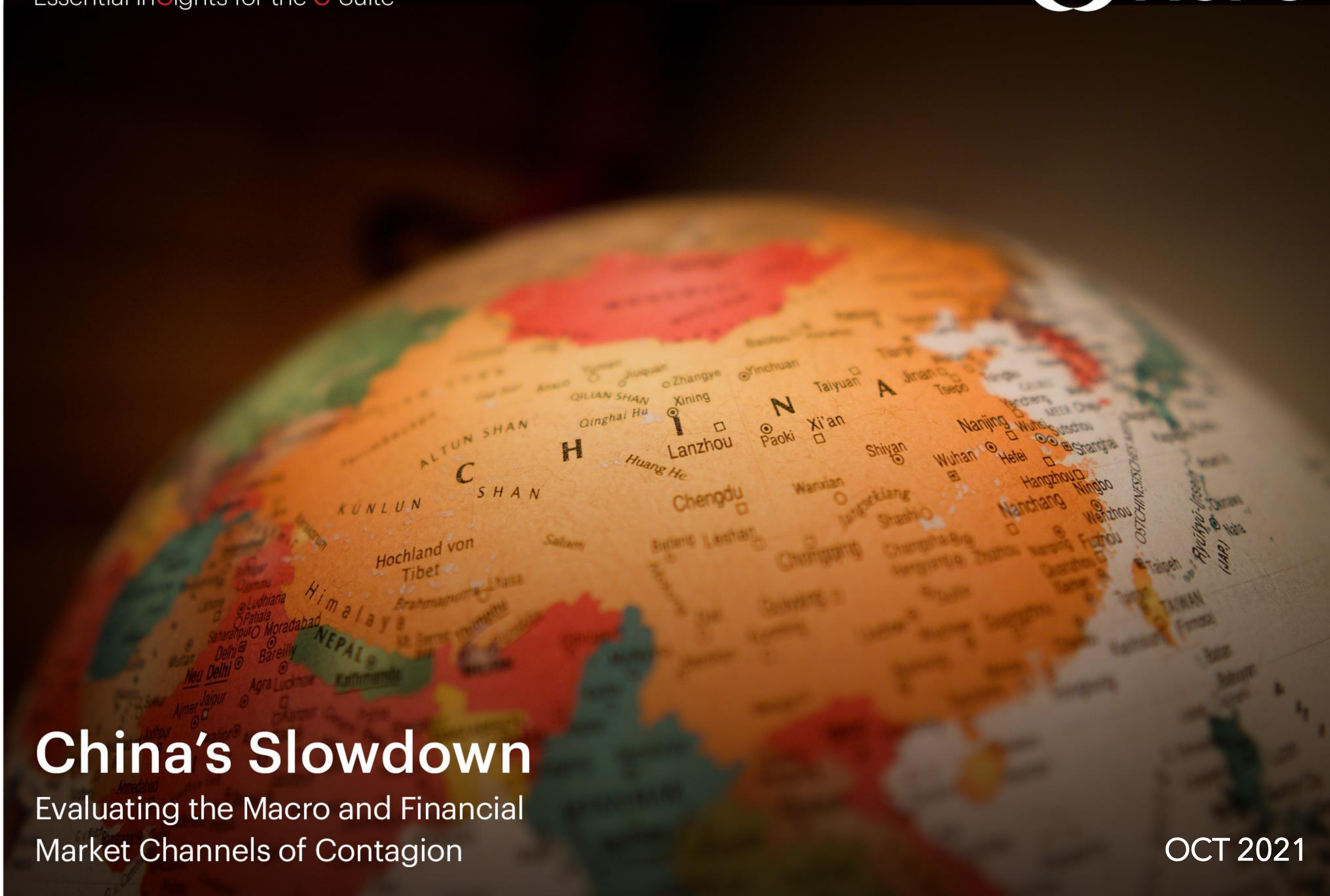
Capital Markets Strategy
Essential inCights for the C-Suite



China's Slowdown

Evaluating the Macro and Financial Market Channels of Contagion

OCT 2021

> "There is no durable counterparty risk when the state owns or controls all of the counter parties. This does not mean there cannot be pain on the financial side. Making whole everyone involved in Evergrande's failure would all but guarantee a repeat. The government wants visible suffering; the question is who suffers and who is spared."

China's Beige Book

Contents

Summary Conclusions

1. China's Q3 GDP growth of 4.9%, down from 7.9% in Q2, fell below 5% for the first time (ex-COVID) in over three decades (since 1989). Underlying data demonstrated that the slowdown has been particularly evident across three sectors of the economy: industry, construction and services.

2. China's economy is expected to grow 5 - 5.5% in 2022, roughly half the rate of growth a decade ago. Headwinds to growth are numerous, and include: recent policy tightening, regulatory activism ("common prosperity" agenda), COVID restrictions, a cooling property market, energy shortages and global supply chain disruptions.

3. Evergrande's rising default risk is both a cause and symptom of China's slowdown as a disproportionate amount of China's GDP growth and corporate leverage over the last decade has been driven by the property sector.

4. Following a 25 year boom, China's property sector (directly and indirectly) accounts for nearly 29% of China's GDP, while housing represents approximately 60% of urban household assets - in both cases, much larger than the United States and other G7 economies. As such, even a managed property sector slowdown will have a meaningful impact on China's economy.

Summary Conclusions

5 China's rapid rise in corporate leverage since the GFC will take years to unwind, and will be complicated by increased regulatory activism, a declining working age population, plateauing urbanization rates and slower growth.

6 With total debt to GDP across the entire economy at 329%, President Xi has made deleveraging a policy priority. In fact, M2 money supply growth in the US has exceeded that in China for the first time in 25 years. Under President Xi, the "security" and "resilience" of China's growth model has taken priority over the "rate" of growth itself, with longer-term structural change more important than short-term growth.

7 In response to Evergrande, the delicate balancing act in China's policy response has included bank sector liquidity (RRR cuts, repo injections) and a minor easing in mortgage lending markets. However, deleveraging has remained a policy priority, as evidenced by stable benchmark policy rates and continued restrictions on property developer loans.

8 China's banking system would be resilient to a large scale Evergrande default. With roughly 45% of Evergrande's bank borrowing collateralized (valued at 135% of debt), and concentration risk well distributed, Chinese bank Tier 1 ratios would fall from approximately 11.9% to 10.9% in a full write-off scenario (unlikely), still well above the regulatory minimum of 9.5%.

Summary Conclusions

9 Foreign linkages with China today are still much larger through trade than finance. Any Evergrande contagion is therefore likely to proceed more through macro "real" economy channels than through a larger financial market event (i.e., "Lehman moment"). While Evergrande's roughly $300 bn of liabilities are similar in size to Lehman, only about $20 bn is in the offshore market, with most of the onshore debt well collateralized.

10 Spillover to global financial markets have thus far been negligible. Global financial conditions remain easy. USD credit spreads are trading near multi-decade tights, and the US "TED" spread (3 month interbank rates less T-bills) remains tight. Oil prices are trading at 7 year highs.

11 Economies most exposed to a broader China slowdown include emerging markets (especially SE Asia), commodity exporters (i.e., Chile, Brazil, South Africa) and those with heavy China trade dependencies (i.e., Germany, Taiwan).

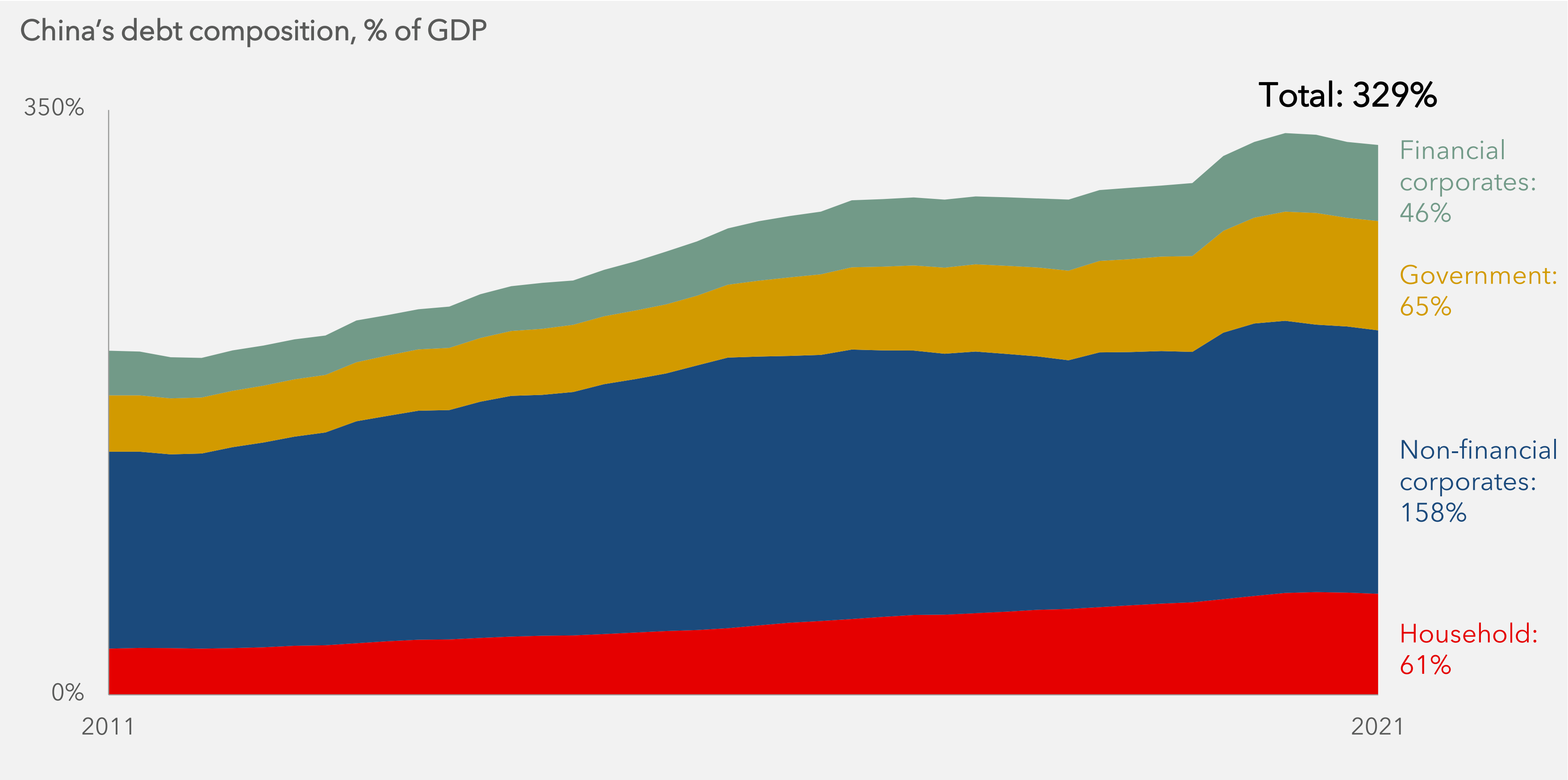
12 Global financial markets most exposed to China slowdown include EMFX (those with large C/A deficits and high ST debt), industrial metals (i.e., iron ore, steel) and global equities with high China exposure (i.e., European luxury goods).

SITUATION ANALYSIS

1 China's Growing Debt Problem

China's Rapidly Rising Debt Levels

After increasing by $2.3 trillion in Q2 2021, China's total debt reached an all-time high of over $55 trillion by the middle of the year. With debt-to-GDP now well over 300%, President Xi has made deleveraging a policy priority for the Chinese economy.

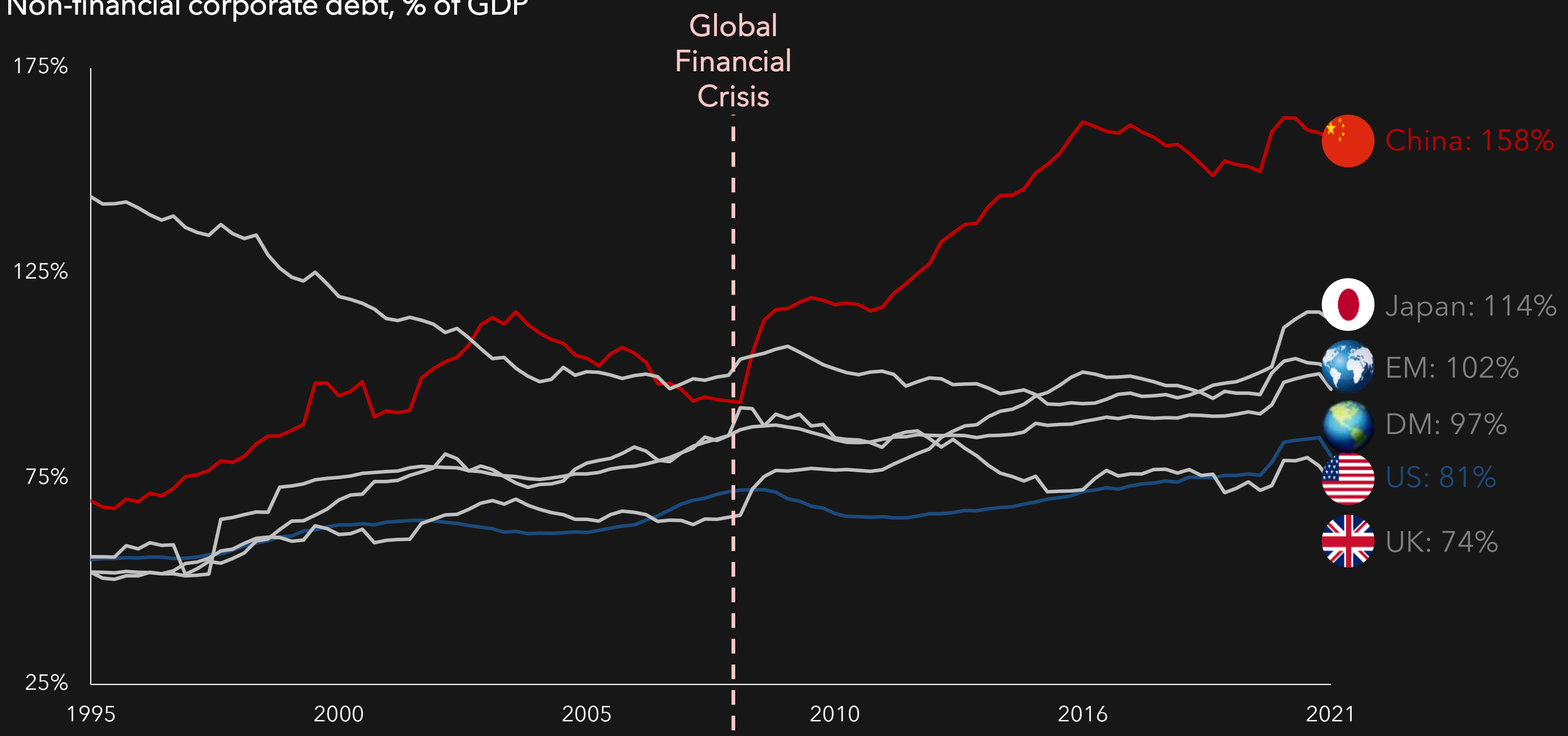


Source: (1) IIF. 2021 data is through Q2 2021.

China’s Corporate Debt Problem

Since the Global Financial Crisis, the banking sector (globally) and consumer balance sheet (in the US) have generally de-levered, whereas corporate and government balance sheets have generally increased leverage. China responded to the GFC with one of the largest fiscal spending programs in the world at the time, and over the last decade, has seen a rapid rise in debt among corporates, state owned enterprises (SOEs) and local governments - the majority of which has been driven by the real estate sector.

