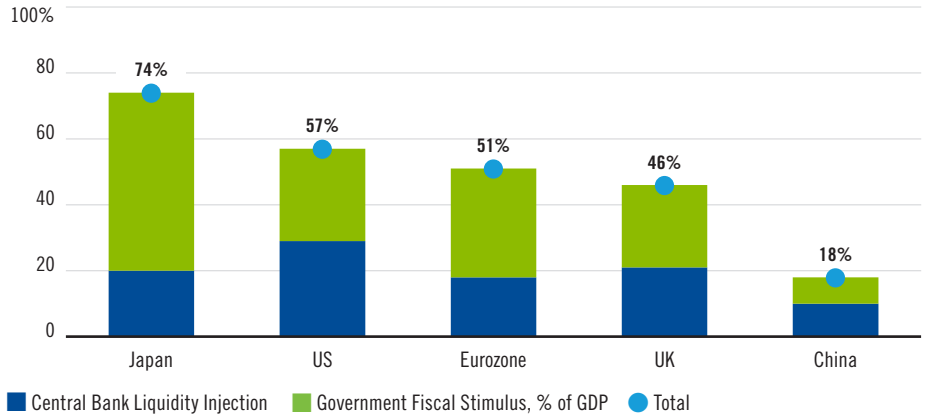
GLOBAL BOND YIELDS' STEADY DECLINE

Exhibit 2: Bloomberg Barclays Global Aggregate Negative-Yielding Debt Index market value
January 2, 2018–June 7, 2021

Source: Bloomberg. Indexes are unmanaged, and one cannot invest directly in an index. They do not include fees, expenses or sales charges. Important data provider notices and terms available at www.franklintempletondatasources.com.

CHINA'S FISCAL DISCIPLINE DURING COVID-19

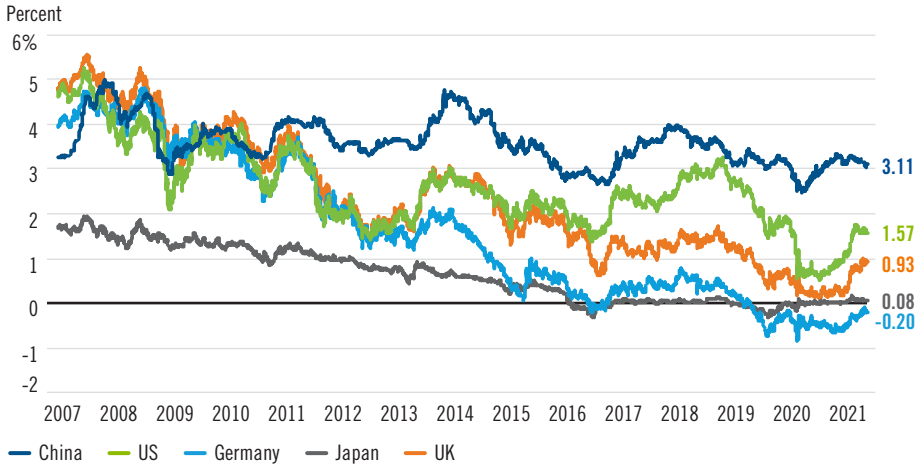
Exhibit 3: Global monetary and fiscal stimulus to fight COVID-19 impacts
February 2020–May 2021



Source: Cornerstone Macro.

CHINA BOND YIELDS HAVE BUCKED THE TREND

Exhibit 4: Global sovereign 10-year bond yields
January 1, 2007–June 7, 2021



Sources: Macrobond, US Department of Treasury.

Unlike its DM peers, the correlation between China's sovereign bond yields and its economic growth rate is not significant. This difference is due to China's unique quasi-monetary policy, which is driven more by the quantity of liquidity (loan quotas, etc.) that the PBOC injects into the economy, rather than the price (i.e., interest rates)—a topic we recently discussed.[4]

Gravitational pull toward zero

Global fixed income investors must gauge the likelihood of DM bond yields rising and recoupling with China, or the probability of China's government bonds being pulled down into low-yielding territory. Structurally speaking, we do not believe China will be a long-term exception from the gravitational pull of zero interest rates, given its high debt burden, aging demographics and deflationary forces. China is currently the only country with a debt-to-gross domestic product (GDP) ratio over 250% that is still able to defy zero-interest rates, according to JP Morgan Research. However, this exception will not last indefinitely. China has a debt-to-GDP ratio close to 300%, and approximately 70% of its total social financing is used for interest payments. Hence, we do not think China can afford higher interest rates, and we expect rates to decline and approach zero in the next several years.

China's "big bang" event: Opening the onshore bond market

Before China opened up its local bond market, many global investors used EM bonds of commodity-exporting sovereigns as a proxy for China's impressive growth. With new access channels for foreign investors—the China Interbank Bond Market (CIBM) in 2016 and Bond Connect in 2017—the pace of foreign inflows accelerated in 2019 when the Bloomberg Barclays Global Aggregate Index included local Chinese bonds.

Despite strong foreign portfolio flows last year, China's financial markets remain relatively isolated from global capital. According to a July 2020 FTSE Russell report on the Chinese bond market, foreign ownership, mostly concentrated in government bonds, is about 9% of China's sovereign bond market but only around 3% of its entire onshore bond market.[5]

In 2020, the JP Morgan Government Bond Emerging Market Index followed, with the FTSE World Government Bond Index scheduled to include Chinese bonds in October 2021. So far, central bank reserve managers and sovereign wealth funds looking for more yield diversification are the major foreign investors in China's onshore bond market. However, we estimate index inclusion could generate foreign flows of up to US$400 billion (RMB¥2.6 trillion) into Chinese bonds over the next two to three years, also bringing along active, value-oriented bond investors attracted by China's higher yields.

Pivoting to consumer-driven growth

China's opening is by strategic design—a natural progression of its rebalancing from debt-driven modernization and export-driven manufacturing toward more organic growth from Chinese innovations and a domestic consumption-driven economy. Facing growth challenges from its aging population, inefficient allocations of capital, and an adverse geopolitical environment that restricts some exports, China needs to reform its financial markets to optimize its capital allocations. If China fails to boost productivity and compete with economic peers in higher value-chain industries, it could become stuck in a "middle-income trap."

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Embracing a market-based system

Achieving this goal requires opening up its capital account[6] to two-way capital flows. Currently, China encourages inflows but still tightly curbs outflows. With gradualism as its mantra, China's policymakers are cautious about not losing control too fast due to the complexity of their mission. Given the structural decline of its account surplus, China needs more foreign direct investment to fund its future growth, upgrade its value chain, and promote its currency globally. Opening up its bond market also can serve as a catalyst to force difficult financial reforms. By transitioning to a more market-based

system, investors can better price credit risk while China focuses on stemming the buildup of distressed and defaulted loans and nurturing productivity growth with more efficient investments in homegrown innovation.

We view China's onshore market opening as a "Big Bang" event in the global bond market, on par with China's 2001 entry into the WTO. If foreign ownership in China's bond market can match that of the US bond market, which is about 25%, potential capital inflows could reach US$4 trillion (RMB¥26.1 trillion). If China gradually enables domestic households to diversify their investments by allowing them to invest overseas, the outflows also may reach several trillion US dollars. Those amounts will have significant implications for the global financial market. With the United States and China potentially competing for overseas capital, the PBOC will need to adjust to fluctuations in exchange rates and market interest rates more frequently.

The case for China's sovereign bonds: Higher yields and safety

As macro-oriented, value-driven investors, we approach any investment opportunity by first evaluating both information risks and price risks. Information risk assessment entails a deep dive into fundamental analysis, analyzing how the basis of our thesis might fail. A review of price risks requires an understanding of the valuation anomaly. For readers interested in a deeper dive into China sovereign bond fundamentals—covering a range of economic and policy wild cards along with ESG (environmental, social, and governance) risks—please see the **Key Risks and Mitigations** section on page 12.

After yields bottomed in April 2020, China's government bonds sold off from April to November 2020, noticeably impacting valuations. We attribute the sell-off to the following three factors:

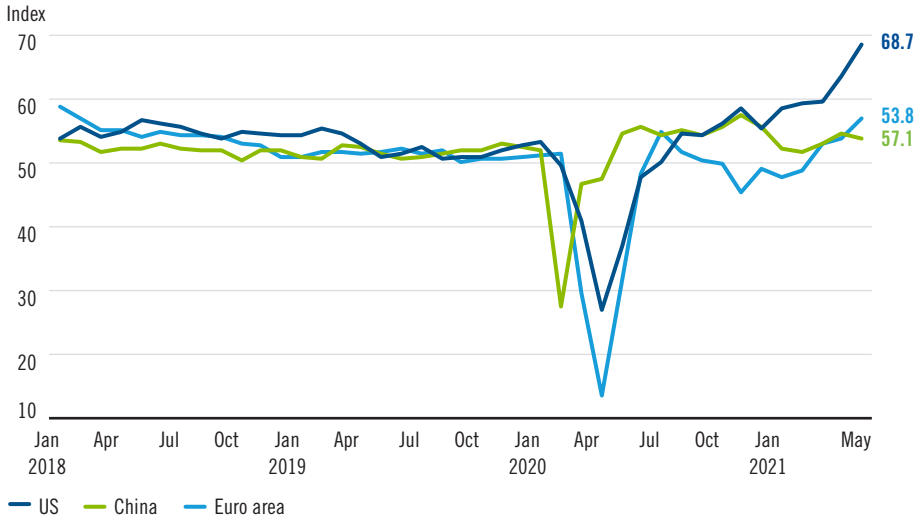
- China recovered from COVID-19 lockdowns faster than other regions and also generally avoided the successive waves of infections still plaguing other nations. As a result, economic activity as measured by the output category of the Purchasing Managers' Index (PMI) rebounded sharply (Exhibit 5) in early 2020, and bond yields normalized faster.
- As China's fiscal deficit has risen by 4%–5%, we have seen a commensurate sharp increase in the issuance of government bonds, policy bank bonds and special local government bonds to finance the deficit. This huge supply has dampened investor demand.
- The PBOC has signaled policy normalization with no more easing. The bond market's next move likely will be driven by how the Chinese economy performs later in 2021 after the post-virus rebound.

Slowing growth momentum

After China's V-shaped but uneven recovery, we believe China's growth momentum may start to moderate in 2021 due to policy normalization and a renewed focus on deleveraging financial risks while avoiding a policy cliff. We expect policymakers' attention will be consumed by the very challenging tasks of shifting growth drivers from infrastructure and property investments to consumption, services and manufacturing investments. A resurgence of COVID-19 cases or an unwillingness to change the status quo ahead of the Communist Party centenary in July 2021 could dampen the pace and scale of policy tightening. Ultimately, however, we believe fiscal consolidation, a slowdown in credit growth and macro-prudential measures to address asset bubbles and local government hidden debt will become headwinds again to growth later in 2021.

CHINA'S SHARP REBOUND

Exhibit 5: IHS Markit, Composite PMI Output Index, seasonally adjusted
January 2018–May 2021



Source: Macrobond, IHS Markit, Archival St. Louis Fed (ALFRED). Indexes are unmanaged, and one cannot invest directly in an index. They do not include fees, expenses or sales charges. Important data provider notices and terms available at www.franklintempletondatasources.com.

Supportive fundamentals: The strength of a developed market

Besides China's strong but measured economic prospects, its bond market is supported by solid fundamentals and structural improvements, which can make it attractive to foreign investors. China's onshore sovereign bonds also lack many of the weaknesses and vulnerabilities that plague other EM sovereign bonds, calling into question whether Chinese government bonds deserve the EM risk premium. Instead, we believe China's government bonds belong more to the DM rather than EM block. Supporting our view is the fact that the renminbi (RMB) is the only "EM currency" that has been included in the basket of currencies that is used to value special drawing rights (SDR); the SDR is an international reserve asset created by the International Monetary Fund (IMF) to supplement the official reserves of its member countries.

Attractive valuations and yields: Potential for further price appreciation

Absolute yields on China's onshore sovereign bonds have been trading at compelling levels relative to global DM sovereign bonds, in our analysis. The bonds also are at their widest spread levels versus global sovereigns over the past 10 years, thanks to the strength of the Chinese economic recovery (Exhibit 6 on the next page). We believe Chinese bonds, with yields around 3.1%, offer an asymmetric return profile, with limited downside risk but huge potential for price appreciation.

Japanese and German bonds failed to offer downside protection in the first quarter of 2020, which suggests their traditional role as defensive assets may be limited in the next recession with yields around 0%. We believe China's government bonds can offer a compelling alternative as a high-quality, defensive asset.

Other compelling characteristics

In addition to strong fundamentals and attractive valuations and yields, Chinese sovereign bonds offer several other favorable qualifications.

CHARACTERISTICS OF CHINESE BONDS

Favorable debt repayment

China has demonstrated a strong ability and willingness to service and repay its debt. While the prospect of corporate defaults is concerning for some investors, we think they are signs that the market is maturing and open to pricing credit risk more accurately. Furthermore, China's balance of payments data shows the country remains a net creditor to the rest of the world, with a significant positive net foreign asset position of approximately 15% of GDP, based on FTSE Russell research.[7]

Strong credit rating

The underlying creditworthiness of China's bond market is reflected by the country's A+ sovereign credit rating. China's debt growth has been fueled largely by a reallocation of domestic savings from consumption to longer-term investments aimed at boosting productivity and future growth. Modern "smart city" clusters supported by sophisticated high-speed train networks are a case in point.

Stable ownership structure

Two-thirds of China's government bonds, according to an FTSE Russell report, are held by domestic commercial banks, which usually hold to maturity.[8] The bonds are insulated from the reliance on foreign ownership and accompanying volatility.

Low government debt-to-GDP

The government debt-to-GDP ratio is still relatively low, backed by a high savings rate, healthy balance of payments and large foreign exchange reserves.

Favorable market technicals

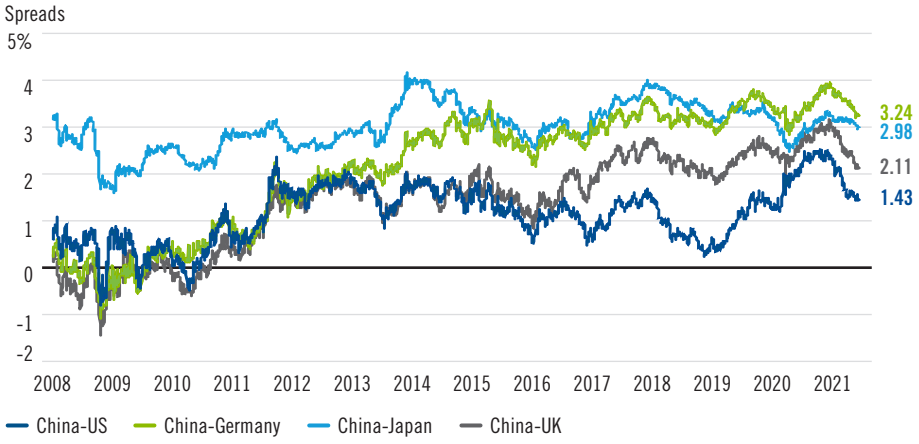
China was the only major economy to post positive GDP growth in 2020. Inflation remained benign as global demand was weak. This favorable combination of solid growth and low inflation has provided the PBOC with more monetary policy flexibility and the ability to avoid excessive money printing. Monetary policy normalization and fiscal consolidation resulted in smaller government bond issuance.

Market-driven monetary policy

PBOC monetary policy has become more market-driven, evolving from loan quotas and liquidity management to greater emphasis on interest rate transmission. Until 2019, repo rates were the main indicators of the PBOC's policy stance. Now, loan prime rates (LPR) and medium lending facility (MLF) rates serve as the policy rates. We monitor these and other rates to interpret the PBOC's monetary stance.

CHINA WIDENING THE YIELD GAP

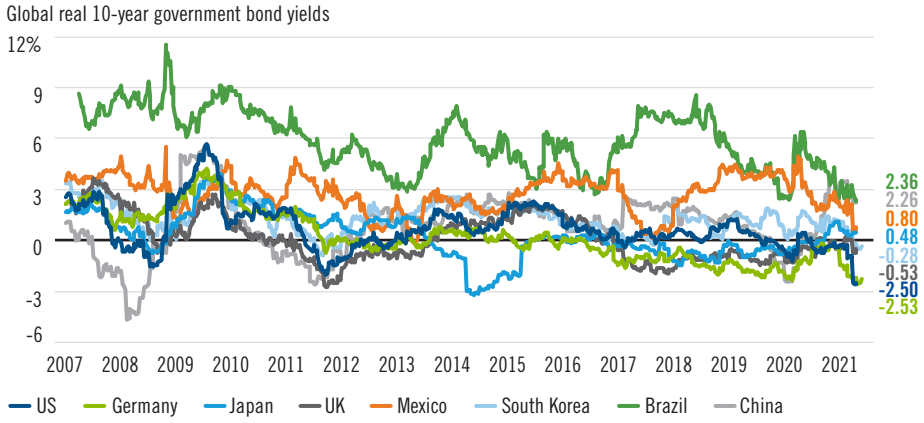
Exhibit 6: Spreads between China and global DM 10-year treasury yields
January 2008–June 2021



Sources: Macrobond, US Department of Treasury.

CHINA FARING WELL WITH LESS VOLATILITY

Exhibit 7: Global real 10-year government bond yields
January 2007–May 2021



Source: Macrobond.

A GOOD BALANCE OF RISK VS. REWARD

Exhibit 8: Long-term risk adjusted returns of different assets
January 2010–February 2021

	Annualized return %	Annualized standard deviation %	Risk-adjusted returns %
China government bonds	3.6	3.2	1.11
S&P 500	14.0	14.0	1.00
US Treasury Bonds	3.3	4.5	0.72
US high yield	7.5	12.1	0.62
US investment grade	5.6	6.7	0.83
EM Bond Index Global	6.3	10.0	0.63
EM Local Bonds	2.3	13.8	0.17
EM Equities	5.2	25.9	0.20
EM FX	0.6	9.0	0.07
MSCI EM Asia	8.0	25.6	0.31
Asia USD Credit	5.9	8.6	0.68
International Treasury Bonds	2.4	6.8	0.35

Source: JP Morgan Research.

Good combination of DM and EM
China's onshore sovereign bonds stand out from other EM sovereign bonds and DM bonds. As the world's second-largest bond market, China still offers high positive real yields, comparable to some EM bonds (Exhibit 7). However, the Chinese market is generally less volatile than other EMs, due to its limited reliance on foreign ownership and skew toward shorter maturities.

High historical risk-adjusted returns
For the past 10 years, an allocation to Chinese government bonds has boosted risk-adjusted returns by increasing return and dampening volatility for global bond portfolios. Since 2010, Chinese bonds have bested many asset classes while offering risk-adjusted returns that are among the highest of major bond markets (Exhibit 8).

Low correlations and diversification potential
At a time when core DM bond markets, including the United States, Germany, Japan and the United Kingdom, have been increasingly correlated, which presents diversification challenges to investors, China has been characterized by low correlations to most other bond markets (Exhibit 9 on the next page). Furthermore, correlations among EM bond markets, including Brazil, Mexico, South Africa and even India, have been significantly higher.

Chinese sovereign bonds: A welcome alternative

Over the past decade, the utility of safe-haven sovereign bonds inside portfolios has steadily diminished. Pressured by structural forces, global bond markets have been approaching low, zero or negative yields. Bond investors seeking both yields and safe-haven protection have been discovering China's sovereign bonds potentially can offer the potential for higher yields

CHINA'S LOW CORRELATION OFFERS DIVERSIFICATION

Exhibit 9: Correlation of weekly local bond market return in selected government bond markets
January 2010–February 2021

	China	India	Mexico	S. Africa	US	Germany	Japan	Brazil	UK
China	1.00	0.12	0.18	0.08	0.22	0.20	0.14	0.09	0.21
India	0.12	1.00	0.18	0.11	0.16	0.14	0.07	0.15	0.15
Mexico	0.18	0.18	1.00	0.47	0.43	0.30	0.31	0.41	0.36
South Africa	0.08	0.11	0.47	1.00	0.10	0.10	0.11	0.42	0.12
US	0.22	0.16	0.43	0.10	1.00	0.74	0.50	0.20	0.78
Germany	0.20	0.14	0.30	0.10	0.74	1.00	0.47	0.14	0.75
Japan	0.14	0.07	0.31	0.11	0.50	0.47	1.00	0.16	0.46
Brazil	0.09	0.15	0.41	0.42	0.20	0.14	0.16	1.00	0.19
UK	0.21	0.15	0.36	0.12	0.78	0.75	0.46	0.19	1.00

Source: JP Morgan Research.

relative to DM bonds and greater safety with less volatility relative to EM bonds. Over the past decade, high risk-adjusted returns combined with low correlations have further enhanced the portfolio diversification benefits of Chinese sovereign bonds and lent added support for an allocation within a global bond portfolio.

It is worthwhile noting that China's onshore bond market is still largely under-owned by foreigners. This ongoing trend provides a long-term structural tailwind, in our view, which should accelerate with upcoming index inclusion in the FTSE World Government Bond Index. It is a welcome development that China is determined to earn, both through prudent monetary policies and ongoing efforts to continue opening its onshore bond market and encouraging foreign investors. Against this positive macro backdrop, we believe Chinese government bonds represent an attractive opportunity over the long term.

CHINA SOVEREIGNS: KEY RISKS AND MITIGATIONS

China's onshore bond market presents opportunities for global investors to add diversification and return potential to their portfolios. However, the market is not without risks, some of which are unique to China and should be considered carefully.

Risk of debt burden

The primary risk is the massive leverage that resulted from the credit-driven investment boom since the GFC. However, this risk is being addressed by deleveraging and supply-side reform. Growth in shadow banking has turned negative and is still contracting. China continues to balance its tolerance for SOE defaults with safeguarding financial stability. We do not think SOE bond defaults pose a major systemic risk as policymakers have plenty of tools to maintain control of the financial market due to the relatively low government debt ratio.

Policy risks

A return to an aggressive deleveraging campaign could trigger more corporate bond defaults and lead to a broad sell-off in Chinese bonds. However, our base case is that the PBOC's intent is to avoid a policy cliff and ensure market stability.

Currency risks

Investing in China's onshore government bonds bears currency risk. Recent reforms that improved foreign investors' access to foreign currency (FX) derivatives should assist in hedging this risk. The risk of a sudden policy reversal involving capital controls should be very unlikely, given the market damage this shift could trigger.

Risk of COVID-19 resurgence

An additional COVID-19 shock could impact the domestic economy and EM economies. China's vaccine rollout has been very slow. If COVID-19 resurges, investors would need to assess the likely negative impact on global supply chains and Chinese exports, as well as potential losses from China's lending to other EM economies.

ESG risks

China ranks low in environmental, social and governance (ESG) scoring for its human rights records, corruption and pollution levels. However, policymakers have made progress.

- **Environment:** China joined the Paris climate accord and pledged to achieve carbon neutrality by 2060 and reach peak emissions by 2025. China is gradually shifting its energy mix from coal toward clean sources like solar and wind. It dominates the green supply chain, demonstrated by its 72% market share in solar modules, 69% in lithium-ion batteries and 45% in wind turbines, based on Societe Generale research.[9] In addition, China has made significant improvements in energy efficiency in the past two decades, upgrading its transportation network and expanding the electric vehicle sector through generous tax cuts and government subsidies. China is also the largest green bond issuer.
- **Social:** China faces significant censure on human rights issues, but the country announced it had eliminated absolute poverty nationwide. Societe Generale research put the literacy rate at 96.84% in 2018, a 1.7 percentage point increase from 2010, according to UNESCO.
- **Governance:** The anti-corruption campaign, which lasted several years, had more than 100,000 people indicted, according to Societe Generale.[10] China now needs to improve on due process and enforcement of laws. Disparity of development levels among urban, coastal and rural inland areas has been narrowing. Policymakers have continued to encourage urban migration as well as fund education and expand healthcare and transportation infrastructure in poor areas.

If the green transition helps sustain productivity growth, China's bond yields should maintain their premium, since long-term yield levels typically correlate with long-term growth potential.

Market transparency and liquidity risk

China's bond market is still fragmented, dominated by the interbank bond market and supplemented by the exchange bond market. The two submarkets lack connectivity, with different trading systems, participants and bond varieties. The regulatory framework is also fragmented. With commercial banks as the main buy-and-hold investors, liquidity can be challenging. Derivative tools are insufficient to hedge against exchange rate risk, interest rate risk and credit risk.

Geopolitical risk

The delisting of some Chinese stocks and investment restrictions for pension funds pose additional geopolitical risk. We believe the Biden administration in the United States will not be friendlier to China but probably more predictable and more measured than the previous presidential administration. Biden's team may take a differentiated strategy on China: competitive on trade, investment and financial services; adversarial on technology, geopolitics and human rights; and cooperative on COVID-19 control, climate change and nuclear nonproliferation. Biden likely will encourage allies to form a united front and reengage with the WTO and other global institutions. While Biden may seek greater domestic investment in science, technology, education and infrastructure, China also may continue to engage with other trading partners to minimize the impact of further US-China decoupling.

China's banks embrace private innovations

Desmond Soon, CFA
Head of Investment Management, Asia (ex-Japan)/Portfolio Manager
Western Asset

Swee-Ching Lim
Portfolio Manager
Western Asset

In a volatile year for bonds, China was a bright spot in 2020. By offering strong economic growth and ample yields, China witnessed record foreign flows into onshore China government bonds, followed closely by policy bank bonds, which we view as high quality quasi-sovereigns.[11] To a lesser degree, we think bonds from China's largest commercial banks also deserve a look, particularly in China's offshore bond market. Whereas China's central government bond issuance is limited in hard currency, China's large banks offer ample US-dollar bond issuance, which we integrate into our global bond portfolios.

We do believe it's important to note that foreign ownership of China's local currency bonds has historically been low by design—less than 5%—primarily due to long-standing capital controls imposed by the government. China has gradually relaxed regulations on its capital markets and has been making foreign ownership incrementally more accessible over the past 15 years.

Conceptually, we view China's six largest banks (see Exhibit 10) as a levered play on China sovereigns and future economic growth. As we explain in this chapter, China's colossal banking system (the world's largest) plays a direct role in implementing the macro-economic strategies of China's policymakers. In the following pages, our focus is not on unpacking the particulars of individual bank bonds. Rather, it is helping investors understand the broad architecture of China's banking system and the role China's banks play in re-shaping China's future growth.

Becoming a near-majority middle-class country by 2025 will be a major milestone for China. Achieving it involves "window guidance" from China's top policymakers, who direct bank loan allocations to individual sectors and companies. Policymakers have made it clear to banks that a business-as-usual approach isn't an option. Unproductive SOEs can no longer simply borrow more to spend their way out of challenges. Better to reorient loans toward privately owned companies whose organic (not debt-driven) innovations can generate growth. A positive step broadly speaking, but these loans also introduce new risks, especially among small and micro enterprises (SMEs) with higher default rates. For China's six largest banks, these risks are manageable given their ample exposure to systemically important SOEs.

To better grasp how policymakers are reorienting bank lending, it helps to first understand China's recent past. In the wake of the global financial crisis, banks pumped enormous quantities of credit into China's economy. It turned out that

THE BIG SIX OF CHINA'S BANKING ECOSYSTEM

Exhibit 10: China's six largest state-owned banks
As of March 31, 2021

Bank	Total assets (US$ trillion)	Total assets (RMB trillion)
Industrial and Commercial Bank of China	5.2	34.4
China Construction Bank	4.5	29.4
Agricultural Bank of China	4.3	28.5
Bank of China	3.9	25.8
Postal Savings Bank of China	1.8	12.0
Bank of Communications	1.7	11.2

Source: 1Q21 financial statements of each institution.

too many loans were wasteful. Looking ahead, bank lending is not about increasing the quantity of loans to hit new gross domestic product (GDP) targets. With an eye on China's future, rather than flooding China with credit, the PBOC is deploying what it perceives to be more efficient credit irrigation tools, channeling loans to strategically important sectors and companies. And by no means are SOEs out of the picture; SOEs retain key roles in strategic sectors and the supply chains feeding China's value-added manufacturing. But increasingly, banks are asked to place SOEs on a more level playing field alongside China's privately owned enterprises.

China's colossal bank system

China's bond market is undeniably large—at US$18 trillion (RMB¥118 trillion) it's now the world's second largest.[12] But it is also quite young. Consider this: China had fewer than 25 active corporate bond issuers in 2000 with just US$286 billion in bonds outstanding.[13] Now, place China's current bond market next to China's US$40 trillion (RMB¥263 trillion) bank market, and one begins to grasp just how massive the world's biggest banking system is (surpassing those of both the US and the EU).