Non-financial corporate debt, % of GDP

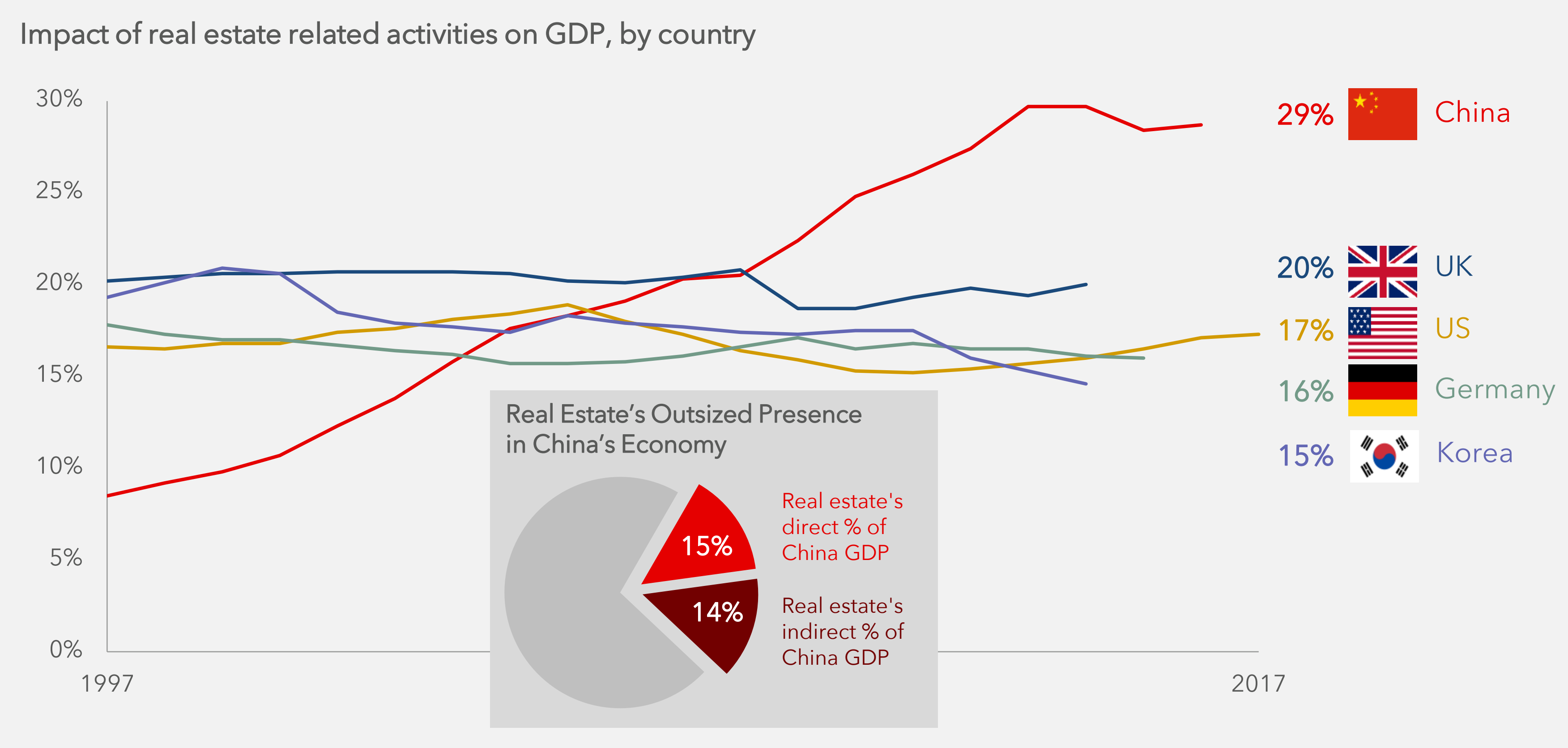


Source: (1) IIF. 2021 data is through Q2 2021.

2 Real Estate’s Outsized Presence

Real Estate Driven Growth

Real estate and related services account for approximately 15% of China's GDP, less than the United States. However, including backward linkages to other sectors (i.e., steel, cement), real estate directly and indirectly accounts for approximately 29% of China's GDP, much larger than the United States. When one considers the high correlations between China housing purchases and car purchases, for example, the 3rd and 4th derivative effects of China's real estate sector are even larger.

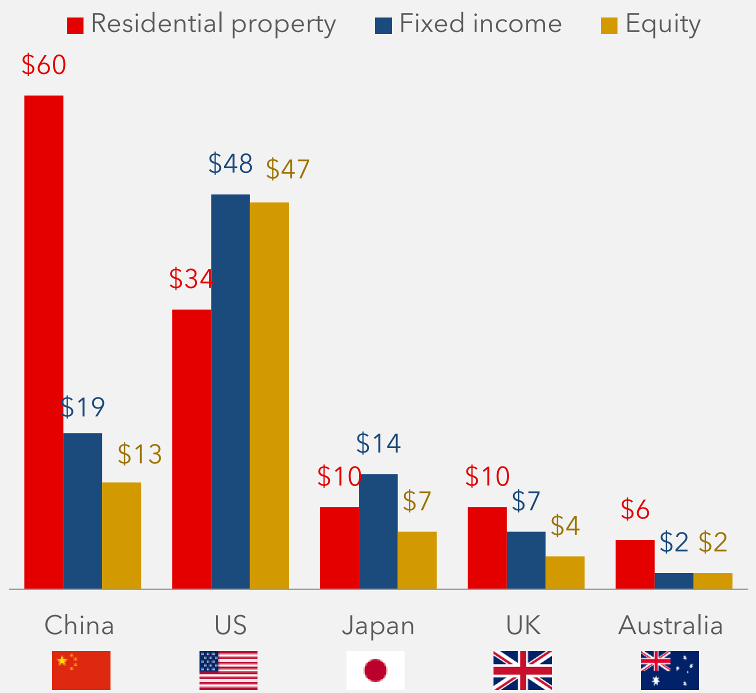


Source: (1) WSJ "Empty Buildings in China's Provincial Cities Testify to Evergrande Debacle" (October 4, 2021). Kenneth Rogoff, Harvard University and Yuanchen Yang, IMF.

Property an Outsized Portion of Household Assets

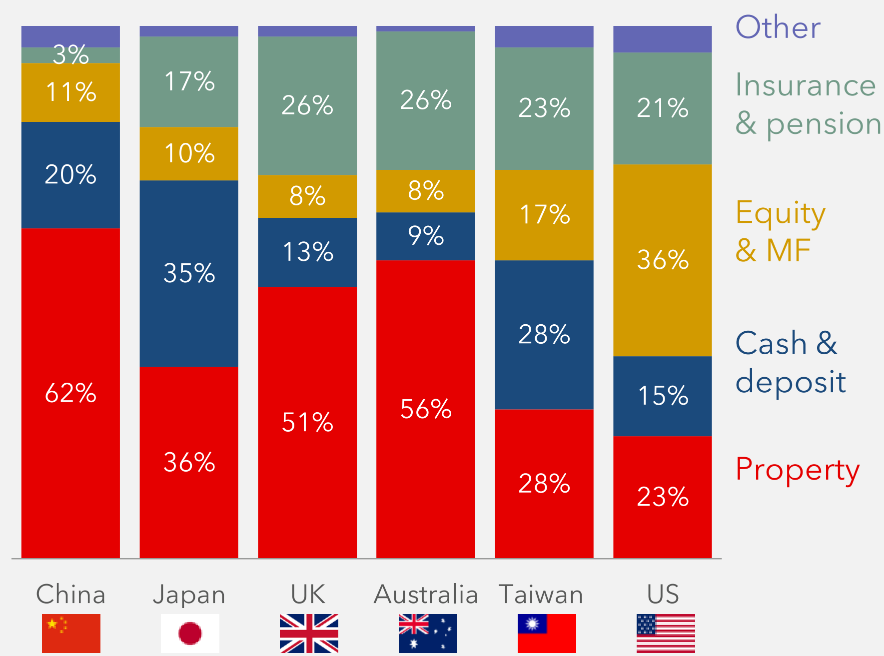
Property ownership has been a cultural cornerstone in China for several generations (urban home ownership is already 90%), and with real estate widely viewed as a more reliable investment than China's relatively volatile equity markets, a disproportionate amount of household investment is tied to the property sector. With 87% of home purchases in 2018 by buyers who already had at least one dwelling, Beijing is looking to cut back on property speculation.

At over $60 tn in value, China's property market is one of the largest asset classes globally



Property represents over 60% of urban household assets in China, well above developed market peers

Composition of urban total household assets



Source: (1-2) Goldman Sachs. NIFD. CEIC. WIND. Japan Cabinet Office, Halifax.

Systemically Significant Property Developer

Evergrande is China's second largest property developer and its most indebted company

4%
of China's real estate market

>$350bn
of debt
(including $89 bn in interest-bearing debt)

$20bn
offshore debt outstanding

>200k
employees

1,300
real estate properties in 280 cities

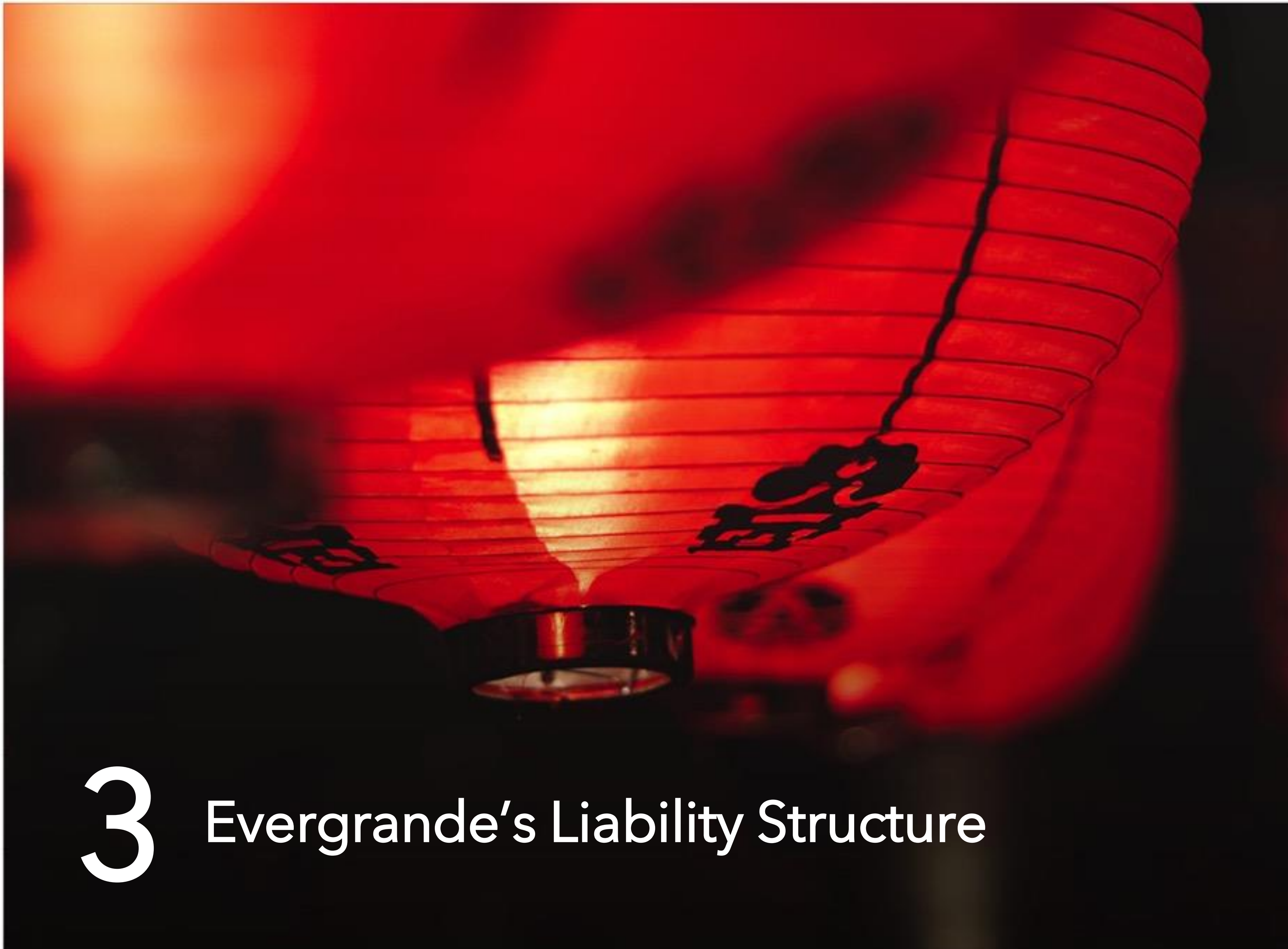
1.4mm
unfinished apartments

>700
ongoing projects in 223 Chinese cities

214mm
square meters of land reserves

>25%
property market share of China's GDP

80%
of Chinese family wealth in real estate

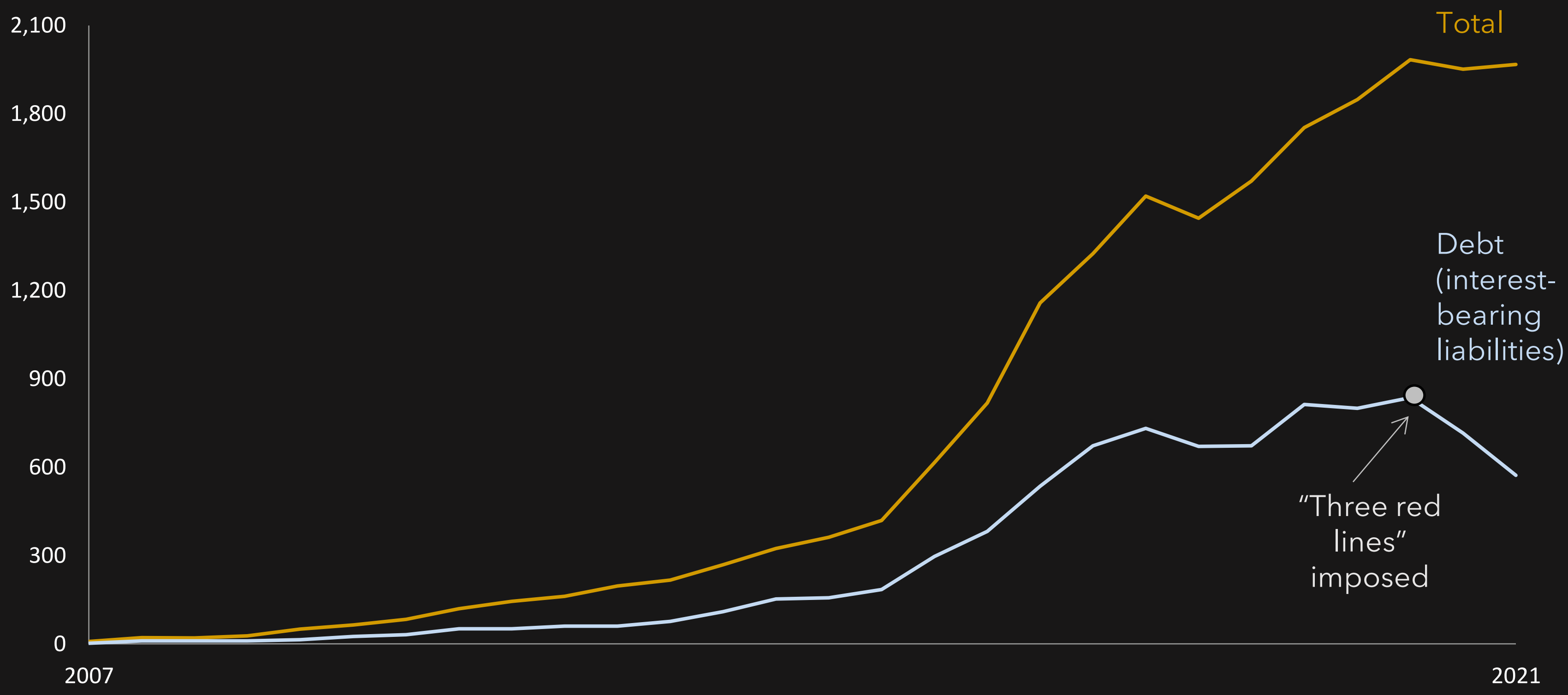


3 Evergrande’s Liability Structure

Over $300 Billion in Liabilities

With nearly RMB 2 trillion (over $300 billion) in liabilities, Evergrande has become the world's most indebted property developer and China's most indebted company. While Evergrande's liabilities peaked at 86% of assets last summer (around the implementation of the "3 red lines" policy) the company was more heavily reliant on short term debt than its peers. Pre-completion deposits from households now account for the bulk of the company's liabilities.

Evergrande liabilities, RMB bn



Source: (1) Capital Economics "Evergrande circling the plughole" (September 9, 2021).

Breaking Down Evergrande's Liabilities

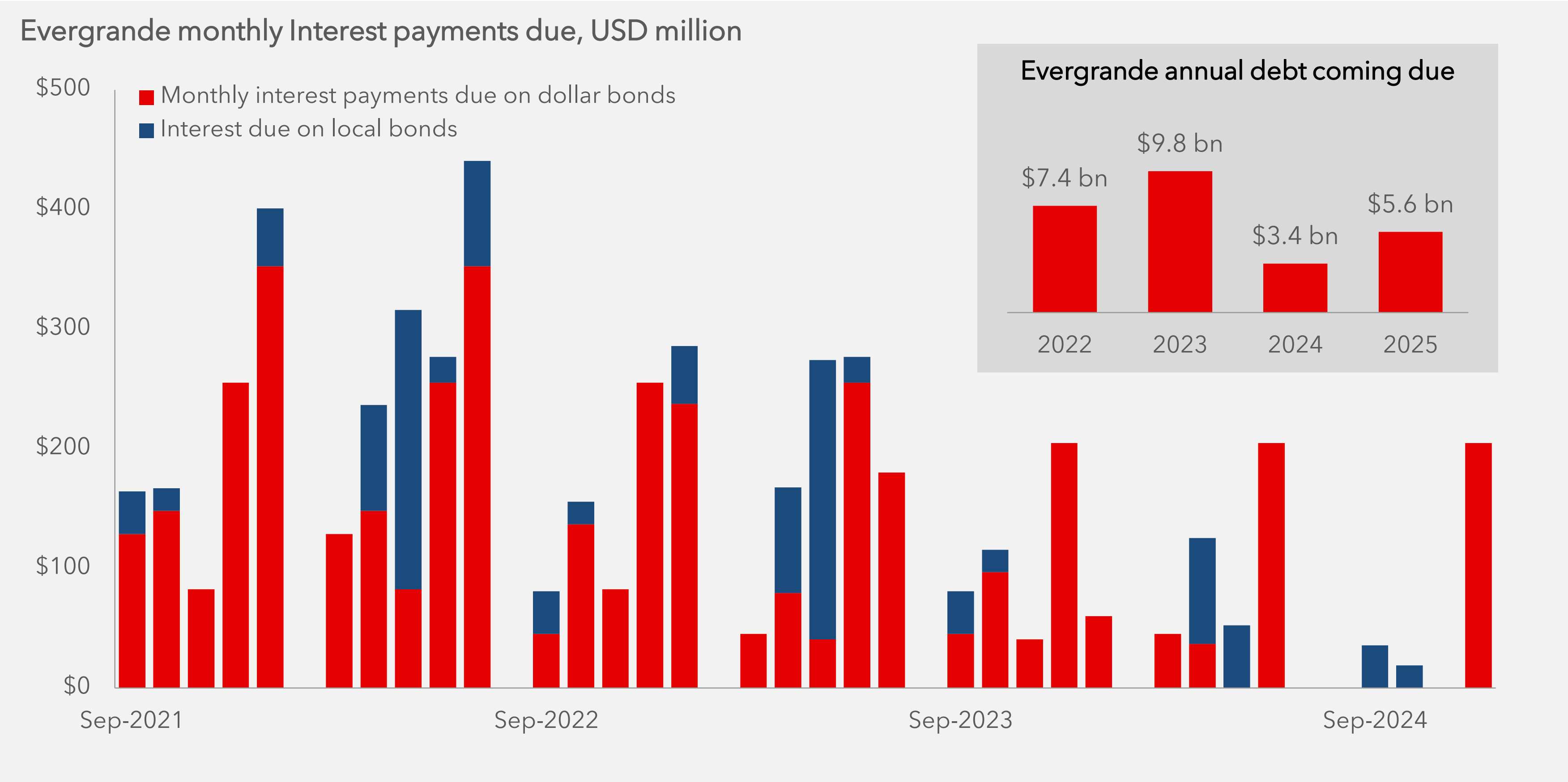
While bank loans are the largest portion of Evergrande's interest bearing debt, roughly 45% of its bank borrowing was backed by collateral (valued at 135% of debt) as of the end of 2020. The remaining onshore portion of its debt is equivalent to 1% of commercial banks' tier 1 capital ratio, meaning even in a complete write-off scenario (unlikely), average tier 1 capital ratios would fall to 10.9%, still well above the regulatory minimum of 9.5%. While offshore bond holders are likely to suffer larger write-offs, at roughly $20 bn in outstanding offshore debt, the contagion risk should be largely contained.

Evergrande's $304 billion in liabilities

Source: (1) WSJ. "China's Evergrande Debt Crisis: Sizing Up a Big Mess" (October 3, 2021). Dollar amounts were converted from Chinese yuan and figures have been rounded.

Evergrande's Interest Payments

Evergrande avoided a technical default in early October by making an $84 million overdue interest payment within the 30-day grace period. However, the company still has nearly $338 million due in coupon payments by year-end, including $45 million due by October 29, and $7.4 billion of onshore and offshore debt maturing next year.



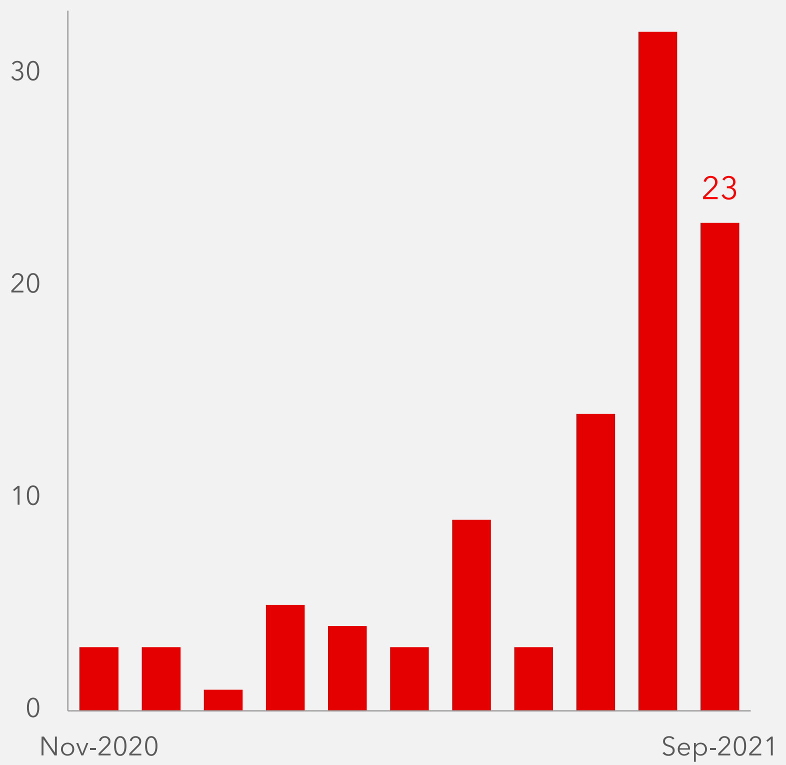
Source: (1-2) Bloomberg. Data as of September 23, 2021.


4
Rising Regulatory Activism

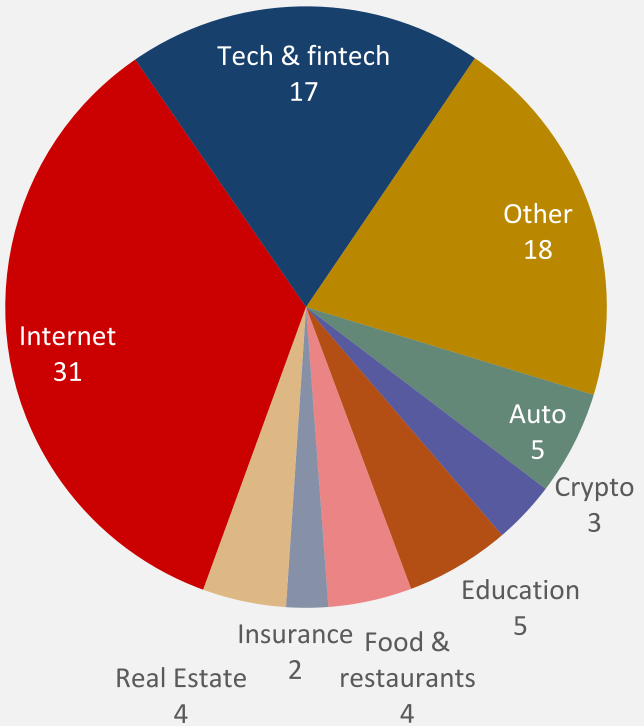
Rising Regulatory Activism

President Xi Jinping has shifted China's policy from "growth at all costs" to less rapid but higher quality growth, specifically targeting curbing the rapid rise in corporate debt and reducing real estate speculation. Xi's "common prosperity" policy objective will involve scaling up existing reform directives on public services, taxes, protection of labor, and regulation.

# of regulatory actions taken by Beijing



Beijing regulatory actions, by sector



Source: (1-2) Cornerstone Macro.

Rising Regulatory Activism

Since the suspension of Alibaba's Ant Group IPO in November 2020, Chinese authorities have launched numerous unexpected regulatory actions on many different sectors including tech giants, wealthy individuals, and education services. Many of China's recent regulatory initiatives fall under the "common prosperity" policy objective to balance growth and financial stability.

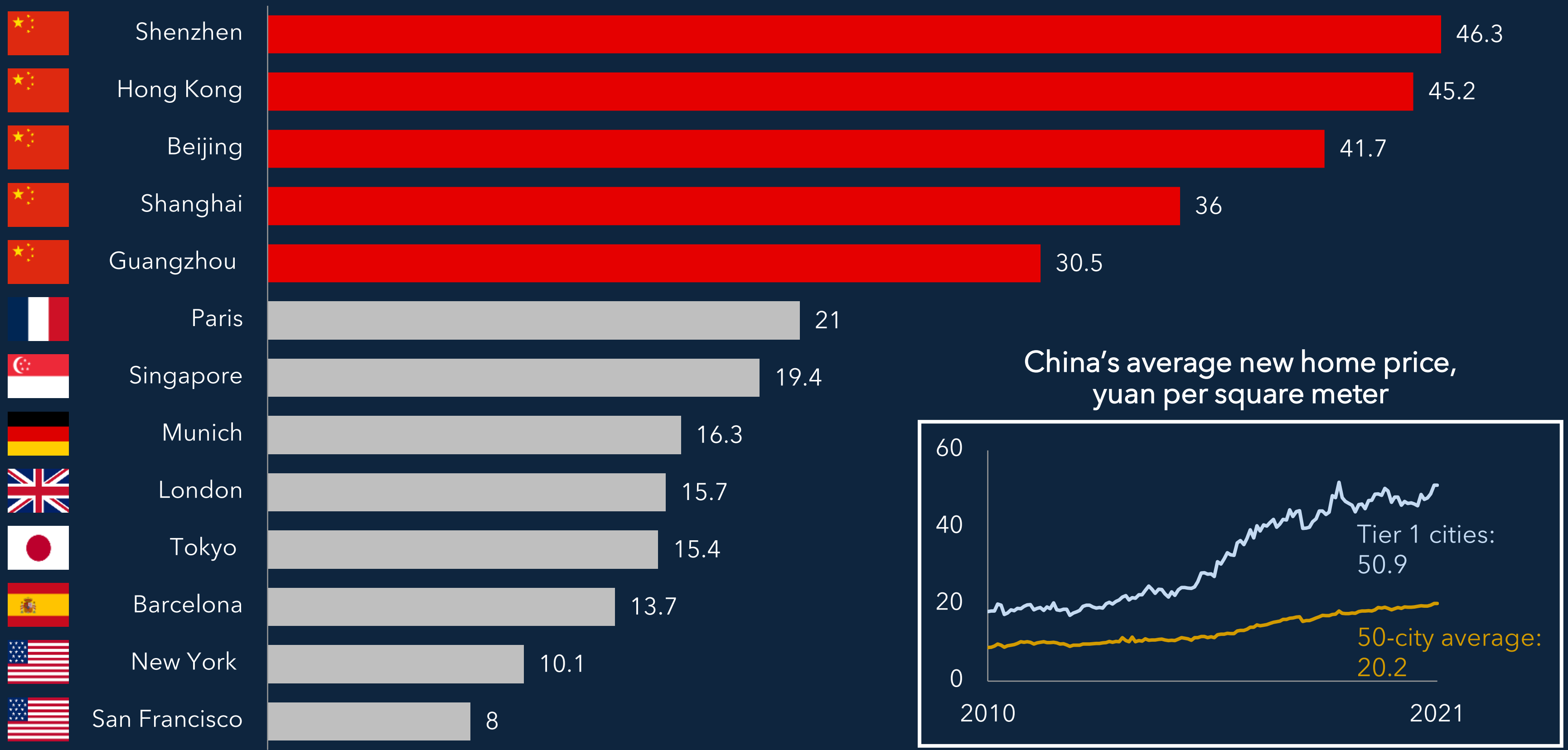
Areas of Recent China Regulatory Activism	
• Ecommerce companies	• Cloud computing firms that sell services to State and Party organizations
• Social media companies	• Bitcoin miners and crypto exchanges
• Fintech companies	• Real estate companies and landlords
• Fan clubs and celebrity culture	• Private investment funds
• High-income individuals	• Companies that have a lot of customer data
• Tutoring and education companies, private schools	• Companies that make heavy use of algorithms
• Gaming companies	• Online insurance providers
• Ride-sharing, car-hailing, bike-sharing and power bank sharing companies	• Online rental platforms
• Companies considering US stock exchange listings	• Cosmetics and packaged food brands

Source: Bloomberg "China Signals More Regulation for Businesses in Coming Years" (August 11, 2021). Brookings Institute "Assessing China's 'Common Prosperity' Campaign" (September 9, 2021). Chang Che.