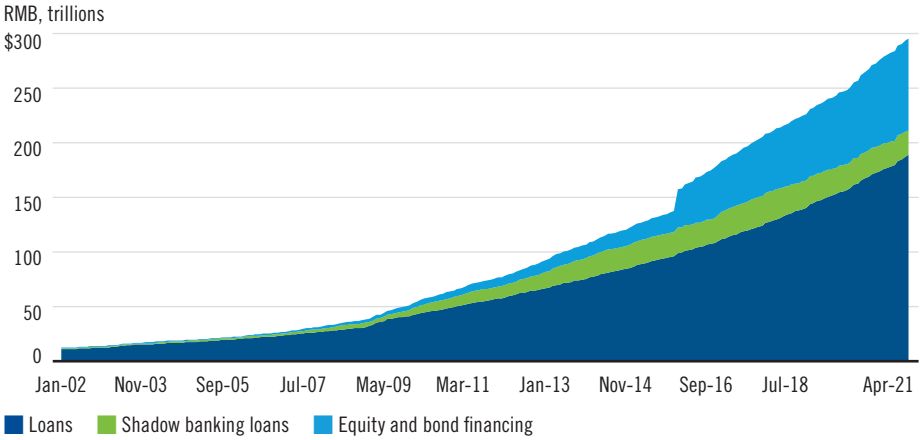
Further, sitting atop China's sprawling system of over 4,500 banking institutions, the PBOC not only directs China's monetary policy, it also offers "window guidance" to banks that then channel credit into what the PBOC believes to be strategically significant sectors and individual companies. A well-known practice across Asia, window guidance is an unofficial way for policymakers to skip bureaucratic formalities to directly influence bank lending practices—a key factor in Japan's remarkable economic turnaround after the second world war.[14] Beijing policymakers frequently use dialogue (in person or by phone) to attempt to persuade commercial banks towards a specific course of action, picking certain sectors or companies that should receive cheaper credit or special subsides, for example.

Additionally, as illustrated in Exhibit 11 below, commercial bank loans play an outsized role in funding China's total social financing (TSF). A unique liquidity metric, TSF captures the aggregate volume of new liquidity (i.e., credit impulse) injected into China's economy. The liquidity spans China's entire domestic financial system; policymakers use it as a credit tool to help the PBOC guide monetary policy.

Responding to COVID-19, China's credit injections surged in 2020—new TSF flows amounted to US$5 trillion (RMB¥32.8 trillion), up 35% from US$3.7 trillion (RMB¥24.2 trillion) in 2019.[15] Because China's credit expansion has been outpacing GDP growth, the Institute of International Finance (IIF) estimates China's total debt hit a record near 335% of GDP in 2020.[16] Given the scale of new bank loans—US$3 trillion (RMB¥19.6 trillion)[17] in 2020—it's important that we examine the PBOC's new window guidance.

TSF: CHINA'S LIQUIDITY TOOL

Exhibit 11: China's outstanding total social financing
January 2002–April 2021



Sources: People's Bank of China, Macrobond. The People's Bank of China changed its method of calculating total social financing in 2018 to include asset-backed securities of depository financial institutions, loans written off and local government special bonds. Shadow banking assets include undiscounted bankers' acceptances, trust loans, entrusted loans, and depository corporations' asset-backed securities.

TSF: CHINA'S LIQUIDITY TOOL

China's total social financing (TSF) 社会融资规模 tool made its debut in 2010 under the Hu-Wen administration, largely in response to the expansionary monetary and fiscal policies after the global financial crisis in 2008. Today, policymakers use TSF as a liquidity measure to help shape monetary policy.

The TSF metric resembles a credit impulse because it measures total new bank loans and equity/bond financing issued in a specific time period minus amounts repaid.

Both the recipients and suppliers of TSF are all domestic China entities, which means foreign direct investments and foreign debt are excluded. China's sovereign bonds are also excluded because those fall into the fiscal category.

China's reckoning with debt

Looking ahead, we fully expect Beijing policymakers will continue uprooting the debt-driven habits of certain SOEs. The message to investors, at home and abroad, is loud and clear: the government will not bail out every SOE regardless of underlying credit fundamentals. China's banks must therefore continue improving the efficiency of their credit allocations to borrowers. In that vein, the PBOC is strongly encouraging banks to fertilize more private enterprises and small companies. This strategy fits into a broader goal of boosting China's productivity growth by injecting more market-based discipline into capital and credit allocations.

Before outlining what we believe may be the architectural path forward for the PBOC and China's six largest banks, it's worth recapping how its bank allocations used to look. In the immediate aftershock of the global financial crisis, China unleashed US$4 trillion (RMB¥26.2 trillion) of stimulus in 2008, kicking off a years-long tsunami of loans to local governments and state-owned firms. From 2009 to 2016, banks and shadow banks (underground financing outside official bank regulations) shoveled as much credit as possible into China's economy. Banks funneled loans into white elephant public-works, local government boondoggles and subsidies for politically connected companies. If some loans to SOEs were wasteful, it didn't matter, as long as China's GDP kept growing. If loans turned sour, banks rested easy knowing SOEs had the implicit guarantee of state bailouts.

Faced with a flood of non-performing loans (NPLs), policymakers transferred bad bank loans to China's asset management companies (AMCs) where NPLs are restructured, sold to third parties or repackaged into new investment products. The volume of toxic loans, however, kept rising.

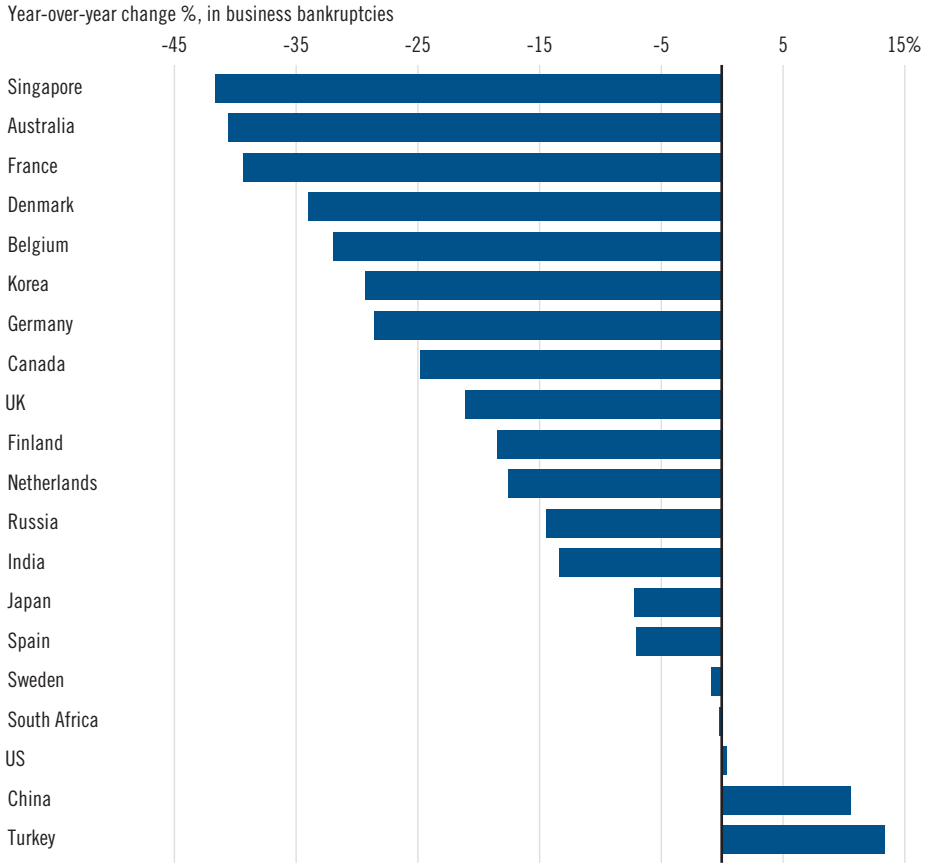
Eventually a reckoning was due, and it finally arrived with the Xi Jinping administration. An anticorruption campaign and new regulatory screws to stabilize China's financial system were among Xi's initial reforms, which are intended to push banks towards more disciplined market-based credit allocations. And per these reforms, China's ability to hit GDP targets with pinpoint accuracy is no longer an option if it's achieved by way of unsustainable debt-driven growth. Instead, China's banks are now expected to make efficient credit allocations to technology and domestic service sectors. Generally speaking, this is obviously good for investors; indeed, as bond investors who analyze the willingness and ability of borrowers to repay, a shift to more disciplined credit allocations is music to our ears.

China's corporate zombies

In 2020, China stood out among its global peers along two dimensions: generating positive economic growth in the wake of COVID-19; and corporate bankruptcies (see Exhibit 12 below). The United States and Europe issued emergency stimulus programs to stave off bankruptcies triggered by lockdowns, while China (and Turkey) saw bankruptcies increase relative to 2019. To be clear, last year's SOE defaults aren't a new COVID-19 phenomenon, as shown in Exhibit 13 (on the next page). Since 2015, the Xi administration has been methodically deleveraging SOEs and local governments. It is worth noting here that China's non-financial corporate debt category is largely comprised of SOEs and not private enterprises: Nearly 85% of

CHINA STANDS OUT

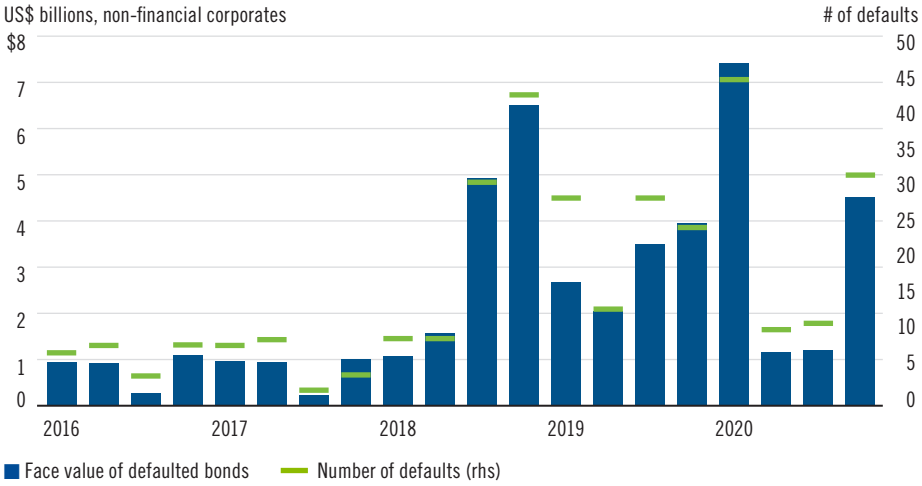
Exhibit 12: China's SOE bankruptcies escalated in 2020
As of December 2020



Source: Institute of International Finance.

CHINA DEFAULTS TRENDING UPWARDS

Exhibit 13: Xi's government is growing more tolerant of SOE defaults
As of Q4 2020



Source: Institute of International Finance.

China's corporate debt can be attributed to state-owned/controlled enterprises, according to the IIF.

Xi's early reforms started with supply side structural reforms, targeting industrial sectors such as steel, coal, cement and glass, which had binged on China's 2008 stimulus and waves of bank loans. Amped up on cheap credit, annual industrial output outstripped market demand by wide margins. With coal and steel prices plummeting, many state-owned firms were on the brink of defaulting on their bank loans and bonds. By targeting the mechanics of production, Xi's reforms aimed to increase operational efficiencies and profitability while also shifting industrials to more environmentally friendly practices. After cutting excess capacity, prices stabilized and China's industrial sector was back on a more sustainable path.

In 2017, the Politburo of the Chinese Communist Party ("Politburo"), comprising China's 25 most senior officials led by President Xi Jinping, went a step further by publicly advocating for the market to play a more active role in letting money-losing, debt-laden "zombie" SOEs fail.[18] While zombie SOE defaults noticeably picked up pace and size in 2018 and 2019, default volumes remained modest relative to the size of China's bond market, reflecting Beijing's preference for an orderly process that wouldn't spiral out of control.

After reaching a new high of defaults in 2020's first quarter, Beijing waited for China's economy to recover from COVID-19 before a fresh wave of SOE defaults kicked in during November. We believe controlled SOE defaults are healthy for China's bond market; they encourage better credit differentiation between fundamentally sound SOEs and the so-called zombies, while also promoting more discipline and discernment from both bond investors and banks. The defaults also tell us Xi's government is committed to weaning Chinese investors off the belief that the state will always bail out SOEs regardless of credit fundamentals. To the extent that this, too, would mean an increased ability and willingness among borrowers to pay, it would also be generally good for investors.

The defaults also tell us Xi's government is committed to weaning Chinese investors off the belief that the state will always bail out SOEs regardless of credit fundamentals. To the extent that this, too, would mean an increased ability and willingness among borrowers to pay, it would also be generally good for investors.

Embracing private innovation

If Beijing now insists some zombie SOEs stick to low-debt diets, the PBOC is also attempting to ensure China's banks are adequately lending to private companies, particularly those capable of harnessing powerful technologies such as artificial intelligence (AI) and 5G networks to drive fully automated factories and fleets of autonomous vehicles. However, there remains an old-school pecking order to overcome, as many banks still give SOEs preferential treatment over private enterprises. At a 2018 conference on private sector funding, PBOC Governor Yi Gang acknowledged that some ill-considered policies made it difficult for private companies to raise capital from China's banks.[19] Moving forward, the PBOC would avoid a one-size-fits-all approach across bank lending.

This problem extends beyond unwieldy PBOC lending policies, however. Amid a slowing economy triggered by an escalating US–China trade dispute, large SOEs started delaying payments to private companies. Under pressure to get their houses in order and pay off debts, the easiest way for SOEs to free up cash to retire loans was to short shrift private businesses. Premier Li Keqiang of China's State Council responded with a stern message—SOEs needed to pay private companies promptly. Li also advised local governments flush with funds from issuing bonds to prioritize payments to private sector suppliers and small companies.[20]

China's efforts to properly irrigate private enterprises with credit has continued in 2021. In March, China's banking regulator urged banks to increase financing to private tech companies in sectors like 6G infrastructure and cloud computing—strategic areas critical to China's new five-year plan.[21] For a bond investor in China's largest banks, embracing private enterprises has risks but also merits. Private firms constitute 84% of all enterprises in China, numbering 15.6 million in 2018.[22] Most of China's best-performing enterprises have done so without preferential loans or state bailouts. Case in point: 54% of China's 2020 exports came from private Chinese companies, whereas just 8% came from state-owned companies.[23] That said, a top-down mandate to boost loans to small and micro enterprises introduces new risks for China's largest banks that we monitor closely.

Deleveraging while disseminating

As we've discussed, China's efforts to de-risk banks have been ongoing since 2016. China's banks quietly dispose of bad loans on the one hand while on the other disseminate fresh credit to strategic sectors, like technology. This process, however, has been hard for smaller banks.