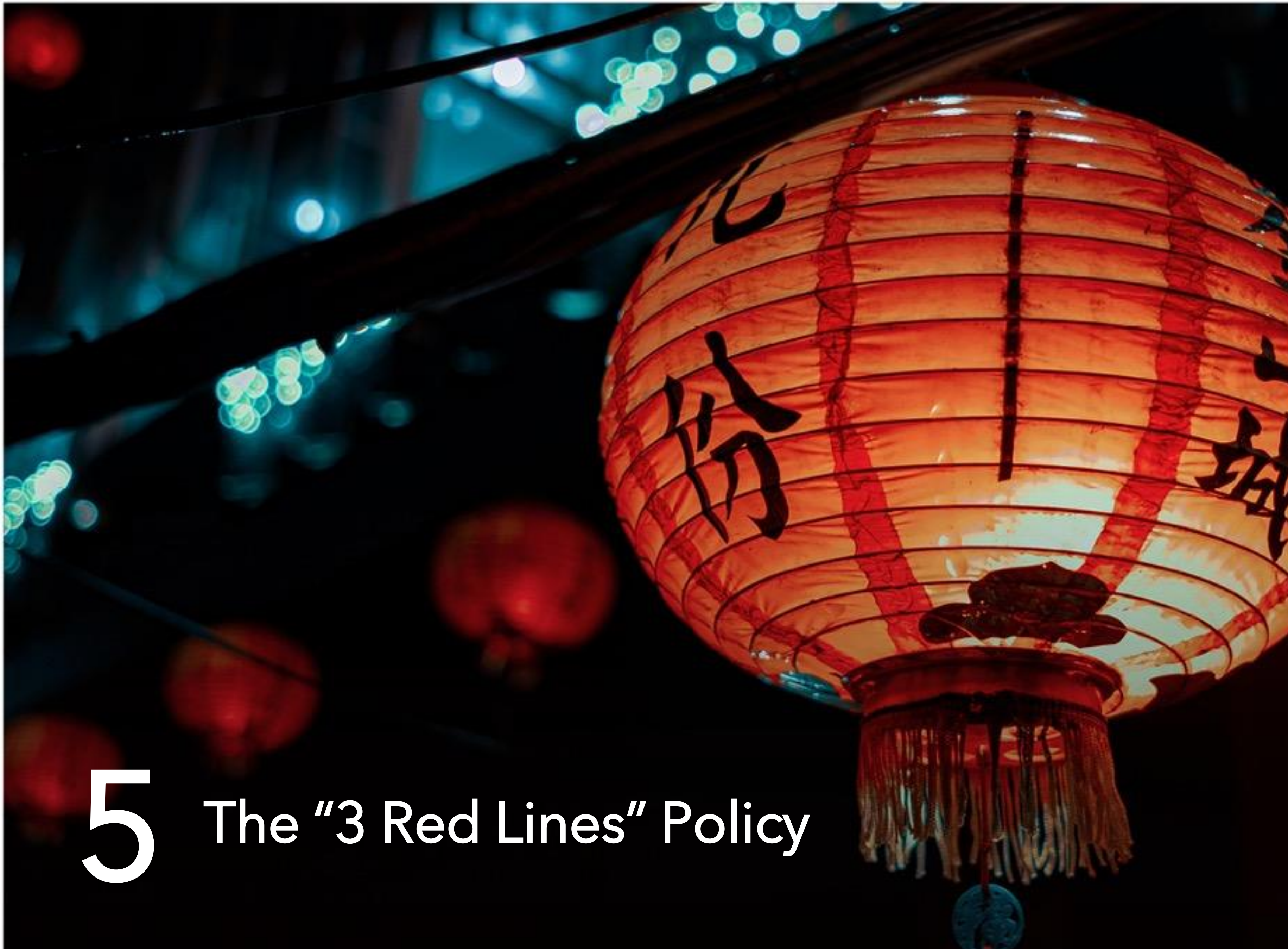
Housing Prices in Focus

One component of the "common prosperity" policy initiative is to improve access to affordable housing. With average prices in tier 1 Chinese cities among the highest in the world, look for Beijing to try to stabilize prices by promoting rental housing and possibly rolling out a property tax.

Median apartment price to median family disposable income



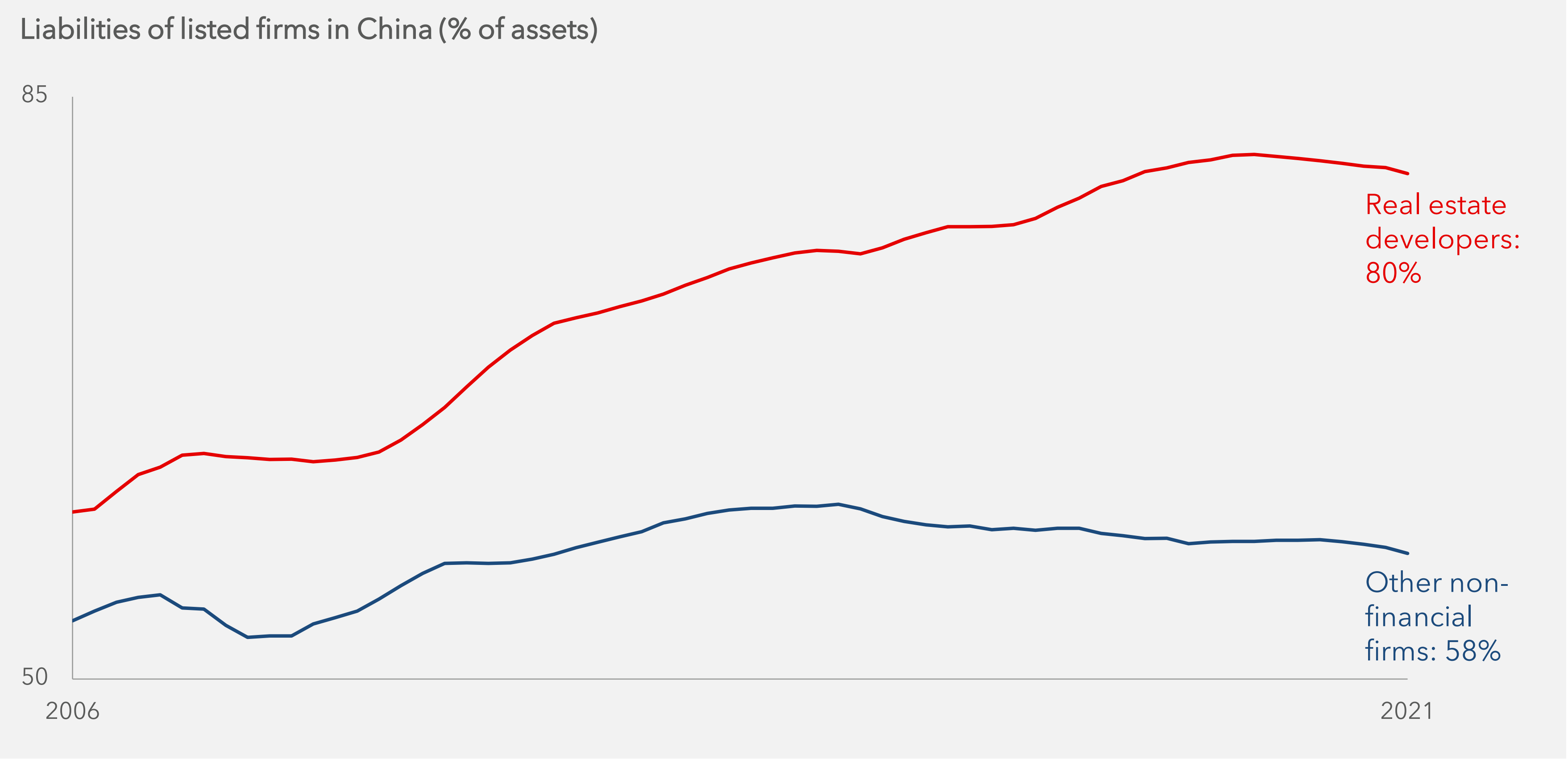
Source: (1) Bloomberg. "China's Evergrande Debt Crisis is a Stress Test No One Wanted" (September 23, 2021). Numbeo Property Prices Index 2021. (2) Bloomberg. "China's Evergrande Debt Crisis is a Stress Test No One Wanted" (September 23, 2021).



5 The “3 Red Lines” Policy

Property Developers Driving Credit Boom

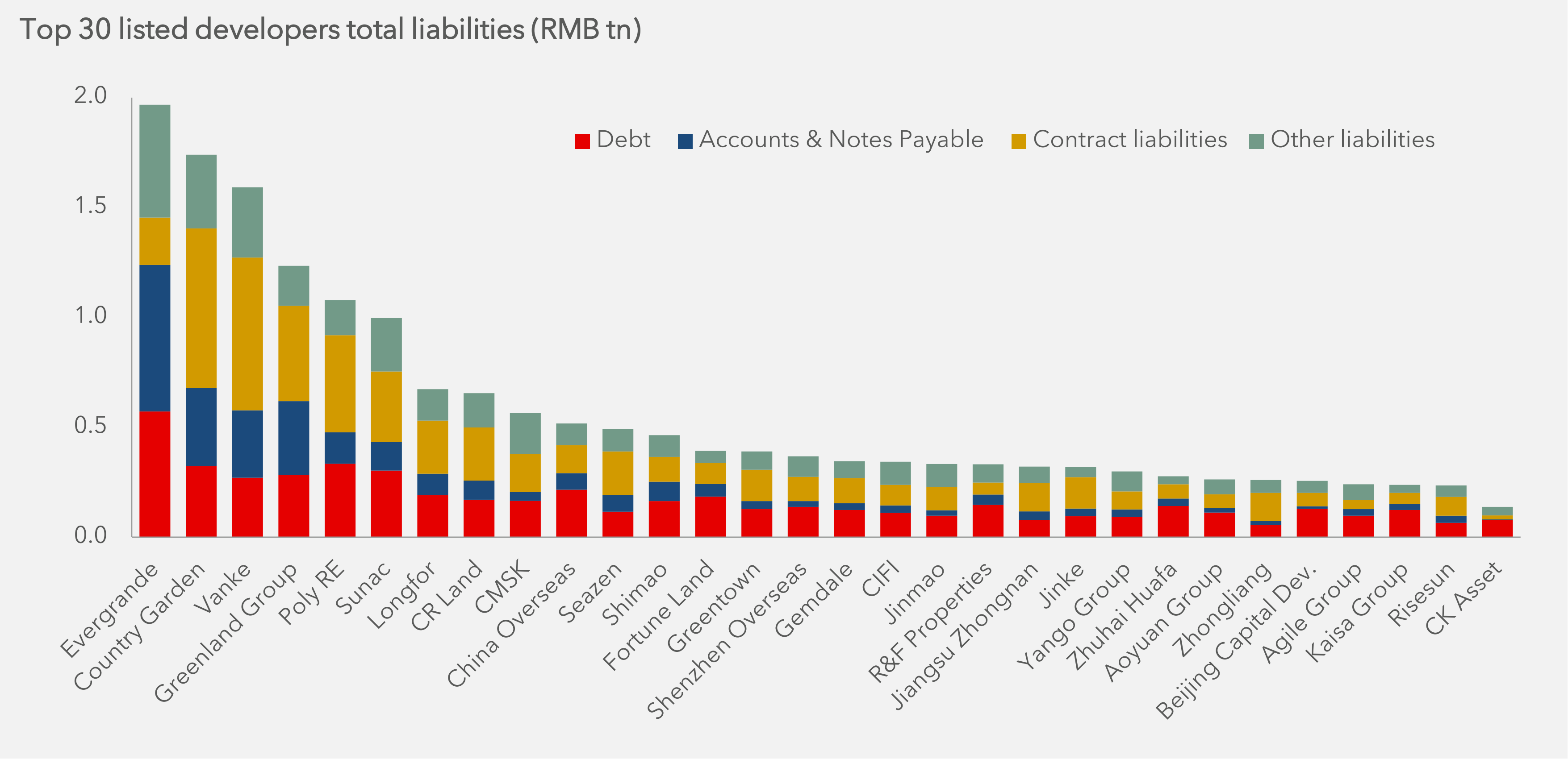
Chinese development firms account for most of the increase in leverage in the post-GFC credit boom of the last decade. Developer bonds from banks, bond markets and shadow banks doubled between 2012 and 2020 from 9% to 18% of China's GDP.



Source: (1) Capital Economics "Property sector leverage, China's CPTPP bid" (September 17, 2021). Wind. Liabilities is 4 quarter average.

China’s “3 Red Lines” Policy

Introduced in August 2020, President Xi’s “3 red lines” policy was meant to curb ballooning property sector debt. Last summer, 8 of the 12 scrutinized property developers failed at least one of the “3 Red Lines” tests. Today, only two do. Of the top 30 developers in China, which account for over 70% of sector liabilities, less than 1/3 exceeded any of the limits, compared with 2/3 a year ago.

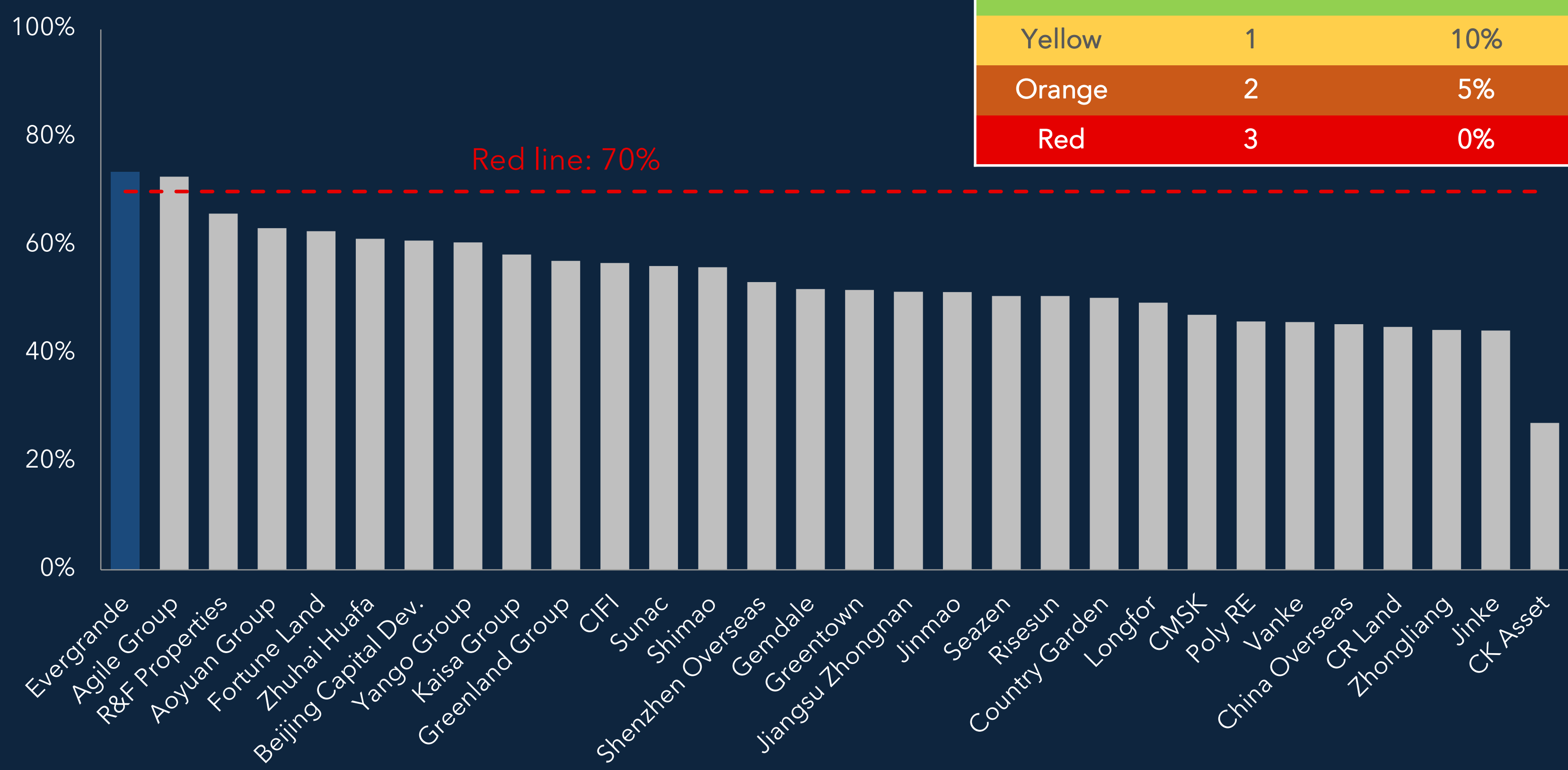


Source: (1) Capital Economics “Most developers are not on the brink of default” (September 22, 2021). Data is as of end of June 2021.

Red Line #1 – Liability-to-Asset Ratio

Liability-to-asset ratio (excluding advanced receipts) must be less than 70%

Top 30 listed developers
Liabilities excluding receipts in advance, % of assets



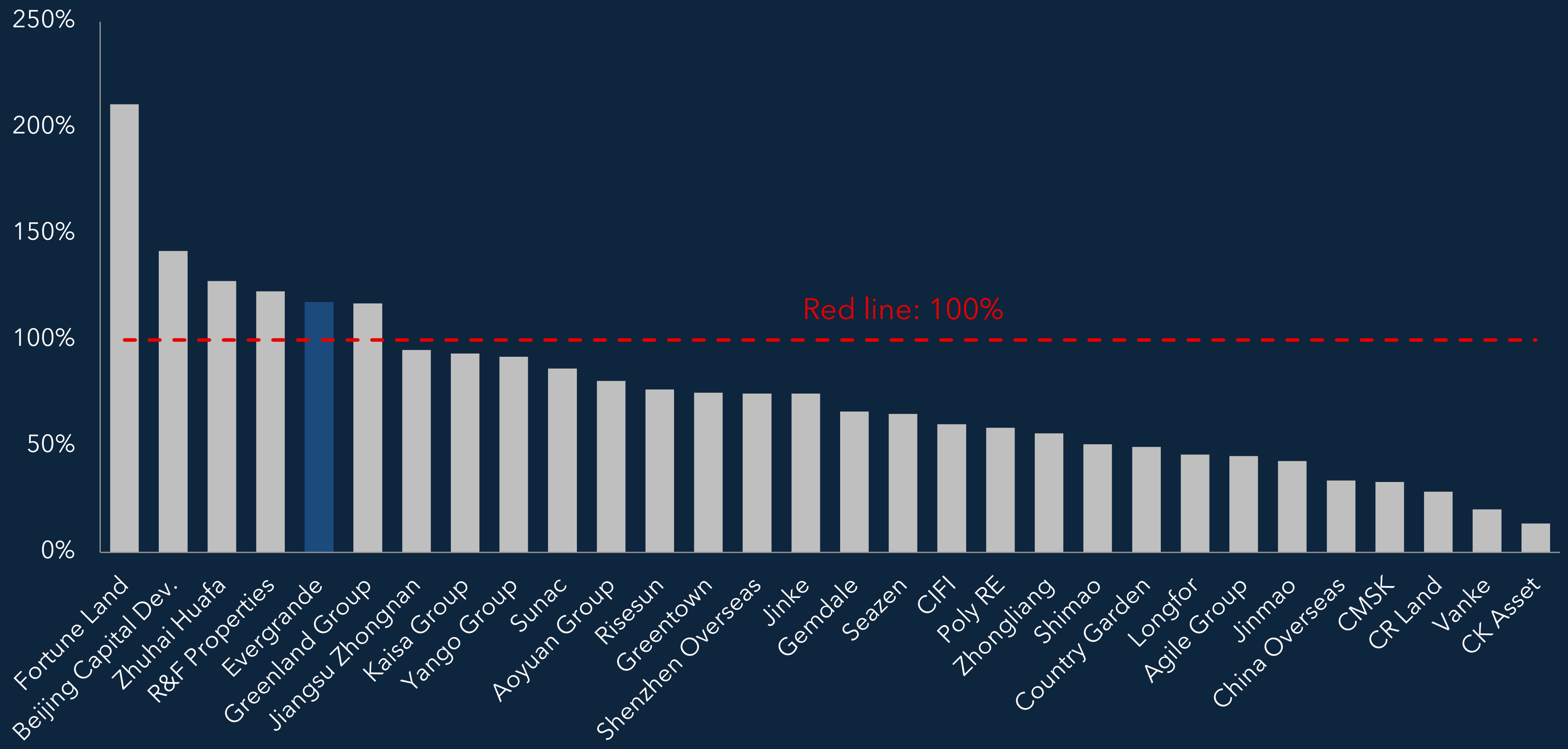
Implications of Breaching the 3 Red Lines Policy		
Color Code	# of lines breached	Allowable annual debt growth
Green	0	15%
Yellow	1	10%
Orange	2	5%
Red	3	0%

Source: (1) Capital Economics "Most developers are not on the brink of default" (September 22, 2021). Data is as of end of June 2021.

Red Line #2 – Net Debt-to-Equity Ratio

Net debt-to-equity ratio must not exceed 100%

Top 30 listed developers
Net debt, % of equity

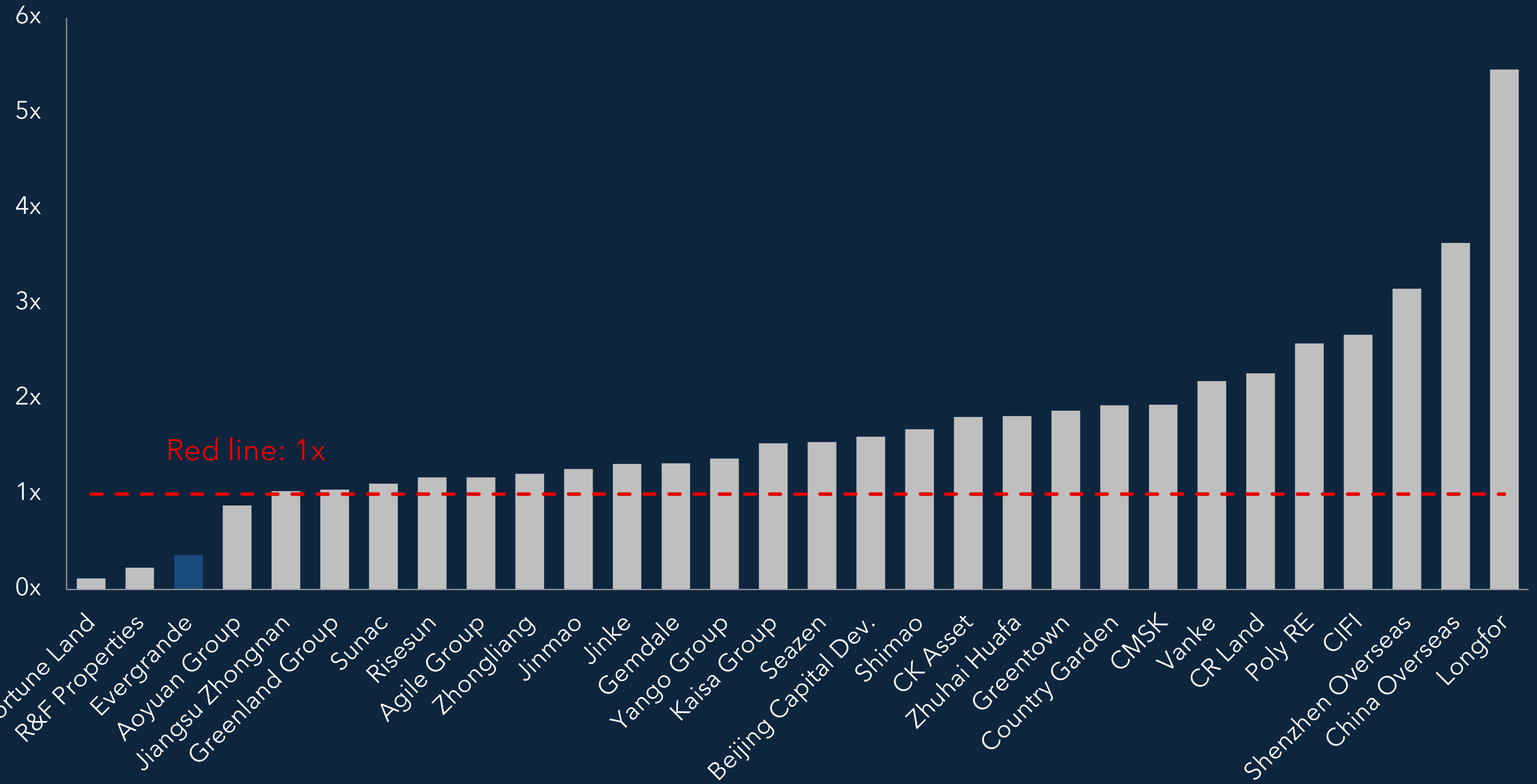


Source: (1) Capital Economics "Most developers are not on the brink of default" (September 22, 2021). Data is as of end of June 2021.

Red Line #3 – Cash-to-Short-Term Debt Ratio

Cash-to-Short-Term Debt Ratio must exceed 1x

Top 30 listed developers
Ratio of cash & equivalents to short term debt



Source: (1) Capital Economics "Most developers are not on the brink of default" (September 22, 2021). Data is as of end of June 2021.

BEIJING'S POLICY RESPONSE

6 Beijing's Policy Response

Beijing's Policy Response

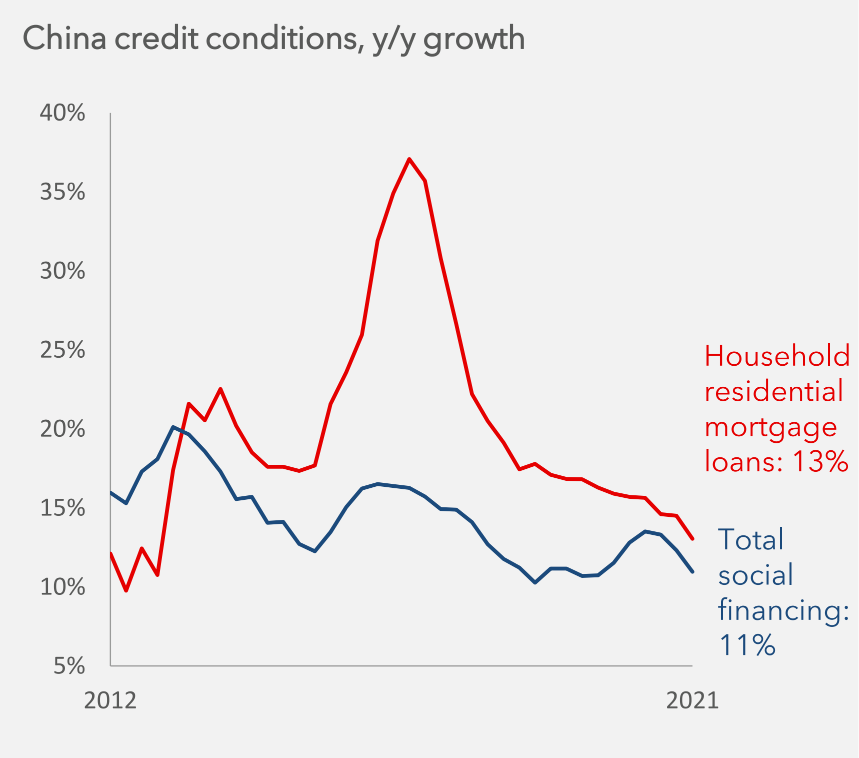
Beijing is adopting an "individuals first" approach to intervening in an Evergrande restructuring – prioritizing stability and protections for individual investors and property owners while minimizing direct support for the company. Maintaining liquidity in the banking system has also been a top priority response for Beijing.

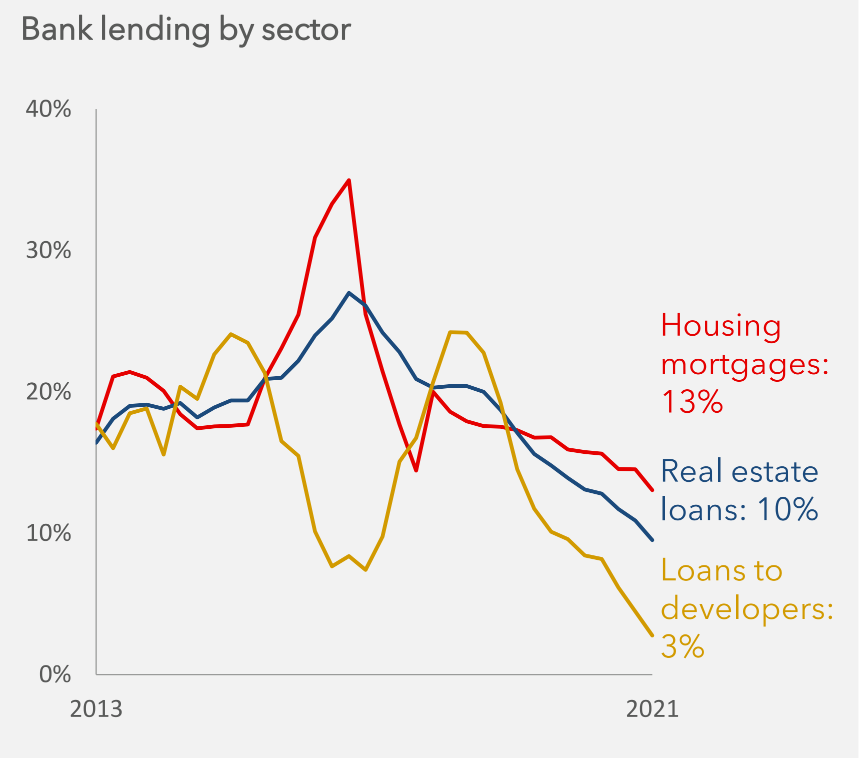
- Gradual Evergrande debt restructuring
- Encouraging lenders to keep credit to the real estate sector "stable and orderly"
- Continuing 3 Red Lines Policy – tightening credit for property developers
- Purchasing stake in regional Shengjing Bank from Evergrande for $1.55 bn
- Lowering bank reserve requirements / increasing bank sector liquidity
- Allowing new bank quotas for MBS sales – effectively easing caps on mortgage lending
- Accelerated local government bond issuance for infrastructure, if needed
- Reducing down payment requirements for first-time homebuyers at local government level (generally 30-35% today vs. regulatory floor of 20%)
- Easing climate policy driven cuts on electricity and production
- Policy support for SMEs, manufacturing and industry, if needed

Source: (1) Capital Economics "Property Downtown Deepens, Triggering Easing" (October 15, 2021). Bloomberg "China Breaks Silence on Evergrande, Saying Risks 'Controllable'"

Promoting Mortgage Lending while Restricting Developer Loans

Tight mortgage approval standards, a small rise in mortgage interest rates and strict purchase restrictions at the local government level had dampened housing demand and prices. As Evergrande contagion fears have roiled markets, Beijing has announced some policy easing which aims to reduce mortgage rates and lower down payment requirements for first time home buyers while still discouraging real estate speculation.