Back in 2018, S&P Global thought that China's megabanks (including the six largest), given their strong financial positions, would likely play a significant role in China's transition to high-innovation sectors.[24] We agreed. In the wake of Xi's 2016 deleveraging efforts, small city and rural commercial banks saw credit growth drop precipitously, while the megabanks mostly carried on as usual (see Exhibit 14).

Despite having strong capital buffers, keeping non-performing loans in check remained difficult for China's big banks. In 2018, US tariffs and Xi's reforms were nudging China's economy to its slowest pace since 1990. This meant shrinking or flat net profits for banks combined with an uptick in bad loans as more companies struggled to repay loans. With the PBOC pushing banks to boost lending to small businesses by 30%, China's big banks faced a daunting mandate.[25]

Xu Yiming, then the chief financial officer of China Construction Bank, candidly told policymakers in 2019:

> "We deeply feel it's quite difficult to maintain the low bad loan level. There are external factors, our own reasons, problems with multiple layers of local governments and other pressures."[26]

Despite feeling squeezed from all sides, Xu and the rest of China's megabanks continue shrinking bad loans and prudently funding new growth, adjusting to China's "new normal" of lower but more sustainable economic growth.

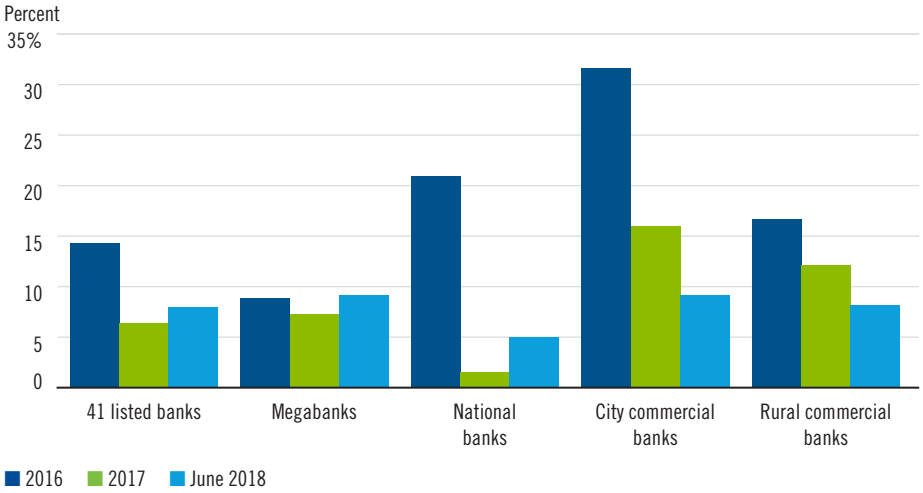
Precision-drip irrigation

Like the banks it sits atop of, the PBOC faces a delicate balancing act. It needs to support economic recovery and growth in 2021, while not over-stimulating sectors already inflated from too much credit. On the one hand, the PBOC wants to contain leverage among China's megabanks. But it also does not want to tighten monetary conditions so much that it sparks risks among smaller banks. Many small banks rely on interbank borrowing from larger banks, have higher nonperforming loan ratios and are less ably managed. This explains the PBOC's penchant for its new precision-drip irrigation (精准滴灌) liquidity tools. Unlike the flood-irrigation (大水漫灌) of the past, in which a wave of liquidity stimulates everything,

BUSINESS AS USUAL FOR MEGABANKS

Exhibit 14: Year-over-year total credit growth for Chinese banks by peer group

As of June 2018



Source: S&P Global Ratings.

Going forward, China's economic solutions may be less about throwing money at problems, and more about getting China's house in order. From a bond investor's perspective, this would be a welcome development.

the PBOC's drip-irrigation approach was designed to channel liquidity more precisely using the reserve requirement ratio (RRR). For example, the PBOC can increase liquidity by cutting the RRR for 1,000 county-level rural commercial banks and credit cooperatives, while tightening it for the megabanks. Although some bond managers in the west are concerned that this deviates from what they consider conventional monetary policy, we believe it's a welcome innovation.[27]

In the wake of COVID-19, the PBOC also dusted off two funding-for-lending schemes it first developed in 2019 catering to small banks and the private enterprises they service. During periods of financial stress, small banks may not have enough high-quality collateral to tap into larger banks through interbank borrowing. With the PBOC's "relending" program, small banks can exchange loans they made to small businesses directly with the PBOC for cash. This helps them reserve higher-quality collateral—like policy bank bonds—for interbank borrowing from larger banks. With "re-discounting" the PBOC now accepts Negotiable Certificates of Deposit (NCD) as acceptable collateral so small banks can access the PBOC's Standing Lending Facility (SLF)—an emergency facility offering short-term loans to banks. In 2020, the PBOC issued US$274 billion (RMB¥1.8 trillion) in loans through its relending and re-discounting programs to help small private businesses and to support the production of essential services and goods, including medical supplies.[28]

Looking at 2021 and beyond

To understand the significant role banks play in China's economy, it's instructive to compare China's 2021 growth forecast of somewhere above 6% with the IMF's aggressive 8.4% target.[29] We think the IMF is undercounting China's intent to pull back from wasteful lending and investments. We think China's banks are passing the baton to private businesses to drive more sustainable growth. For example, in a recent speech on science and technology, Xi Jinping noted that increased spending on research and development (R&D) doesn't automatically produce results.[30] Instead, China also needs to overcome institutional barriers to innovation. Case in point: R&D spending in China's new five-year plan is lower than spending was over the previous five years. Going forward, China's economic solutions may be less about throwing money at problems, and more about getting China's house in order. From a bond investor's perspective, this would be a welcome development.

In essence, Western Asset's investment view on China's bond market is that it can offer attractive risk-adjusted opportunities. The investment prospects may even improve as the Chinese capital and currency markets continue to mature and further open to foreign investors. Ultimately, and in concert with our overall investment philosophy of identifying long-term fundamental value, we believe that we can successfully exploit attractive value opportunities in both Chinese onshore and offshore markets.

Cyclical and structural factors point toward a stronger renminbi

Templeton Global Macro®

China's positive growth in 2020 impressively stood out against the massive contractions in economic activity around the world. The country's unique role as the preeminent engine of global production drove extraordinary economic outperformance. Critically, China was able to maintain its economic resilience using more efficient levels of fiscal stimulus, less debt expansion and greater monetary policy restraint than much of the world. It also more effectively contained COVID-19 over the last year, emerging from the brunt of the pandemic before other regions and countries. These factors have not only put China at the forefront of the current global recovery, they have positioned the country to aggregate greater economic power in the decade ahead. China's ongoing outward expansion will have significant implications for global investors.

In this research note, we focus on the outlook for the Chinese renminbi (RMB), specifically our baseline expectation for continued appreciation of the RMB against the US dollar (USD). We see several cyclical drivers that we expect to impact the valuation of the currency in upcoming quarters, as well as longer-term structural factors that we expect to underpin a secular appreciation of the RMB in the years ahead. China remains focused on expanding the prevalence of the RMB in economic and financial transactions by opening its domestic bond markets to foreigners, invoicing greater levels of trade in the renminbi and being among the first to digitalize its currency. Each of these efforts, combined with cyclical drivers such as stronger growth rates, surging demand for China's exports, a manageable fiscal deficit, relatively low levels of debt (around 60% of GDP [gross domestic product]) and higher interest rates, point toward a near-term and longer-term trend appreciation of the RMB.

Fundamental drivers of renminbi appreciation

China was the only major economy not to contract in 2020, expanding by an estimated 2.3% (according to the IMF). Fundamentally, the country's resilience was in large part a function of being the chief source of production for the global economy. Despite intermittent logistical disruptions around the world during the pandemic, China was able to keep many of its economic gears turning. China was also able to thread the needle more effectively on the fiscal and monetary fronts, efficiently delivering fiscal stimulus measures as needed while preserving the stability of the country's financial system. This approach contrasted sharply with the excessive

China's relative restraint in fiscal and monetary policy during the pandemic also bodes well for its future. The PBOC has been conservative in adding monetary stimulus, and as a result, China maintains relatively high nominal and positive real interest rates—favorable conditions for attracting foreign capital and strengthening the currency.

fiscal and monetary responses deployed across much of the advanced world, which saw deficit spending and debt levels reach new magnitudes and monetary policy loosened to its extremes.

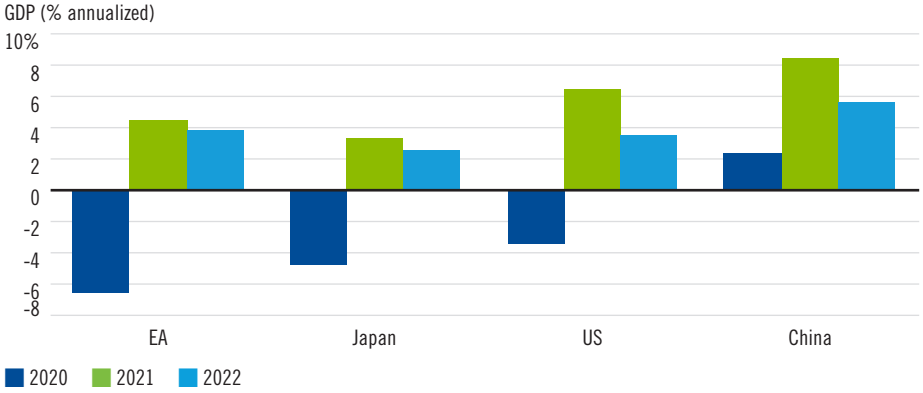
These overarching dynamics have remained in play for 2021, with China at the front edge of the global recovery, due both to its economic position as well as its earlier containment of COVID-19. Concurrently, the world is emerging from the pandemic on a delayed and staggered schedule behind China. Surges in economic activity in the United States in the spring have already sharply accelerated the demand for Chinese goods. Areas of the euro area have lagged the pace of vaccine distributions in the United States and the United Kingdom but are poised to experience their surge in economic activity in the second half of 2021. China is positioned to benefit from these cascading recoveries and to outpace the combined growth rate of the advanced economies.

Additionally, broader-based recoveries in retail sales within China in 2021 suggest that domestic consumers are becoming a greater driver of overall growth for the country. Ongoing stability in China's financial markets combined with a stronger RMB should continue to boost consumers' ability to consume.

China's relative restraint in fiscal and monetary policy during the pandemic also bodes well for its future. The PBOC has been conservative in adding monetary stimulus, and as a result, China maintains relatively high nominal and positive real interest rates—favorable conditions for attracting foreign capital and strengthening the currency. Additionally, the size of the government's fiscal stimulus was much smaller compared to other key regions and countries, including the United States, the euro area and Japan. Accordingly, the fiscal payback is

CHINA'S GROWTH IS PROJECTED TO OUTPACE THAT OF THE UNITED STATES AND ADVANCED ECONOMIES

Exhibit 15: Projected calendar year GDP growth
2020–2022F

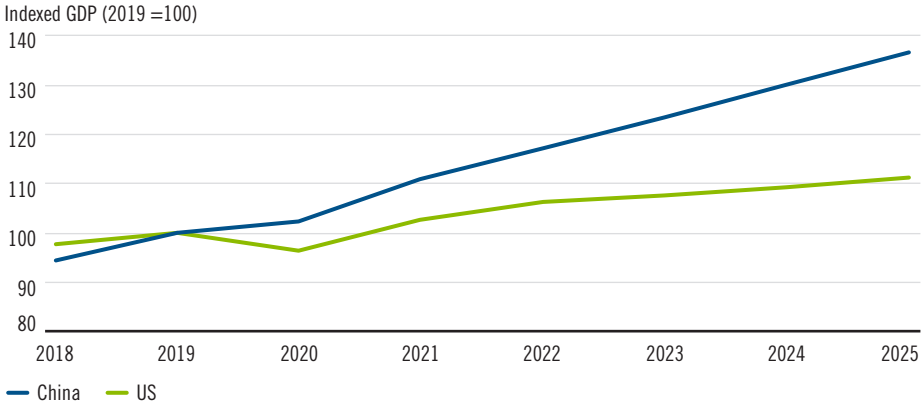


Source: IMF World Economic Outlook (WEO), April 2021. There is no assurance that any forecast, estimate or projection will be realized.

Note: F=Forecast

CHINA'S GROWTH TRAJECTORY IS MUCH STRONGER THAN THE UNITED STATES RATE OF GROWTH

Exhibit 16: GDP growth in the United States and China
2018–2025F

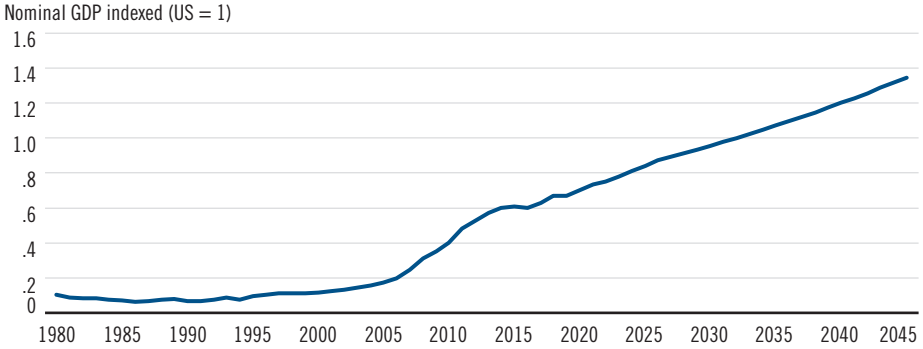


Source: IMF WEO, April 2021. There is no assurance that any forecast, estimate or projection will be realized.

Note: F=Forecast

CHINA'S NOMINAL GDP IS ON PACE TO ECLIPSE US GDP IN THE NEXT TWO DECADES

Exhibit 17: China's nominal GDP (in US$) indexed to US nominal GDP
1980–2045F

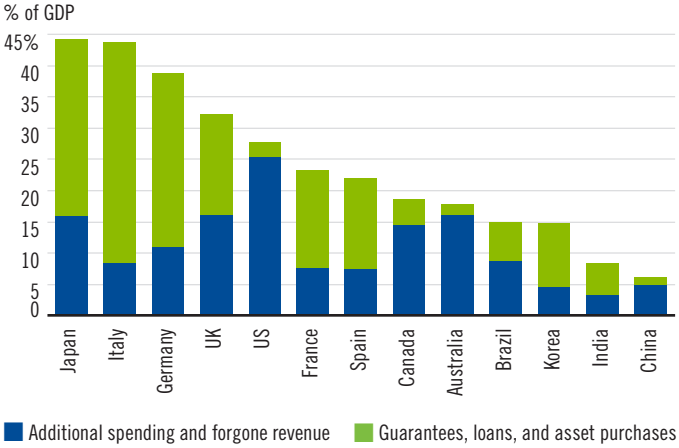


Source: IMF WEO, April 2021. There is no assurance that any forecast, estimate or projection will be realized.