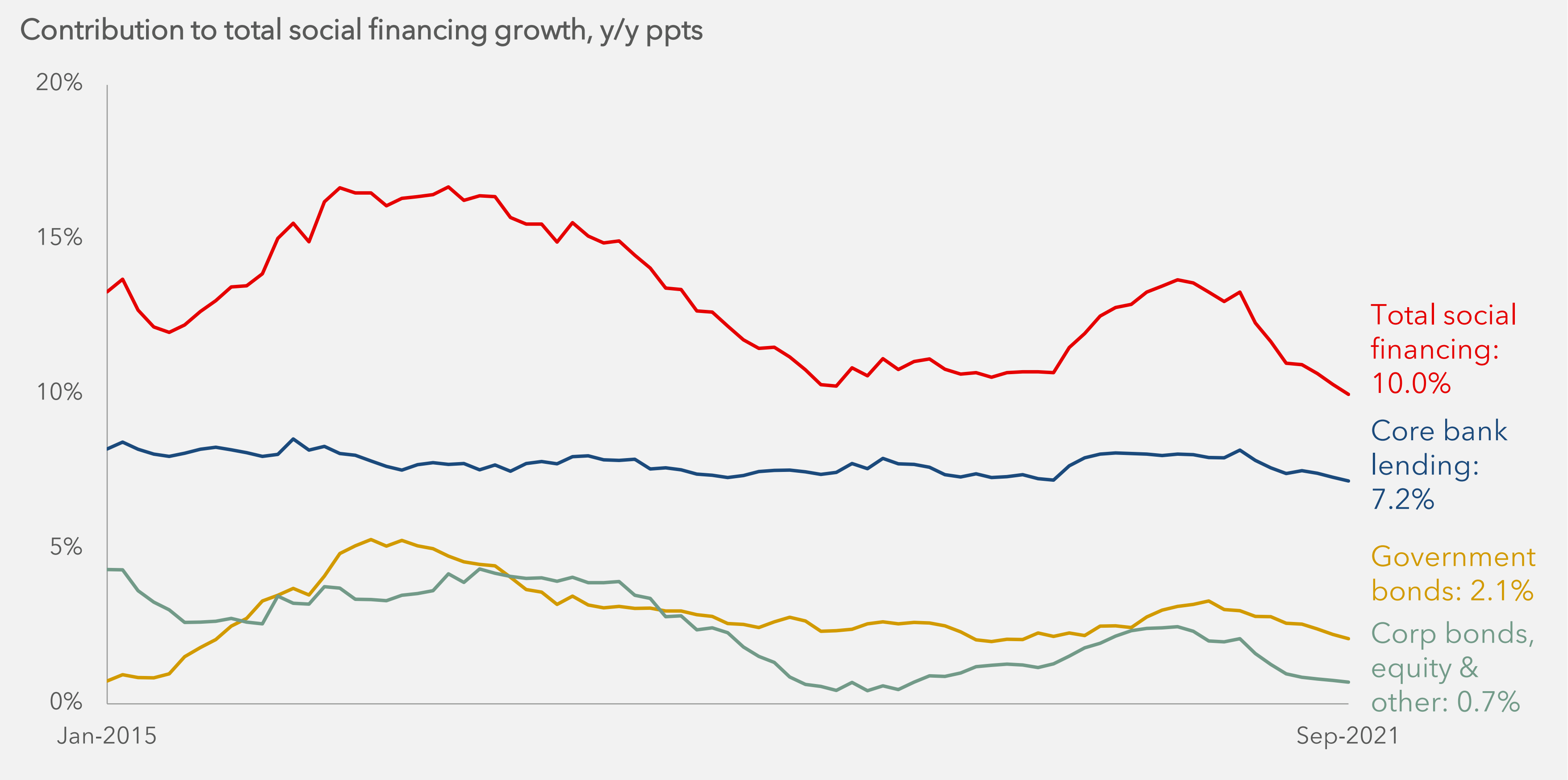




Source: (1) Oxford Economics "Why Real Estate is set to Cool Further" (September 29, 2021). (2) Bloomberg. Data as of October 25, 2021. Capital Economics "Property Downtown Deepens, Triggering Easing" (October 15, 2021).

Maintaining Deleveraging Focus

While policies will be implemented to help individual homeowners, an easing of overall macro policy is less likely as Beijing is still focused on containing leverage and financial risks. Looking ahead, we expect tighter regulation and credit policies regarding property developers and local government financing vehicles.

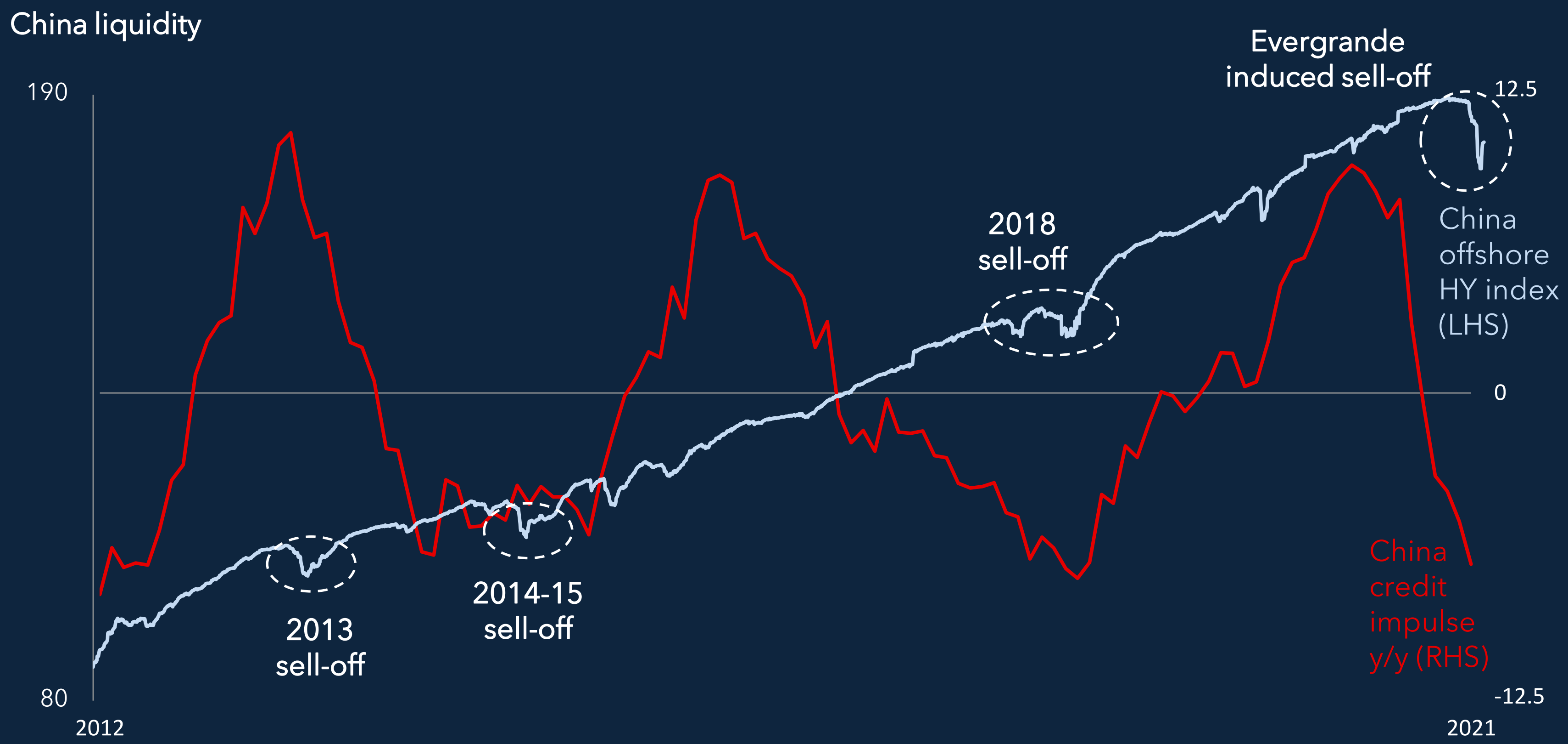


Source: (1) Oxford Economics "Country Economic Forecast – China" (September 28, 2021). Data updated as of October 25, 2021.

7 Bank Sector Liquidity

Liquidity a Priority for Policy Makers

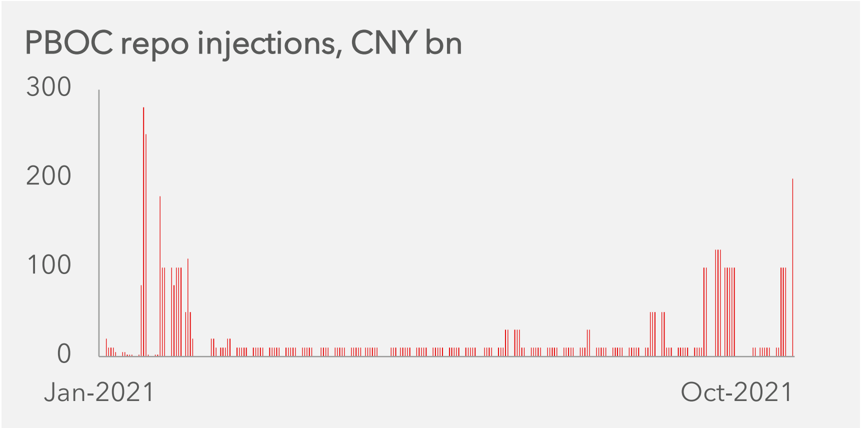
Historically, when Chinese markets sell-off, Beijing has stepped in to boost liquidity

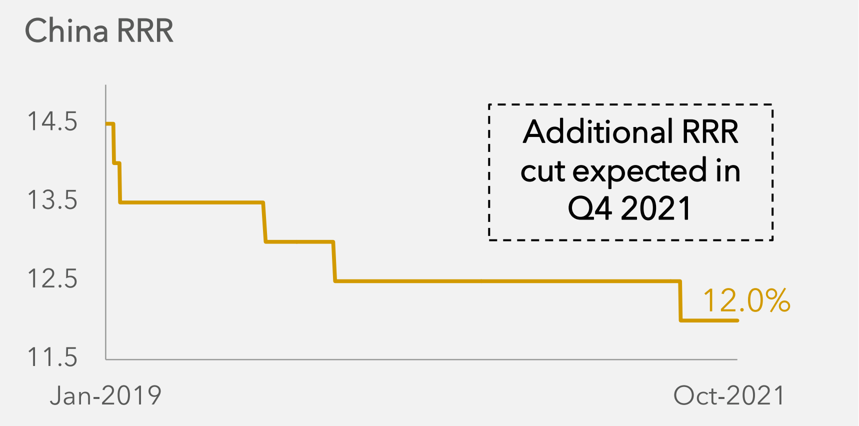


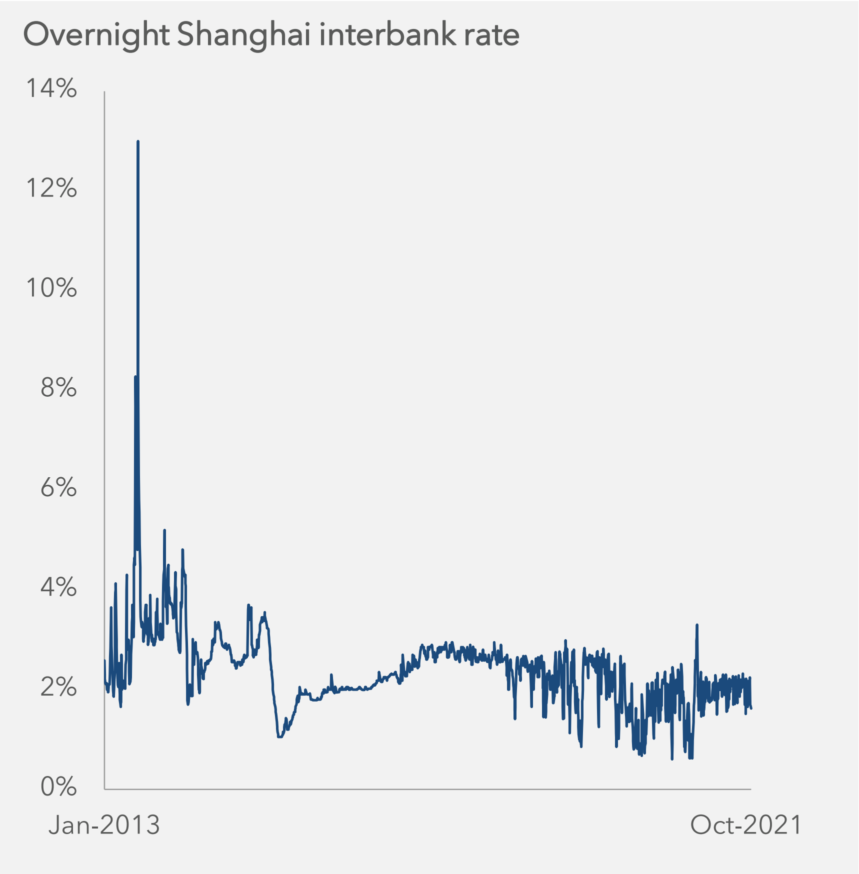
Source: (1) Bloomberg. Data as of October 25, 2021. China offshore high yield index is iBoxx Hang Seng Markit Offshore China Corporates High Yield index.

Bank Sector Liquidity Support

China has already reduced their reserve requirement ratio (RRR) since the start of Evergrande turmoil and an additional RRR cut is expected in Q4 this year. In addition, policy makers have injected liquidity directly via the PBOC's repo market. The result has been relative stability in interbank lending rates.



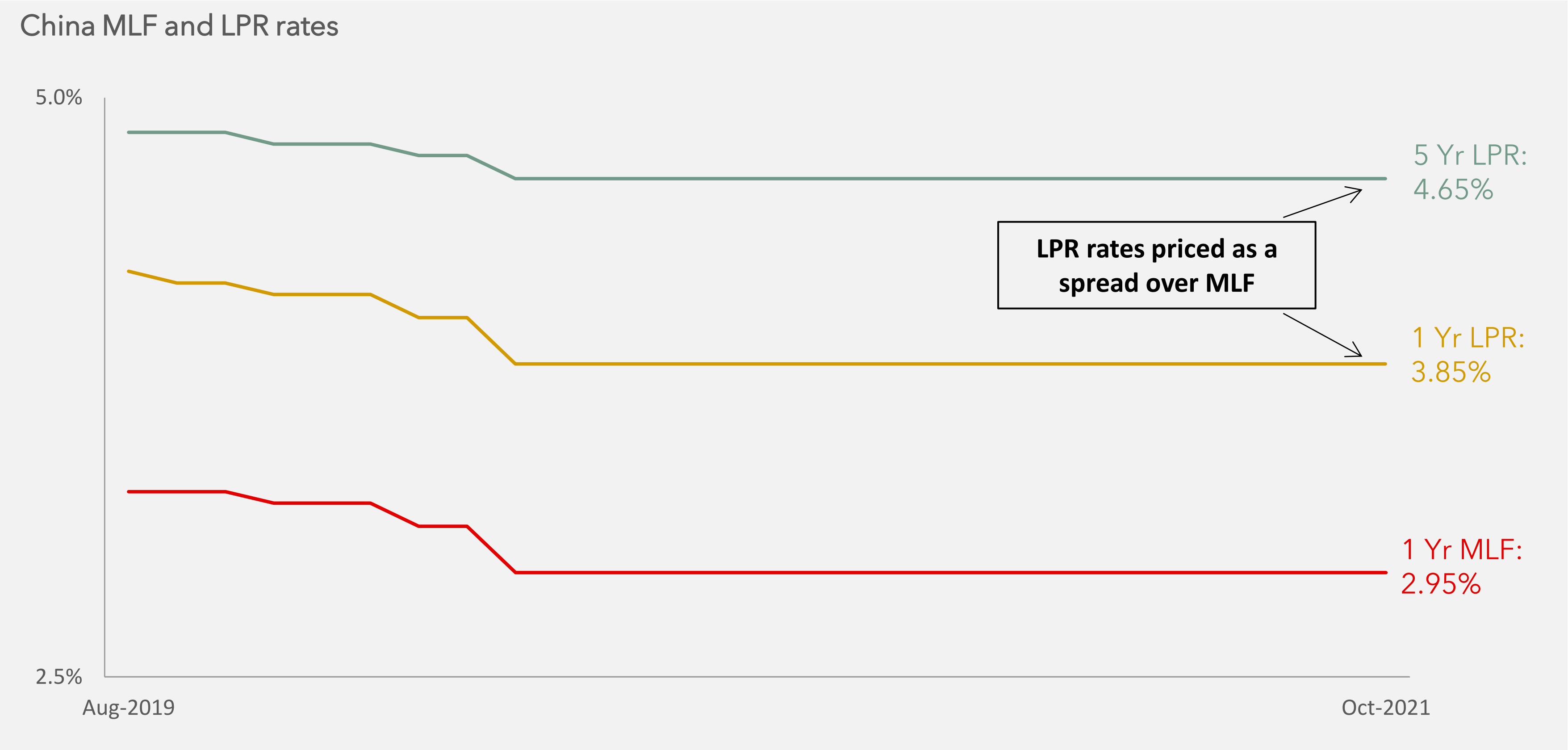




Source: (1-2) Bloomberg. Data as of October 25, 2021.

Interest Rates Stable, Thus Far

While Beijing has taken policy initiatives to support bank sector liquidity, they have not yet reduced lending rates. Both the medium-term lending facility (MLF) and Loan Prime Rate (LPR) have held steady thus far; however, if the downturn in the property sector deepens, policy makers could look to cut the LPR (which mortgage rates are priced from) to support housing demand.

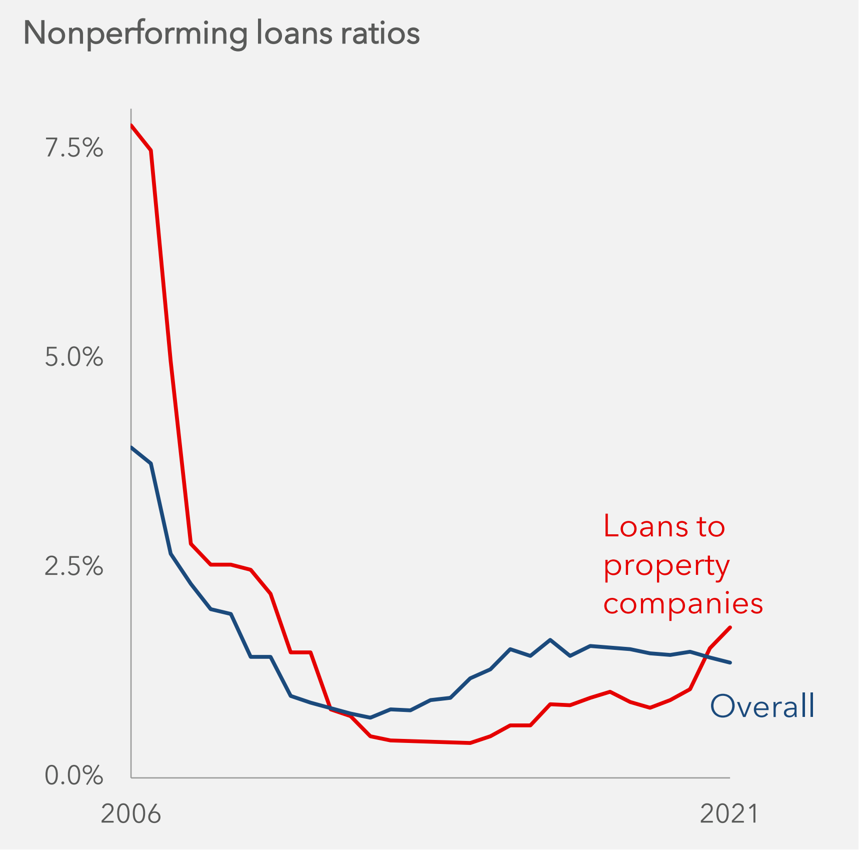


Source: (1) Bloomberg. Data as of October 25, 2021. Capital Economics "Pullback in easing expectations overdone".

8 Tightening Lending Conditions

China's Rising NPL Ratio

Chinese banks do not face a liquidity problem, particularly as the PBOC continues to inject liquidity into the financial system; banks however, are facing a rising solvency problem. To be clear, while the average non-performing-loan ratio has increased in the last five years, bank loans are well collateralized (typically between 60% and 70% loan to collateral value), but a rising NPL ratio and the government's focus on deleveraging will mean stricter lending standards to highly levered companies.

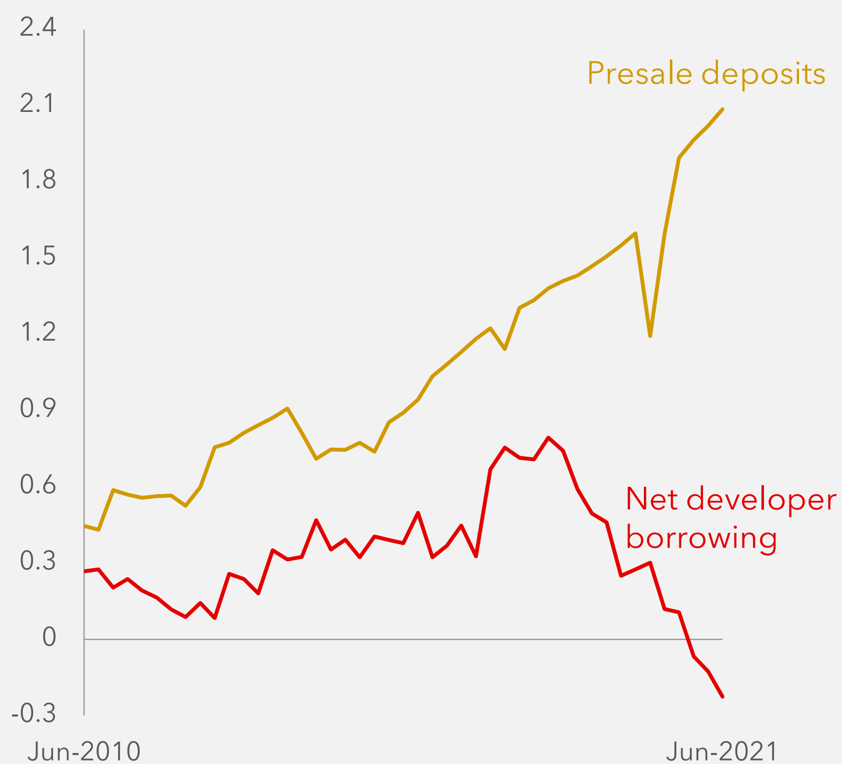


Source: (1) Enodo Economics "Managing Evergrande Default – Everything Short of a Bailout" (September 9 , 2021). CEIC. (2) Based on filing of Chinese national banks. Jefferies.

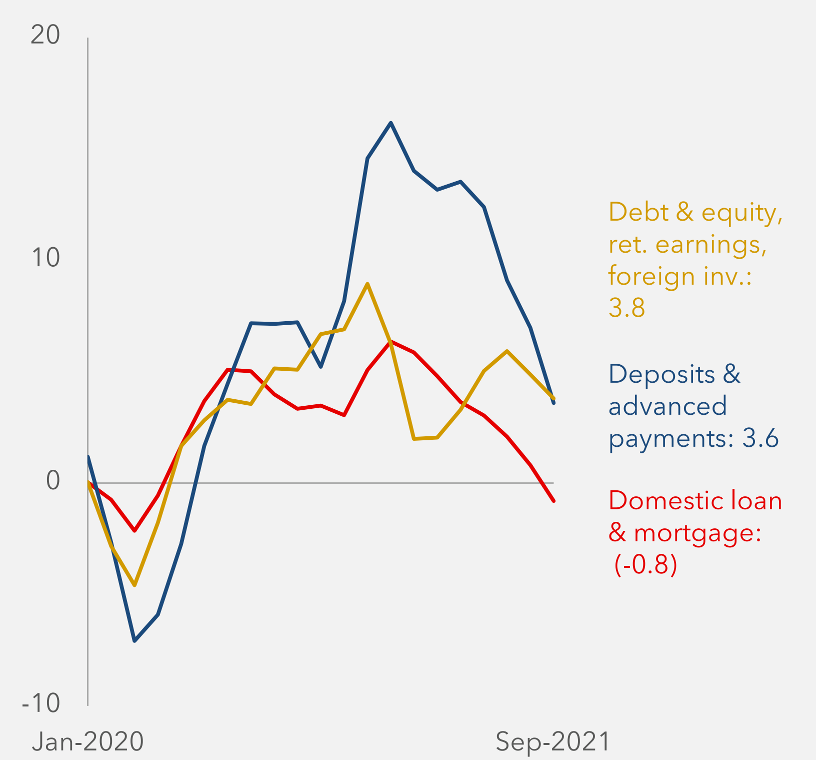
Property Developers Reducing Bank Exposure

As bank lending standards tighten and property developers look to improve their balance sheets to satisfy the “3 red lines” policy, they have become more reliant on non-interest-bearing liabilities that sidestep borrowing restrictions. The increase in household savings during the pandemic has facilitated a boom in new housing pre-sales, which have taken the place of many traditional forms of developer borrowing.

Developer financing, RMB tn



Developers’ source of funding, ppt contribution



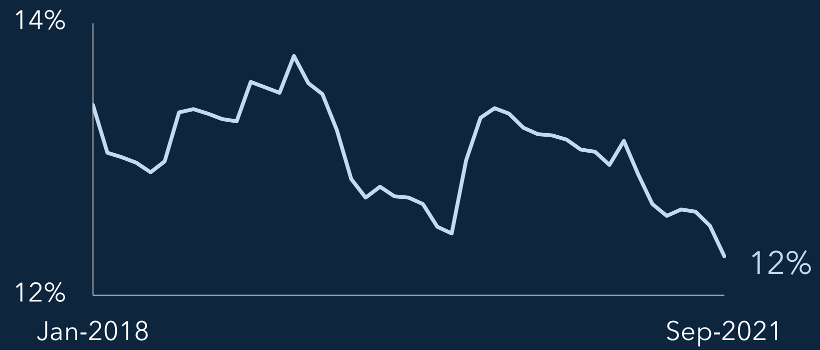
Source: (1) Capital Economics “Evergrande is a poster child for property sector risks” (July 23, 2021). Developer financing is seasonally adjusted. (2) Oxford Economics “Why Real Estate is set to Cool Further” (September 29, 2021).

9 Deleveraging Focus

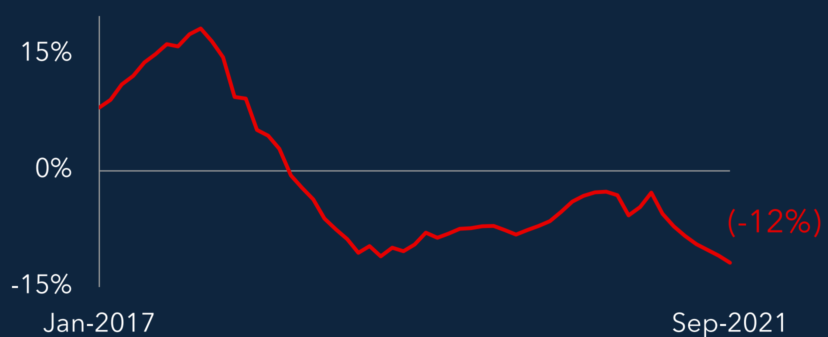
China's Deleveraging Focus

China's deleveraging focus has been increasingly targeting the high growth and increasingly speculative real estate sector, with particular focus on the shadow banking sector

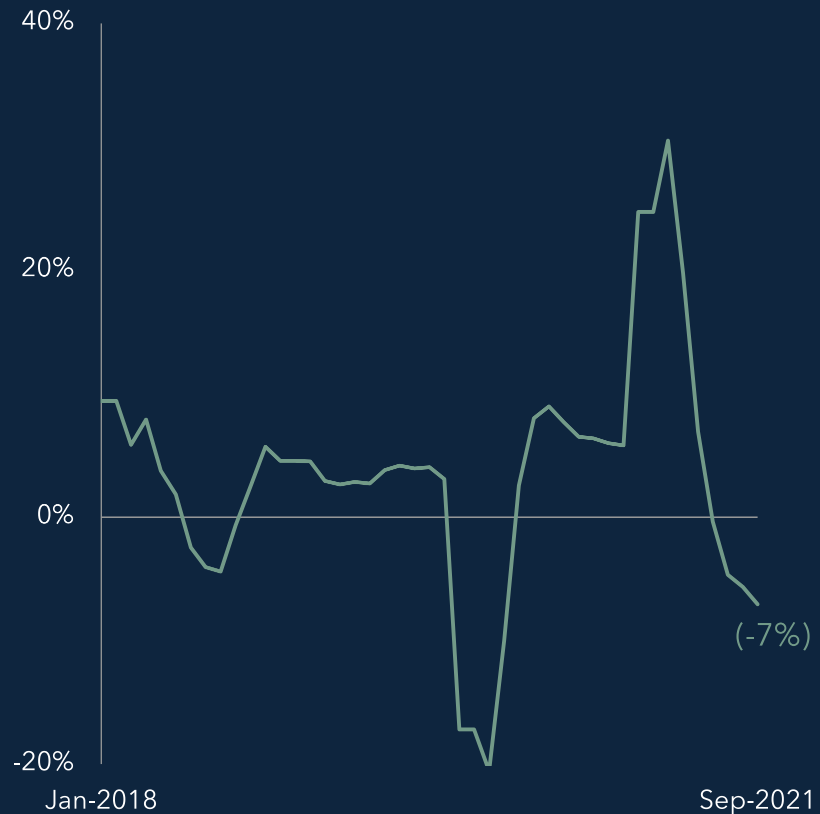
China bank loans, y/y



China shadow financing, y/y



Infrastructure investment, y/y

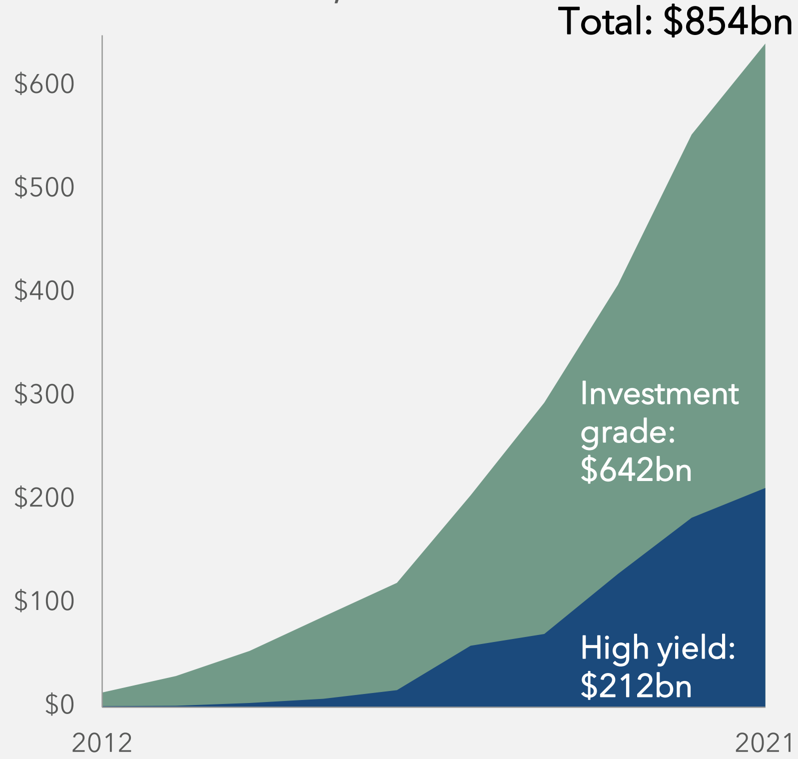


Source: (1-3) Bloomberg. Data as of October 25, 2021 Bank loans is total loans of financial institutions. Infrastructure investment is 3 month moving average.