Note: F=Forecast

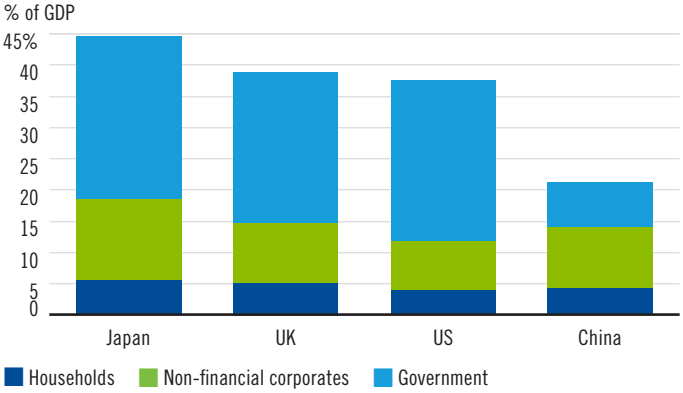
FISCAL CAPACITY HAS BEEN PRESERVED BETTER IN CHINA THAN IN OTHER MAJOR ECONOMIES

Exhibit 18: Fiscal measures in G20 countries
As of April 2021



Source: IMF WEO, April 2021.

Exhibit 19: Increases in total debt from fourth quarter 2019 to first quarter 2021
As of May 2021



Sources: Global Debt Monitor, Institute of International Finance, May 2021.

BECAUSE OF A SUSTAINABLE FISCAL DEFICIT, CHINA CAN AVOID A LARGE NEGATIVE FISCAL IMPULSE

Exhibit 20: Fiscal balances of China, Japan and the United States
2019–2022F

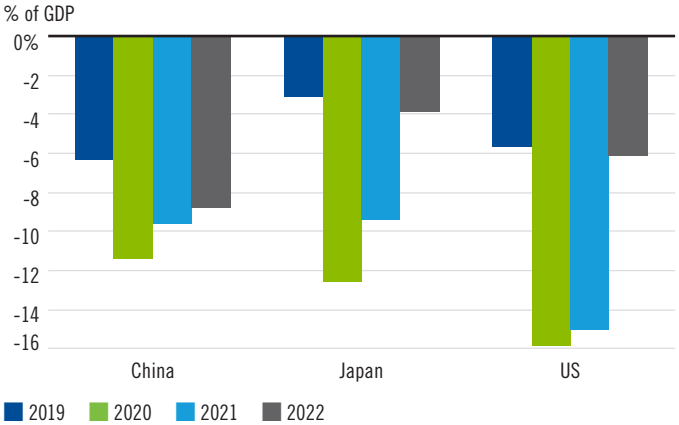
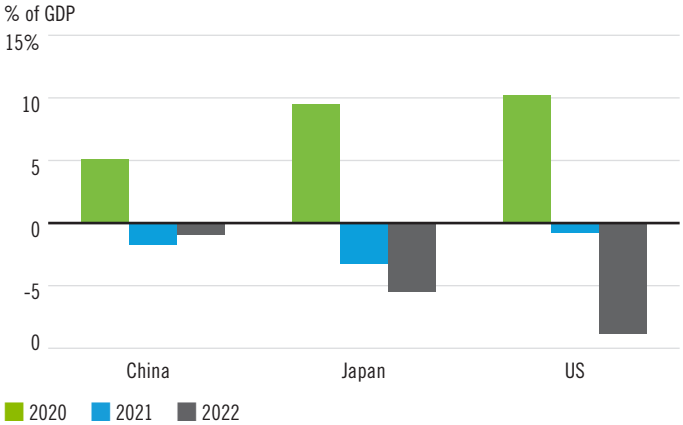


Exhibit 21: Fiscal impulses of China, Japan and the United States
2020–2022F



Source: IMF Fiscal Monitor, April 2021. There is no assurance that any forecast, estimate or projection will be realized.
Note: F=Forecast

expected to be milder than in Japan or the United States. While China's fiscal deficit is by no means small, the economy doesn't need to be forced into a large negative fiscal impulse (withdrawal of fiscal expenditures) given China's prudent management of its resources during the crisis.

China aims to fortify its economy through rebalancing

According to the Chinese government's five-year plan announced in October 2020, the country will focus on "dual circulation" of trade, composed of "internal circulation" serving the domestic economy and "external circulation" serving the global economy. The goal is to continue rebalancing the economy to strengthen domestic demand while also preserving a strong footing in the global market. We expect China to play an increasing role not only in global value added, but also as a global market for intermediate and final goods. Further expansion of the Belt and Road Initiative (BRI) remains a priority. Rebalancing toward domestic drivers should also help minimize the potential impacts of external shocks, such as a trade war with the United States. China will also need to continue its forward push on structural reforms, given demographic challenges.

Although there is pressure from the United States and its allies on China's technology sector that may have constraining effects in the near term, those external pressures are likely to further motivate the government's efforts to develop its own technological capacity, in order to become less dependent on foreign technology and to move up the value chain. These types of initiatives represent new styles of

fiscal stimulus within the country's high-tech infrastructure that are likely to attract and accelerate private investment, creating economic synergies and further driving capital allocations into the country.

Digitalization of the renminbi

Central banks around the world have been studying digital currency technologies in recent years, analyzing their benefits and risks. However, few nations have been as aggressive as China in its efforts to develop a central bank digital currency (CBDC)—a digitized fiat currency that can be more readily transacted and authenticated than cash.

The benefits of digital currency for central banks sharply contrast with the aim of decentralized cryptocurrencies like Bitcoin or Ethereum, which appear popular for their exact opposite qualities—transactional anonymity (theoretically) that operates outside of government supervision and control. While the debate over the future role of cryptocurrencies lumbers on against a backdrop of large valuation swings and speculative trading, the pursuit of digital fiat currencies that would operate under a centralized goal of price stability is simultaneously pressing ahead.

Theoretically, a CBDC would enhance a government's ability to prevent and investigate fraud and crime. It would also enable instantaneous international transactions, reduce transaction costs, permit greater financial inclusion and aid the provision of direct fiscal stimulus to individual citizens. For China, adoption of a CBDC, both within and beyond its borders, would allow its financial system to reduce reliance on the USD and limit the role and oversight of foreign financial institutions and outside regulators.

While many countries are holding discussions over the potential applications for CBDCs, China has already begun actual development. In April 2020, Beijing piloted a digital currency in four cities, allowing commercial banks to run internal tests that converted cash into digital money and back, along with account-balance checks and payments. The pilot program expanded to 28 major cities in August 2020. Aiming for broad circulation by 2022, China has scheduled tests for additional cities in 2021, including Beijing and Shanghai.

Crucially, if China captures the first-mover advantage to meet the world's demand for digital currencies to settle international financial transactions and to own digital assets, the appeal of its CBDC could rise sharply, further fueling the valuation of the RMB and moving it closer to becoming a global reserve currency.

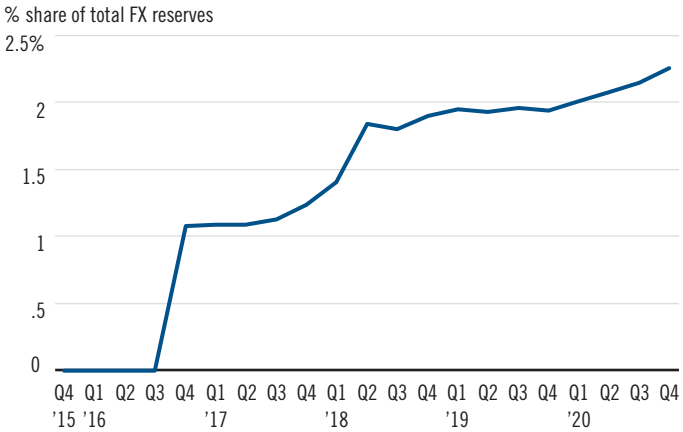
China's broader integration with the world

Currencies are prized as reserve assets when they satisfy two conditions, according to the macroeconomist Barry Eichengreen: First, when they are stable, liquid and widely used in international transactions; and second, when they are backed by a country to which another state has important security links. China's improving stability, widening currency orbit, outward expansion and ongoing integration with the world put it on a firm course to satisfy these criteria in the years ahead.

Previously, a lack of available RMB-denominated assets for foreigners to own inhibited the rise of the RMB as a reserve currency, but those trends appear to be shifting. The opening of China's US$15 trillion domestic bond market to foreign participants over the last year provides a foundation for the RMB's accelerated integration into global capital markets. China has

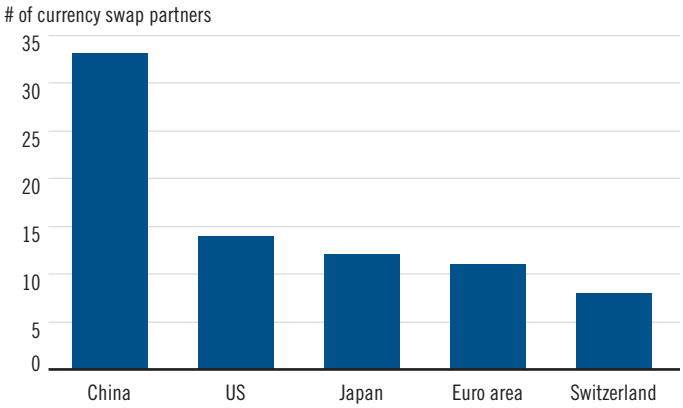
CHINA HAS BEEN EXPANDING RMB USE THROUGH SWAP LINES AND INTERBANK PAYMENT SYSTEMS

Exhibit 22: RMB's share of total foreign exchange reserves
Fourth quarter 2015–Fourth quarter 2020



Sources: Currency Composition of Official Foreign Exchange Reserves (COFER), International Financial Statistics (IFS), IMF.

Exhibit 23: Number of currency swap partners by currency market
As of March 2020



Sources: Center for Strategic and International Studies (CSIS), China Power Project.

China's ongoing ascendence will likely be the most impactful geopolitical event of the 21st century, in our view, challenging the post-WWII hegemonic world order. Outward expansion of its economic and geopolitical influence represents a significant departure from the country's more regional and domestically focused worldview just a few decades prior. This shifting stance will have significant implications for global investors.

also increasingly invoiced its trade in RMB terms, further increasing usage of the currency regionally and globally. Additionally, the security and geopolitical motivation for holding the RMB externally has risen for developing countries that are receiving project financing through China's BRI programs. Thus, the RMB is becoming a critical asset to hold throughout China's expanding global footprint.

The Chinese government has also pursued expansions in other transactional channels, including swap lines and interbank payment systems. Between January 2009 and March 2020, China signed currency swap agreements with a total of 33 governments—more than any other country by a wide margin. Within that list, 21 swap arrangements were with BRI countries. Beijing also introduced its own payments system, CIPS (Cross-border Interbank Payment System), in October 2015 as an alternative to the West's more broadly used SWIFT network. CIPS handled roughly RMB¥45.3 trillion worth of payments in 2020 or about US$7 trillion, though it is still in the early stages of development, accounting for a relatively minor portion of total cross-border financial transactions worldwide.[31] However, its use is accelerating, predominantly in BRI countries.

Conclusion

China's ongoing ascendence will likely be the most impactful geopolitical event of the 21st century, in our view, challenging the post-WWII hegemonic world order. Outward expansion of its economic and geopolitical influence represents a significant departure from the country's more regional and domestically focused worldview just a few decades prior. This shifting stance will have significant implications for global investors. Given the size of China's economy and trade, internationalization of the RMB is a natural path. While that broader trend may seem clear, the specific course ahead is not. We expect a long, nonlinear path that will remain highly dependent on the specific policy choices that China pursues in the quarters and years ahead.

On the foreign exchange front, we see a number of factors that we believe point toward an appreciation of the RMB against the USD on a near-term and longer-term basis, including cyclical and structural drivers. These key factors include: (1) China's growth differential over the United States remains substantial; (2) demand for Chinese goods has accelerated with the global economic recovery; (3) fiscal capacity has been better preserved in China compared to other major economies; (4) China's public debt levels are currently lower and more manageable than in the United States; (5) nominal rates and real rates are meaningfully higher than in advanced economies; (6) ongoing external stability may enable Chinese policymakers to allow the exchange rate to more fully reflect market dynamics; and (7) China remains committed to promoting broader use of the RMB by opening its domestic bond markets to foreigners, invoicing greater levels of trade in the RMB and being among the first to digitalize its currency.

Local knowledge is the key to China credit analysis

Lirong Xu, CFA, CPA (non-practicing)
Chief Investment Officer & Head of Research & Analysis
Franklin Templeton Sealand Fund Management Co., Ltd.

Tracy Liu, CFA
Fixed Income Investment Director/ Portfolio Manager
Franklin Templeton Sealand Fund Management Co., Ltd.

Wang Fei
Head of Credit Research, Fixed Income Investment Management Department
Franklin Templeton Sealand Fund Management Co., Ltd.

To better understand onshore bond investing in China, we interviewed senior members of Franklin Templeton Sealand Fund Management (FT Sealand), a Shanghai-based asset management joint venture established in 2004. Along with Chief Investment Officer Lirong Xu, we spoke with Senior Fixed Income Portfolio Manager Tracy Liu and Head of Credit Research Wang Fei. Our conversation took us from China welcoming more foreign investors and asset managers onshore, to analyzing the credit risks of SOEs. We finished with a deep dive into China's recent breakthrough supplying organic light-emitting diode (OLED) displays to two of the world's best-known smartphone brands outside of China.

One question we get from investors across Europe and the United States is explaining how a local Chinese investment team approaches credit research. What are some key benefits?

From a top-down perspective, investing in China bonds requires a deep understanding of China's national macro-economic policies and how they shape capital markets and individual companies. Some investors have heard of "Made in China 2025" or perhaps China's new "industrial internet," but what they may not understand are these policies aren't typically delivered in a single authoritative plan laid out like a blueprint. We wish it was that easy. Instead, China's policies are often delivered across a wide matrix of interlocking documents issued by central and local government bodies along with various Chinese Communist Party agencies. Even if you read Chinese well, new policies can be cryptic at first. You need years of experience to read between the lines to discern how new policies might impact an individual SOE or the broader bond market.

Local knowledge of business culture and governance practices is also critical.

While conducting credit research with a senior management team, if you don't understand China's culture, you might unknowingly ask unrelated or unimportant questions and receive unclear answers. Or, if you do get a clear answer, you might not fully understand the information they disclose. Being onshore also gives us more opportunities to schedule meetings, as a business or a government minister may only give three-day's notice of availability.

For some ex-China investors looking at China onshore bond managers, it is sometimes surprising to learn how relatively young China's asset management industry is. It also seems to be dominated by the retail market, where the focus is on short-term performance. Is that description accurate?

Broadly speaking that description fits, although we have seen Chinese investor behavior change over the past decade. But the short-term focus and outright return-chasing behavior is real and is something China's policymakers want to change. China's population is getting older. As more Chinese head into retirement, having a solid investment portfolio will be key.

About two years ago, research from China's Tsinghua University analyzed 50 million brokerage accounts on a Chinese exchange from 2016–2019. The results were shared at the World Economic Forum with senior leaders from across China's financial system attending. The analysis shows retail investors dominate China's stock market—representing 80% of China's trading volume (see Exhibit 24 on the next page). That said, retail investors held just 21% of outstanding shares, with institutional investors

holding only 17%—indicating most Chinese investors aren't long-term shareholders. The remaining 62% of shares are held by underlying companies (see Exhibit 25).[32] According to Zhang Xiaoyan, professor of finance at Tsinghua University, the research illustrates that many Chinese investors have "speculative behaviors and gambling mindsets" and often lose money when investing.

It is worth pointing out that given the rise of institutional investors who rely more on mutual fund asset managers, the institutionalization of China's equity market has clearly picked up momentum over the past three years. For the onshore bond market, it's already dominated by institutional investors, with short-term behaviors also diminishing just like the stock market.

China's policymakers understand that momentum-driven return chasing is neither prudent or sustainable and are setting new rules to improve investor returns and professionalize asset management. This includes welcoming more foreign asset managers to China to spur competition and implementing artificial intelligence algorithms to guide better asset allocation. We welcome these moves, as it fits better with our own long-term orientation to stock and bond investing.

As a Shanghai-based joint venture, FT Sealand's investment process looks quite similar to the investment process of bond managers in the United States and Europe—you focus a lot on credit research and risk management. How does your approach resonate with Chinese investors?

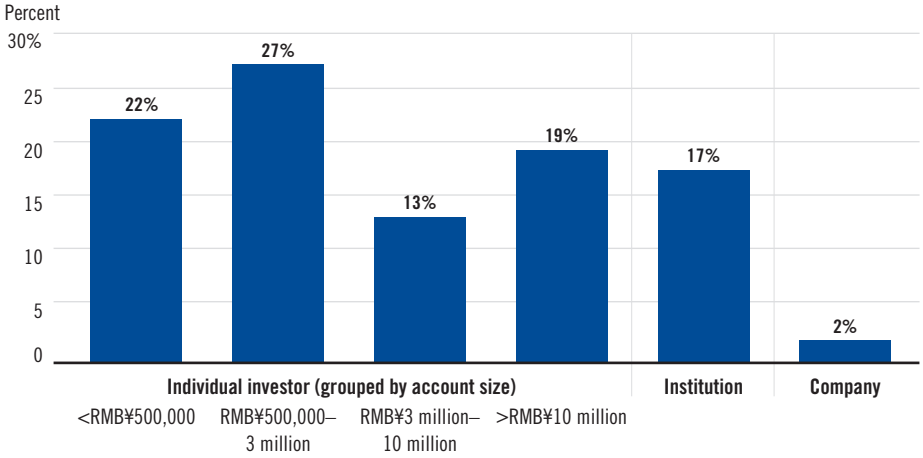
Many local investors still prefer to pick their own stocks, and you certainly see that by their share of trade volume. It's like the Robinhood day traders in the United States, only multiplied by many millions. Investors are generally more open to help from advisors with fixed income, especially after policymakers cracked down on high-yielding products that "guarantee" returns but come with lots of risk.[33] Bonds are becoming part of long-term preparation for a middle-class retirement.

Yet, even within fixed income, our Chinese institutional investors focus more on recent monthly or quarterly returns, whereas we like to showcase our performance over longer periods. We have noticed this short-term focus dissipating in recent years, but it still lags behind our European clients. China's policymakers, however, recognize that more efficient capital markets—grounded in credit research and business fundamentals—go hand-in-hand with China's advanced economy. This mindset should fit better with our long-term investment approach and focus on credit fundamentals.

Recent headlines about defaults in China—many SOEs and local government debt—appear to signal that China's policymakers want bond market investors to manage credit risks and not expect the government to guarantee returns. Are Chinese investors up for this?

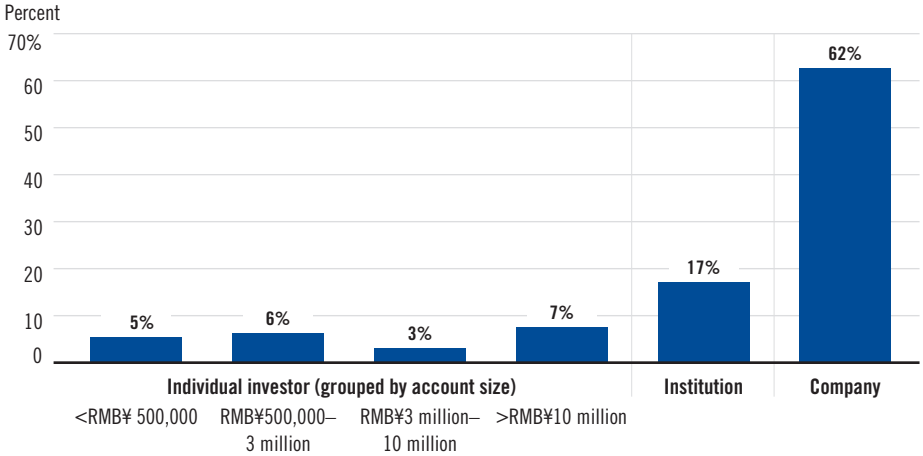
RETAIL INVESTORS DOMINATE CHINA'S MARKETS

Exhibit 24: Breakdown of trade volume by investor (%)
2016–2019



CHINA'S HIGH FREQUENCY TRADING

Exhibit 25: Percentage of shares held by different investor types
2016–2019



Source: World Economic Forum, *China Asset Management at an Inflection Point*, July 2020.

The shift away from implicit guarantees has been underway since 2016 and continues to proceed methodically. The message is undeniable. When defaults grabbed everyone's attention in November 2020, the People's Bank of China (PBOC) WeChat account resurfaced a speech from PBOC Governor Yi Gang, where he emphasizes bond investors should manage their own risks. China's sovereign bonds, policy bank bonds and central bank paper are still considered risk-free assets. All other bond risks, however, should now be absorbed by bond-holders, according to Yi.

We have already seen this gradually play out in the bond markets over the past decade (see Exhibit 26). Coupons on corporate credit are becoming more correlated with the underlying credit risks. We think this trend will continue—especially as more foreign investors buy local bonds. Indeed, China's policymakers are clearly hoping this will be the case.

That WeChat speech sounds interesting. This is good place to pivot to your team's investment process. Your decision-making process includes a macroeconomic analysis that shapes your bond investment strategy, along with asset and sector allocations. Many investors look at China's remarkable growth last year and think its 2021 gross domestic product (GDP) growth will undoubtedly outshine the world's biggest economies once again. What does FT Sealand's macro-economic analysis indicate?

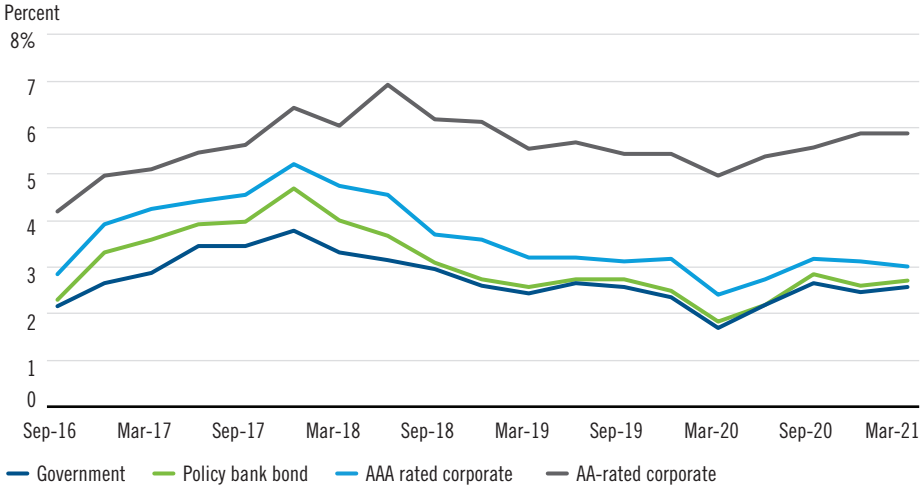
We were not surprised to see policy-makers forecast growth only above 6% for 2021, instead of the higher consensus estimates of around 8%. With China's new five-year plan, policymakers noticeably avoided laying out explicit GDP growth targets. The focus is now on producing high-quality growth that is sustainable in the long term, while de-risking sectors like real estate. Our analysis incorporates a wide range of factors, but the two biggest ones are next year's export growth and consumer demand.

With regards to last year's GDP growth, net exports contributed a record high of almost a quarter of China's GDP growth in the second half of 2020, as shown in Exhibit 27. All that said, we think China's exports could soften a bit in 2021. That is because China's trade growth was gained by taking a greater share of global exports—as many western economies went into extended lockdowns—not pulled up by surging global demand. We think the United States and European Union may retake some of their share of global exports this year, while foreign demand for some of last year's "work from home" goods is to taper.

As for China's consumer demand, last year's liquidity injections via the PBOC's modest cuts to required reserve ratios (RRR)—central bank reserve

CHINESE CORPORATE BOND YIELDS INCREASINGLY REFLECT THE CREDIT FUNDAMENTALS OF THEIR ISSUERS

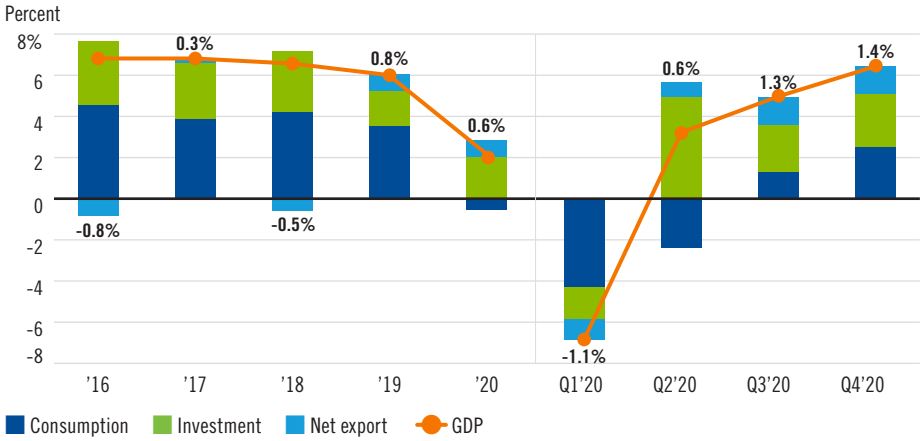
Exhibit 26: 1-year maturity bonds; yield to maturity
Q3 2016–Q1 2021



Source: ChinaBond, affiliated to China Central Depository & Clearing Company, Ltd. (CCDC), Macrobond.

EXPORTS DOMINATED IN 2020

Exhibit 27: Contribution of GDP growth by expenditure
2016–2020



Source: Institute of International Finance.

requirements for commercial banks—typically take up to twelve months to work their way through the economy. Without further liquidity from the PBOC, we note that employment remains low because small manufacturers have not been motivated to replace departing workers. That might keep consumer demand in check during 2021.

Assuming GDP growth reaches 6% instead of 8% for 2021, how should bond investors navigate investing in SOEs given Governor Yi Gang's WeChat speech on bond risks? If bond investors can't rely on implicit state guarantees, how does FT Sealand distinguish between strong and weak SOEs?

Our research process has always been grounded in understanding an SOE's credit fundamentals, regardless of implicit guarantees. That remains so today. What our credit research also incorporates is understanding how an SOE fits inside China's national industrial policies, and its contribution to China's long-term economic growth. A good way to explain this is to take one of China's strategic emerging industries, organic light-emitting diode (OLED) displays. We think this high-tech industry offers a real-life window into China's shift to high-end manufacturing, along with our approach to SOE credit research.

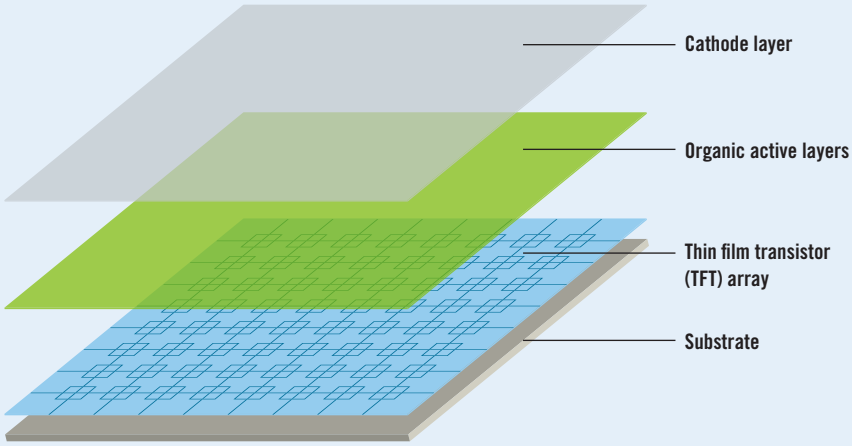
For many years, screen technology was dominated by liquid crystal displays (LCD). However, by 2023 over half of smartphones globally could feature OLED displays as the new consumer standard.[34] By examining China's largest OLED manufacturer—now the world's second-largest purveyor of smartphone OLED displays after Samsung[35]—we need to know how this company fits into China's national policies, local economic development and the livelihoods of its 65,000 employees.

SEEING A BRIGHTER PICTURE

To understand our research process better, it is worth stepping back to explain the science and practical applications of OLED displays. Unlike LCDs that have always-on backlit panels, the pixels inside OLED displays contain organic material that glows when electric current runs through them. Since each pixel lights up individually, OLED displays are thinner and less power hungry than LCDs. They also exhibit better color contrast, higher luminesce, wider viewing angles and have faster response times. An active-matrix OLED (AMOLED) goes one step further. By depositing the pixels onto thin-film transistors made of silicon, the display can be applied to bendable plastics—see Exhibit 28.

THE LAYERS OF FLEXIBLE SMARTPHONE DISPLAYS

Exhibit 28: Cross section of active-matrix OLED



For illustrative purposes only.

Lightweight and thin, flexible AMOLED displays are currently used on wearables and smartphones where displays can wrap around the edges of a phone, or fold shut like a clamshell to fit inside your pocket. In 2013, Samsung Display was the first company to commercialize a flexible AMOLED display on a smartphone. In the near future, we think flexible touch panels will be the standard mode of interaction with our digital world, not only on smartphones, but also on autonomous cars and a wide array of digital home appliances.

To be clear, credit research—analyzing a company's ability and willingness to repay principal and interest from continuous operations—is the bedrock our process. This simply dovetails with understanding an SOE's role within China's overarching mission to achieve a more productive economy and improve social wellbeing.

So how do OLED displays fit into China's new industrial policy?

In 2015, OLED displays received a big boost from "Made in China 2025", President Xi Jinping's state-led industrial policy promoting high-tech manufacturing through concessionary state financing and mobilizing SOEs. Flexible AMOLED displays also received special attention in China's 13th Five-Year Plan, released in 2016.

Because South Korea dominates the market for these displays, China's goal was to move quickly up the value chain in OLED manufacturing. As a midstream technology inside China's industrial supply chain, AMOLED displays would help China's smartphone manufacturers, like Huawei or Xiaomi, offer new premium features in line with (or better than) Samsung phones. Eventually, China could even supply OLED displays to brands like Apple.

As China's biggest OLED manufacturer, the company's largest shareholder is the Beijing city government via the State-owned Assets Supervision and Administration Commission (SASAC). Because OLED display manufacturing is extremely capital-intensive, Beijing's ability to secure financing through China's state banks was critical to building the company's first a state-of-the-art OLED factory in Chengdu, a western Chinese city, for RMB¥46.5 billion (US$6.7 billion). Big enough to cover 16 football fields, the factory kicked off production in October 2017, deploying robots and high-powered lasers to produce flexible OLED displays.[36] Soon after, the company raised roughly the same amount of capital to build a second OLED factory in nearby Mianyang and expects to break ground on a third OLED factory in Chongqing in 2021.[37] It would be difficult for a private company to pull off this scale of capital investments over such a short period without state support.

How do you measure progress for SOEs besides credit fundamentals?

COVID-19 dampened the company's targeted OLED shipments in 2020. Luckily, recent news from South Korea has signaled a new milestone for China. Samsung Electronics plans to use the company's flexible OLED displays for part of its Galaxy M series smartphones—indicating China's OLED technical skills and quality are now on par with South Korea's standards.[38]

Around the same time, Taiwan's Economic Daily Times reported that the same SOE is now one of the OLED display suppliers for Apple's new iPhone 13 this fall.[39] The SOE joined hands with the Hon Hai Group's (also known as Foxconn) GIS-KY, a touch panel manufacturer, to win Apple's approval. This move isn't surprising to our team. Apple has been looking to reduce its supply chain dependency on South Korea's manufacturers, especially Samsung. Production for Apple's iPhone 13 is slated to come from a new production line in the Mianyang factory internally called the "Apple line."[40]

When our team analyzes China onshore corporates (many of them SOEs), understanding a company's credit fundamentals only gives us half the picture. It's important that credit research incorporate top-down policy analysis to understand how an SOE either fits or doesn't within China's evolving industrial policies. It's a critical part of investing in Chinese bonds, and we think better suited to local teams who know how to analyze national policy documents.

Franklin Templeton Sealand Fund Management Co., Ltd (FT Sealand hereafter) was founded in November 2004 jointly by Sealand Securities Co., Ltd and Templeton International Holdings Ltd. (a wholly owned subsidiary of Franklin Templeton Investments).

China real estate—taming the grey rhino

Changqing Gao, CFA
Research Analyst,
Corporate Credit
Franklin Templeton
Fixed Income

Robert Nelson, CFA
Portfolio Manager &
Research Analyst,
Emerging Market Debt
Franklin Templeton
Fixed Income

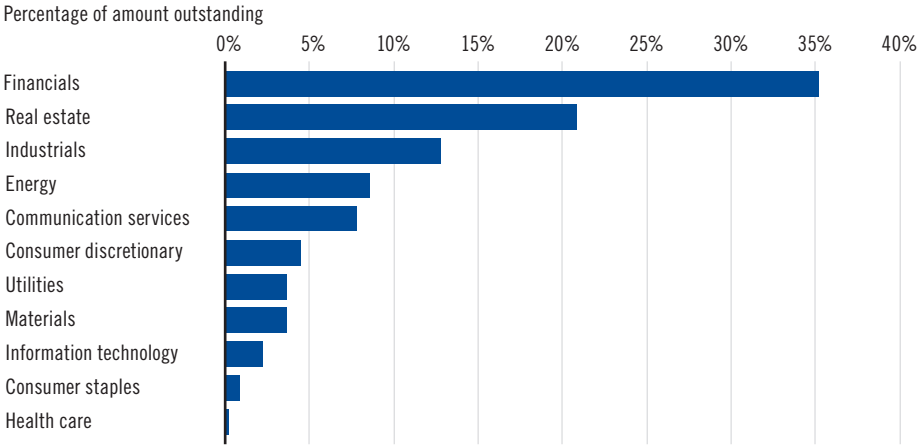
Last summer, a top regulator in China issued a warning about the nation's property sector. "Real estate is the biggest 'grey rhino' in terms of financial risks in China" said Guo Shuqing, chairman of the China Banking and Insurance Regulatory Commission.[41] Unlike unforeseeable black swans, a grey rhino is a highly probable and highly visible threat that remains neglected. And yet, in terms of our team's focus on China's offshore bond market—where real estate is the second largest sector—Guo's rhino hasn't upended real estate bonds except for one high-profile default in the first quarter of 2021. That said, a raft of new regulations meant to cool land and home prices by deleveraging property developers is a major focus for our China credit analysts. As we discuss in this chapter, first-hand knowledge of China's evolving regulations is key to bottom-up credit analysis.

We start this chapter with an overview of China's efforts to dampen real estate speculation from homebuyers and contain escalating land prices—driven partly by aggressive bidding by property developers at land auctions. We review China's "three red lines" that aim to deleverage developers by placing limits on their annual borrowing growth. We spotlight a group of developers our credit analysts monitor to illustrate their scores according to China's color-coded scale. Overall, we view the three lines as a positive development for long-term bond investors.

In section two, we review China's previous attempts to dampen real estate prices by ejecting some state-owned developers, altering the contours of today's property sector. Given the sector's sometimes wasteful capital intensity, we think the bidding frenzy at auctions warrants a close look. Indeed, our China credit analysts closely track bid prices to gauge a developer's capital efficiency. We explain why developers like Shimao take a conservative approach at auctions compared with developers like Sino-Ocean. In the latter case, easy access to low-cost bank loans can degrade the capital efficiencies China's regulators want to nurture.

REAL ESTATE RANKS SECOND IN CHINA OFFSHORE BONDS

Exhibit 29: China offshore bond sector exposure (US$)
As of June 4, 2021



Source: Bloomberg. The data pertains to Chinese Corporate Bonds for which the market of syndication is other than China. This confines the market to China Corporate Offshore Bonds. The sectors have been grouped in accordance with the Global Industry Classification Standards sectors. The amount outstanding for each sector is expressed as a percentage of the total amount outstanding in the China Corporate Offshore Bond Market.

We close with a look at how strong Asian-based demand drives down offshore bond yields, often to a point where valuations don't match bond risks. We tend to see better credit opportunities in Latin America, Africa and Emerging Europe. In terms of the recent offshore real estate bond default, we think clear and more transparent rules around default resolutions for foreign investors are necessary if China wants a more robust credit market.

China's relative restraint in fiscal and monetary policy during the pandemic also bodes well for its future. The PBOC has been conservative in adding monetary stimulus, and as a result, China maintains relatively high nominal and positive real interest rates—favorable conditions for attracting foreign capital and strengthening the currency.

Curtailing a bubble

China has witnessed rapid urbanization the past 15 years, with infrastructure and property investments driving phenomenal economic growth. Each year, China builds roughly 15 million new homes, five times the amount built annually across Europe and the United States combined.[42] Altogether, China's real estate sector and the elements of housing construction (such as concrete) and residential consumption (like curtains) accounts for 17% of China's gross domestic product (GDP).[43]

In booming cities like Shenzhen, home to 22 million residents, sky-high home prices put ownership out of reach for most of Shenzhen's new arrivals seeking better-paying tech jobs.[44] Simply put, there isn't enough supply in China's tier-one cities to meet growing housing demands. For residents that can afford to buy, soaring real estate offers a solid investment that has outperformed China's stock market. Among China's citizens, real estate comprised 64% of their total wealth in 2019 (down from nearly 80% in 2004), which is well above countries like Japan and the United States.[45] This lopsided allocation to real estate and speculative house flipping is one side effect of China's strict capital controls—Chinese citizens have limited access to offshore investments with better return-generating potential.

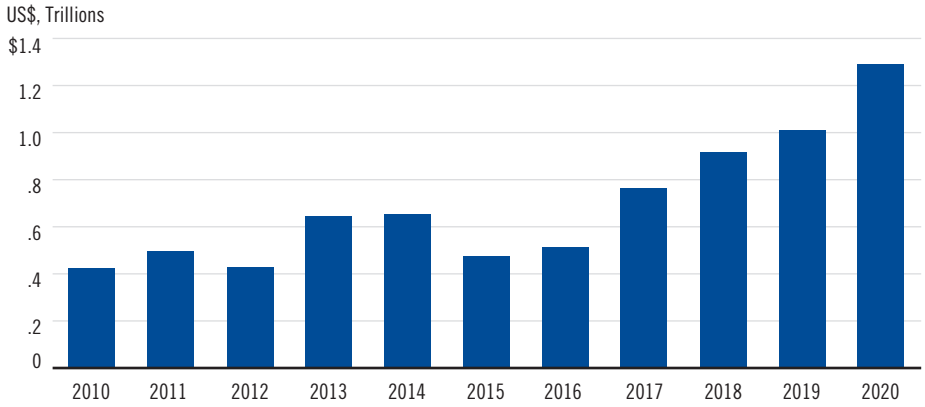
To curtail house flipping, China's policymakers have issued frequent reminders that homes are meant "for living in, not for speculation," a phrase made famous by President Xi Jinping. Many first-tier cities now require property developers to run lotteries for new flats to prioritize first-time homebuyers. Other cities openly bar people from buying second homes. Since the second-home rule only applies to families (not individuals), some couples obtain fake divorces to buy and flip new homes. Shanghai responded with a rule that new divorcees must wait three years before qualifying as a first-time homebuyer.[46] More recently, central government ministries and the PBOC cracked down on people using small business loans to snap up properties in major cities, as buyers rushed back into real estate after the pandemic receded.[47]

Land auction bidding wars

Speculative home buying, however, is just one side of the coin driving China's real estate bubble. Steeply rising land prices in first- and second-tier cities feeds directly into home price growth. This brings us to property developers who bid for state-owned land parcels at auctions. In the past few years, developers have pursued aggressive land-acquisition strategies, bidding up land prices in cities where real estate is already quite expensive. As shown below in Exhibit 30, China's land

ANNUAL LAND SALES FUEL CHINA REVENUES

Exhibit 30: Annual revenues from land usage right transfers in US$
December 1, 2009–December 1, 2020



Sources: China Ministry of Finance, Macrobond.

auctions have generated large revenues for local governments; starting in 2016, however, revenues ramped up exponentially. By 2020, China's policymakers faced a grey rhino of giant proportions.

Three red lines are forcing deleveraging

In August of 2020, the PBOC and the Ministry of Housing announced new guidelines to encourage developers to deleverage. The rules set limits for three financial ratios that determine a developer's future borrowing growth rate, as shown below in Exhibit 31. For developers who meet all three limits (coded green by policymakers), annual borrowing growth is capped at 15%. Developers who breach all three limits (coded red) face zero growth in total borrowing.

In a sign of developer resilience, roughly half of China's 66 largest property developers have complied with all three limits as of April—achieved in some cases by spinning off subsidiaries, like property management divisions, or boosting fresh cash flows by selling homes more quickly at lower prices.[48] Among some property developers our credit analysts monitor for valuation changes (shown below in Exhibit 32), many are adjusting to the financial ratio limits and showing progress. We think some companies might decide to stay inside a lower borrowing bands, such as 10%, if it suits their business strategy.

From a macro perspective, with think China's new deleveraging policy is a positive one for bond investors, and for the long-term sustainability of China's real estate sector. From a bottom-up credit perspective, a deep understanding of China's evolving regulations and property developers merits an active approach to bond selection, as we discuss in the next section.

The impact of top-down policies

In China, top-down regulations often shape the contours of industries in significant ways. For example, years before the current property bubble, many SOEs set to work bidding at land auctions and developing properties after the 2008 global financial crisis. Worried that SOEs were fueling price inflation, policymakers ordered centrally administered SOEs whose core business wasn't real estate to exit the sector. The first withdrawal was COSCO, a shipping conglomerate, which spun off its Sino-Ocean real estate division in 2010.[49] Today, most developers in China are privately owned, but a number of high-profile SOEs remain, along with dozens of spin-offs like Sino-Ocean that retain valuable relations with state-owned banks.

In sifting through China's offshore corporates, our approach to bottom-up credit analysis in real estate rests heavily on scrutinizing a developer's capital efficiency. This tilts us toward private developers rather than the remaining SOEs and spin-offs. In the eyes of our China credit analysts, private developers take better care of capital, mostly for practical reasons. Quite a few are managed by self-made entrepreneurs who started their careers with next to no money. They understand capital efficiency is key to generating profits and also earning the trust of bond markets and banks. Research in China finds a significant positive correlation between private developer executive compensation and corporate profits, whereas in SOEs there is none.[50]

CHINA'S THREE RED LINES

Exhibit 31: Three financial ratio limits and annual borrowing growth caps

Three financial ratios (Red lines)		Limits
1	Total liabilities to assets ratio (excluding contract liabilities)	Less than 70%
2	Net gearing ratio ([total debt – cash]/equity)	Less than 100%
3	Cash to short-term debt ratio	More than 1

Color code	Number of limits breached	Annual borrowing growth
Red	3	0%
Orange	2	5%
Yellow	1	10%
Green	0	15%

Sources: PBOC and China Ministry of Housing.

DEVELOPERS START DELEVERAGING

Exhibit 32: Changes in annual borrowing limits in 2020–2021
As of December 31, 2020

Company	Initial borrowing cap	2020 year-end borrowing cap	2021 borrowing growth
Evergrande	0%	0%	0%
Agile	5%	10%	10%
China Fortune	0%	0%	0%
Country Garden	10%	10%	10%
Sunac	0%	10%	10%
CIFI Holdings	10%	10%	10%
Kaisa	5%	10%	10%
Shimao	10%	15%	15%

Source: Corporate financial statements. For illustrative purposes only and not reflective of the performance or portfolio composition of any Franklin Templeton fund.

One good example that illustrates this point is Hong Kong billionaire Hui Wing-Mau, a Chinese real estate pioneer with a track record of exquisite timing and a penchant for prudent land purchases. As the original founder of the Shimao Group, Hui has lived a rags-to-riches career. After moving from mainland China to work in a textile factory in Hong Kong in the late 1970s, Hui made a small fortune trading stocks before building one of China's first private three-star hotels. His early business strategy was negotiating with government officials to acquire land cheaply with small down payments, and then designing his projects so they took place in incremental phases. Cash flows from phase one, for example, helped to pay for phase two and so on until the full (and often quite grand) real estate project was completed.[51]

Today, we can see the legacy of Hui's attention to prudent land purchases and cash flow analysis come to light when we place Shimao alongside Sino-Ocean, the first SOE spin-off. Although the offshore yields on Shimao and Sino-Ocean bonds are nearly identical, a bottom-up look at credit metrics, like earnings coverage of interest expenses, tells us Shimao's capital efficiency outshines Sino-Ocean.

Often times, red flags like inadequate liquidity and inflated leverage can be traced back to auction bid prices. Our China credit analysts closely track auctions and note Sino-Ocean is a frequent top bidder. And why not? With ample cross-lending opportunities from state banks, many SOEs have a ready supply of fresh capital simply by asking for it. A recent real estate study finds China's SOEs pay an 11.9% premium compared with private enterprises for observably comparable land parcels at auction.[52] Overpaying for land can leave little room for error during construction and increases the risks of missed debt repayments. Shimao is also a top bidder at auctions, but not very often. Instead, Shimao often waits patiently for opportunistic land sales—for example, it recently bought land from smaller developers shedding assets due to China's three red lines.

CREDIT STRENGTH METRICS

While every sector is unique, here are two credit factors our analysts focus on in China's real estate market:

Liquidity profile

A property developer should hold sufficient liquidity/cash to support its operating needs, particularly short-term debt servicing. "Cash vs. short-term debt" is the metric we look for to show a developer's ability to cover short-term obligations, and to reveal management's conservatism over time in terms of balance sheet liquidity.

Net gearing ratio

This measures a developer's financial leverage, calculated as (total debt – cash)/equity. The higher the ratio, the higher the leverage. Because Chinese accounting policies consider perpetual bonds as equities, we must make an adjustment to treat them as debt in our credit analysis. We de-emphasize income statement-based leverage multiples (e.g., Net Debt / EBITDA[53]) because of the disjointed nature of property developers' earnings.

SOE advantages remain

If it sounds like we're over the moon for private developers, our China credit analysts point out that some SOEs retain advantages as the state still comes to the rescue in volatile periods. That said, President Xi Jinping has been clear about China's "unwavering" support for China's private enterprises, as has China's State Council. In December of 2019, the Council unveiled new state measures to bolster private businesses, promising equal regulatory treatment with SOEs and improved access to financial markets and institutions.[54] As China credit investors, we think this commitment to a more level playing field for private enterprise bears close watching in the years to come. If China policymakers truly embrace more market-driven discipline, it could upend current assumptions that SOEs will always fare better during volatile markets.

Finally, it is important to emphasize that capital efficiency is just one factor in our credit analysis. Additional factors in our bottom-up analysis are issuer liquidity profiles and net gearing ratios, as discussed in the credit strength metrics sidebar.

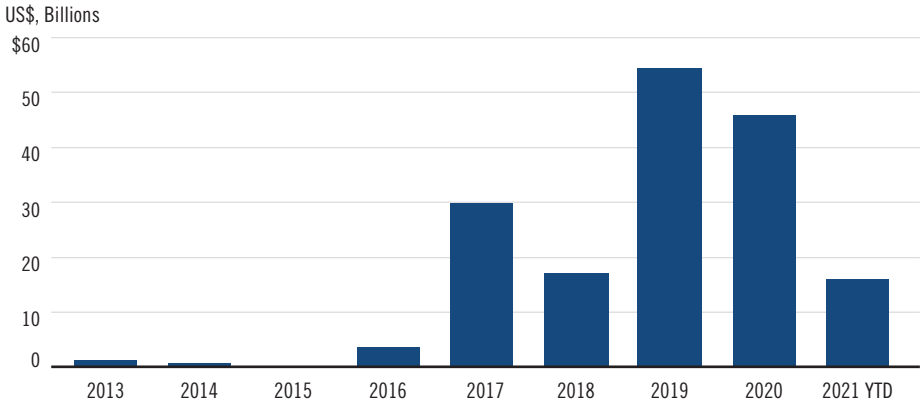
When demand smothers yields

In recent years, as China's policymakers cycled through on-off property rules—changing home purchase price limits and restricting access to onshore bonds—large developers turned to China's offshore bond market for flexible funding. As shown in Exhibit 33 on the next page, developers ramped up offshore issuance quite a bit in 2017 after China's regulators imposed an onshore bond moratorium.[55] That year, sky-high demand from regional Asian-based investors meant most of the developers' offshore issuance was easily absorbed with outsized orders.

RAMPING UP OFFSHORE BONDS

Exhibit 33: Annual bond issuance (US$ billions) from China developers in offshore bonds

As of June 4, 2021



Source: Bloomberg. The data pertains to Chinese Corporate Bonds in the Real Estate Development & Management and Building & Construction sectors (using Merrill Lynch's Industry Classification) that have been syndicated in a market other than China.

That same trend continues today, with strong Asia-based demand driving bond valuations to a point where we see insufficient compensation for bond risks. Redsun Properties Group's recent US$210 million bond issue, for example, was quickly absorbed by a sizable book of orders surpassing US$1.8 billion. Likewise, the Agile Group's US$300 million issue was met with US$1.45 billion of orders, and the KWG Group Holdings US$378 million issue prompted orders exceeding US$1.4 billion. In terms of attractive risk premiums, this giant demand means we often find better opportunities outside China these days, largely due to aggressive Asia-based demand smothering yields.

The surprise default of the property developer China Fortune last February also gives us pause. It's important to see how offshore bond holders are treated. Thus far, China Fortune has said it intends to pursue a consensual resolution with offshore bond holders but hasn't taken concrete steps yet. If China wants to nurture a robust credit market, a more transparent restructuring framework for foreign bondholders is a must.

The value of China expertise

Having walked through China's real estate sector, three key takeaways are worth noting as we close this chapter. First, we think the credit fundamentals of China's real estate sector are improving in the wake of the three red lines policy. Second, even as policy-makers push China's economy toward more market-based capital allocations, there remains a flurry of regulations to incorporate into bottom-up credit analysis. First-hand knowledge is critical to navigating China's offshore bonds. We believe property developers with track records of higher capital efficiency dovetail nicely with China redefining its implicit support for SOEs and a growing recognition of organic private sector innovation. Third, stretched valuations driven by outsized demand for offshore Chinese property bonds merits disciplined security selection. In particular, it is important to evaluate a property developer's credit fundamentals on a standalone basis, first and foremost, before also considering its relationship with the state, particularly given the still murky restructuring process.

Endnotes

1. Source: Macrobond, 10-year maturity.
2. Source: Macrobond, People's Bank of China.
3. Source: "China Corporate Bond Market Blue Book," *Fitch Ratings* October 2019.
4. Source: Chen, T. "Decoding China's Rate Market Conundrum," Brandywine Global, Around the Curve, October 26, 2020.
5. Source: Marshall, R. and Z. Yang. *Chinese bond market: Evolution and characteristics*, FTSE Russell, July 2020.
6. In international macroeconomics, a sovereign's capital account is the balance of payments which records all transactions made between entities inside one country with entities in the rest of the world.
7. Source: Marshall, R. and Z. Yang. *Chinese bond market: Evolution and characteristics*, FTSE Russell, July 2020.
8. *ibid*.
9. Source: "Is it the end of the oil age?," *The Economist*, September 19, 2020.
10. Source: Leng, S. and D. Wertime. "China's Anti-Corruption Campaign Ensnares Tens of Thousands More," Foreign Policy, January 9, 2015.
11. Source: Ma, G., Feng, P. and L. Zhang. "China Spotlight. Foreign investments in onshore bonds," *Institute of International Finance*, March 11, 2021.
12. Source: Liu, J., F. Wang, J. Zhao, T. Chen & L. Yap. "China Faces Bond Market Test After Acting as Bastion in Rout," *Bloomberg News*, March 22, 2021.
13. Source: Jaquet, K. "The Evolution of China's Bond Market," Seafarer, March 2019.
14. Source: Pham, P. "How Do Asian Central Banks Distort and Destroy?" *Forbes*, December 4, 2017.
15. Source: Tiftik, E., Guardia, P., and S. Gibbs. "IIF Weekly Insight. Chinese debt—still on the rise," *Institute of International Finance*, February 4, 2021.
16. *ibid*.
17. Source: Liu, J., A. Li, and Y. Liu. "China Asks Banks to Curtail Credit for Rest of Year," *Bloomberg News*, April 5, 2021.
18. Source: Wang, F. "China's Leaders Set Out Economic Agenda for Rest of 2017," *Caixin*, July 25, 2017.
19. Source: Liu Xiaoying, ed. "Yi Gang: Some early policies have increased the financing difficulties of private enterprises and will avoid 'one size fits all' in the future," *National Business Daily*, November 6, 2018.
20. Source: "Li Keqiang presided over the executive meeting of the State Council," *Xinhuanet*, January 20, 2019.
21. Source: Liangta, Z. and G. Yingshe. "Banks Urged to Lend More to China's Loan-Starved Private Sector," *Caixin*, March 25, 2021.
22. Source: China National Bureau of Statistics. January 22, 2020.
23. Source: Ma, G. Feng, P. and V. Sun. "China Spotlight. The significance of export amid the pandemic," *Institute of International Finance*, February 1, 2021.
24. Source: Yu, L., R. Tsang, and H. Hu. "Deleveraging While Disseminating: The Task Facing China's Banks," S&P Global Ratings, October 18, 2018.
25. Source: Zhang, S. and J. Zhun. "China's top banks warn of 'fragile' bad loans scenario as economy slows,". Reuters, March 28, 2019.
26. *ibid*.
27. Source: Liao, C. and S. Change. "Assessing China's "Structural" Monetary Policy," PIMCO blog, October 2020.
28. Source: Ma, G. and P. Feng. "China Spotlight They PBOC Policy and its Bank Funding Schemes," Institute of International Finance, December 21, 2020.
29. Source: International Monetary Fund. 2020. *World Economic Outlook: Managing Divergent Recoveries*. IMF: Washington, DC.
30. Source: 习近平：努力成为世界主要科学中心和创新高地 *Xinhuanet.com*, March 15, 2021.
31. Source: Finextra, "Swift gpi transferred $77 trillion in 2019," February 18, 2020. The SWIFT global payment initiative (GPI) accounted for approximately US$104 trillion in cross-border payments in 2019, significantly more than the US$7 trillion transacted by CIPS in 2020.
32. Source: World Economic Forum, *China Asset Management at an Inflection Point*, July 2020.
33. Source: Xiaomeng, W. and D. Jia. "Central Bank Delays New Rules for $12.9 Trillion WMP Industry," *Qaixin*, August 1, 2020.
34. Source: Chin, S. "Report: Half of smartphone displays to be OLED by 2023," *Fierce Electronics*, November 7, 2019.
35. Source: Y. Gao, S. Kim and P. Elstrom. "How a Dying Factory Became a Symbol of China's Tech Might," *Bloomberg News*, April 1, 2019.
36. Source: Lingqing, Z. "China's first 6th–generation AMOLED display screen goes into production," *China Daily*, May 18, 2017.
37. Source: Yi, D. "Chinese Panel Maker BOE to Raise $3 Billion Through Share Sale," *Caixin Tech*, January 19, 2021.
38. Source: Yun, G. "BOE to Supply OLED Displays for Samsung Electronics' Smartphones for the First Time," *ETNews*, March 22, 2021.
39. Source: GIS "攜京東方 擴大供貨蘋果", *Economic Daily Times*, February 23, 2021.
40. Source: Udin, E. "BOE Shipped 16 Million Flexible OLED Panels in the first half of the year," *gizchina*, September 8, 2020.
41. Source: "Real Estate Is Biggest 'Gray Rhino' Threat to China's Financial System, Warns Regulator," *Caixin*, December 1, 2020.
42. Source: "Can China's long property boom hold?," *The Economist*, January 25, 2021.
43. Source: Zhou, C. "China GDP: how will economic growth be hit by Beijing's new caps on real estate lending?," *South China Morning Post*, January 12, 2021.
44. Source: "Workers Flocking to China's Tech Hub Can't Afford to Buy Homes," *Bloomberg CityLab*, December 20, 2020.
45. Source: Caiyi, L. and H. Yiwei. "Weekend Long Read: From Housing to Financial Assets, How Chinese Allocate Their Growing Wealth," *Caixin*, April 3, 2021.
46. Source: Li, S. and P. Liu. "Shanghai changes rules to stop couples from faking divorces as they vie for less up-front money to buy residential property," *South China Morning Post*, January 22, 2021.
47. Source: Xiaomeng, W. and H. Wei. "China Tightens Crackdown on Illicit Borrowing for Property Speculation," *Caixi*n, March 27, 2021.
48. Source: "Next China: When Red Lines Move," *Bloomberg News*, April 15, 2021.
49. Source: Yuqian, L. "SOE Sets 2012 Record for Land Purchase," *Caixin*, December 3, 2012.
50. Source: Based on scholarly review by Monkkonen, P., D. Guoying , H. Wanyang. 2019. Does developers' ownership structure shape their market behavior? Evidence from state owned enterprises in Chengdu, Sichuan, 2004–2011. Cities, 84, 154–158. In the piece, they review research from: Liao, S. and X. Sun. 2017. Research on the relationship between the characteristics of real estate executives and corporate performance. *Shandong Social Science*, 11: 159–165 (in Chinese).
51. Source: Barboza, D. "Billionaire Builder of China," *The New York Times*, December 29, 2005.
52. Source: Wang, L. and Y. Yang. 2021. "Political connections in the land market: Evidence from China's state-owned enterprises" *Real Estate Economics*, 49 (1), 7–35.
53. EBIDTA is Earnings Before Interest, Taxes, Depreciation, and Amortization.
54. Source: The State Council of the People's Republic of China, "China's Private Economy to Thrive in Better Business Environment," News Release, December 22, 2019.
55. Source: Yangpeng, Z. "China's property developers flock to US dollar market," *South China Morning Post*, January 24, 2017.

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