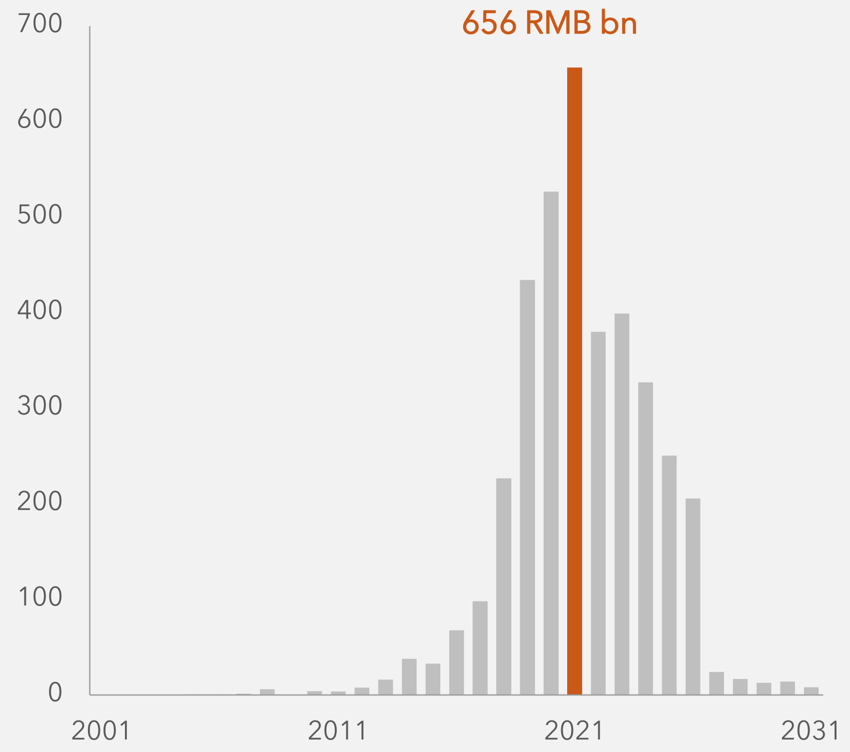
Overseas Markets Gaining Prominence

As onshore debt markets get more heavily scrutinized, many Chinese corporates have more actively tapped the offshore bond markets. Evergrande has significantly reduced its borrowings from banks and onshore capital markets in an effort to comply with the 3 red lines policy, but it is still China's largest USD high-yield bond issuer, representing 16% of the outstanding market.

Cumulative issuance by Chinese companies in offshore bond markets, USD bn



Onshore real estate bonds by maturity, RMB bn



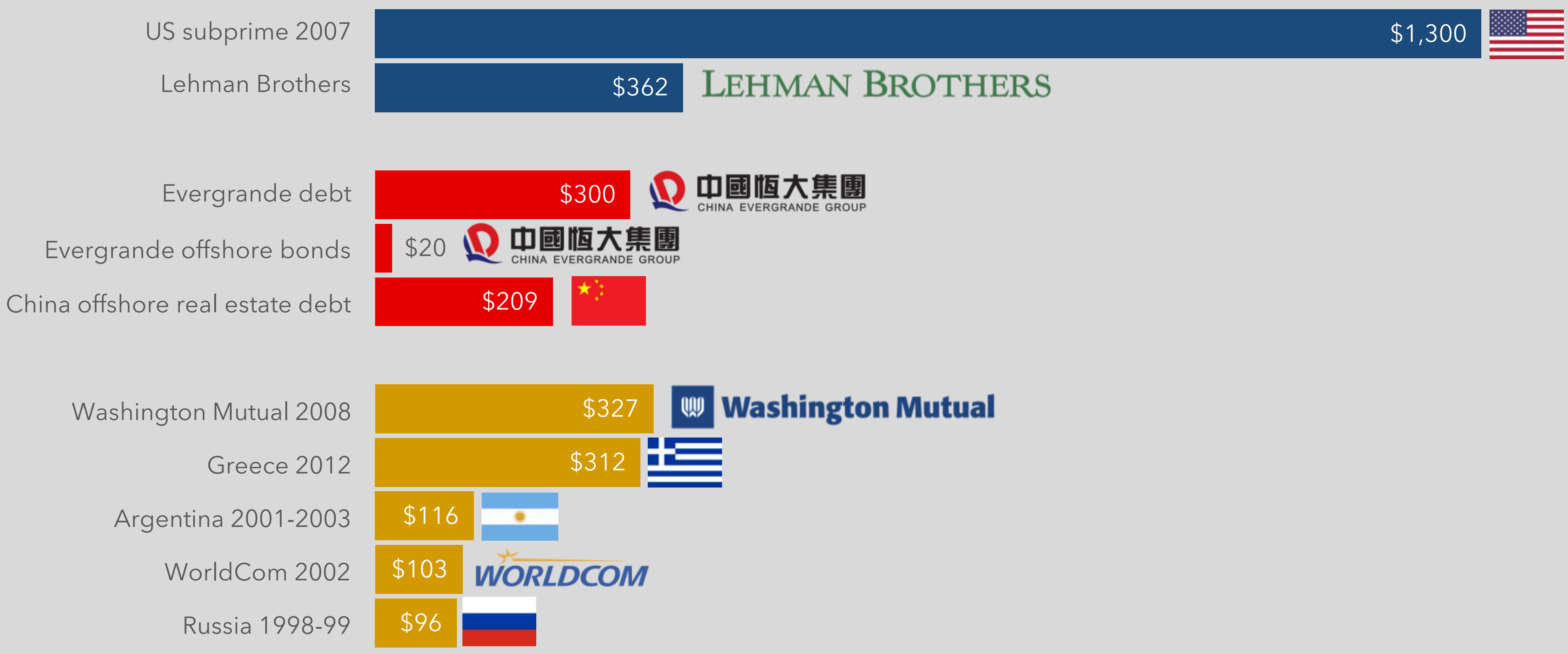
Source: (1) WSJ "Western Investors Bargain Hunt in China Bond Rout" (September 22, 2021). Bloomberg. 2021 data is through August 5th. (2) Enodo Economics "Managing Evergrande Default – Everything Short of a Bailout" (September 9 , 2021). Wind.

10 Restructuring Expectations

“Lehman Moment” Unlikely

While Evergrande’s $300 billion of liabilities is on par with Lehman’s 2008 liabilities, only around $20 billion is in the offshore market and most of the onshore bank debt is well collateralized. The PBOC has responded to Evergrande’s fallout by saying risks to the financial system are “controllable” and unlikely to spread.

World financial crises / defaults by size of asset class or default, USD bn



Source: (1) Oxford Economics “Evergrande Matters but it’s not a Lehman Moment” (September 30, 2021). New York Fed. Lehman Brothers is third party claims.

Expectations for Priority of Claims in an Evergrande Restructuring

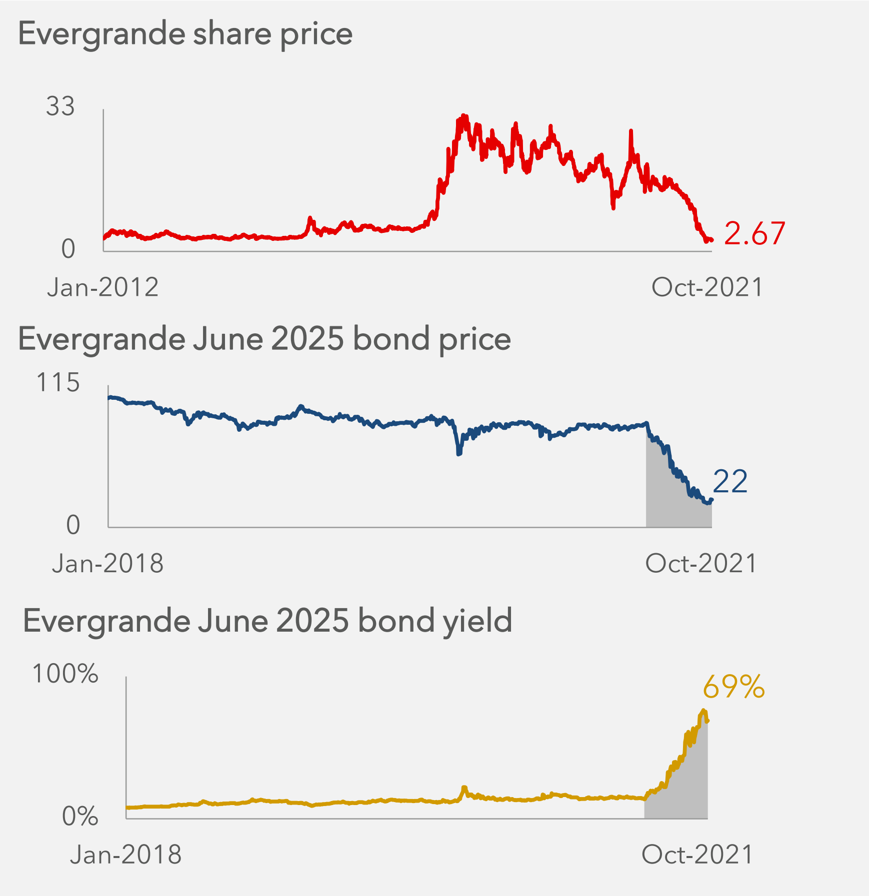
HIGHER Priority Claims

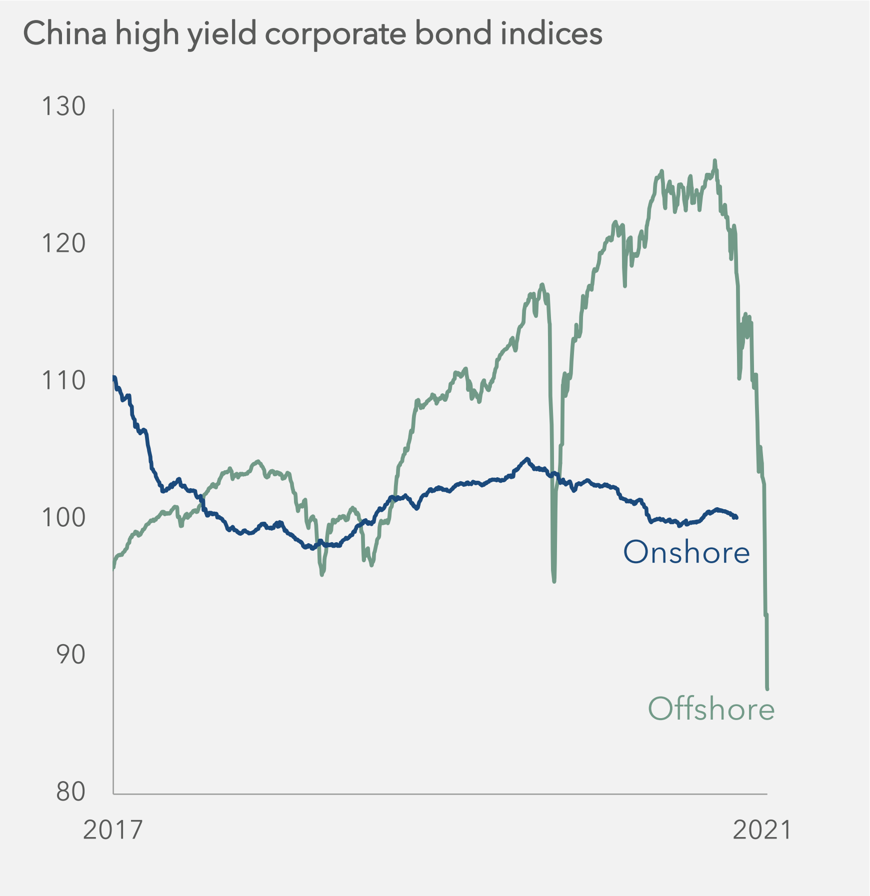
- Owners of unfinished apartments
- Building suppliers for properties
- Key stakeholders in banking system
- Local bondholders/wealth management products (WMPs)
- Offshore, foreign creditors
- Evergrande equity holders

LOWER Priority Claims

Offshore Bondholders, Equities Hardest Hit

An S&P study of almost 50 Chinese defaults showed an average cash recovery rate for unsecured debtors was 23.7%. While onshore creditors are likely to experience an orderly restructuring with relatively high recovery rates, offshore bond holders and equity holders will be hardest hit in the restructuring process.





Source: (1-3) Bloomberg. Data as of October 25, 2021. (4) Capital Economics "Where might markets be wrong about Evergrande" (September 22, 2021). January 2019 = 100.

Timing Expectations

Evergrande has a 30 day grace period from the time of a missed interest payment to when bondholders can call for default

Under Chinese law, once courts accept a creditors bankruptcy order, the company has six months to produce a reorganization plan – the deadline can be extended for an additional 3 months, if necessary

Evergrande has been submitting restructuring plans to the central government since February, but none have been accepted

Collateral disposal in China typically takes roughly 18 months (including court proceedings, asset auctions and creditors receiving what is owed), though the process can take longer when political considerations are involved or if assets are in provinces with less advanced judicial systems

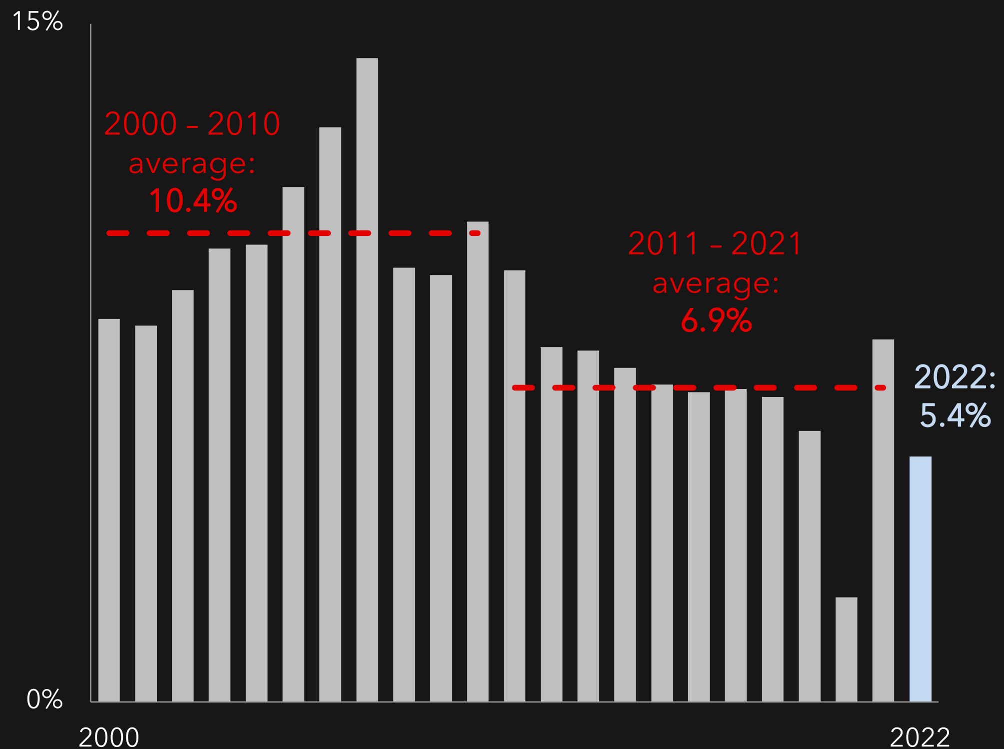
CHANNELS OF CONTAGION

11 China’s Slowing Growth

Driver & Symptom of Slower Growth

Evergrande's crisis is both a driver and symptom of China's slowing growth. President Xi's pivot to lower but "higher quality" growth may have positive implications in the long term, but in the near term, a more activist regulatory stance toward many industries, a focus on deleveraging, and a cooling property sector will adversely impact China's economic growth outlook. China's economy is expected to grow at just 5-5.5% in 2022, roughly half the rate of growth a decade ago.

China GDP growth, y/y



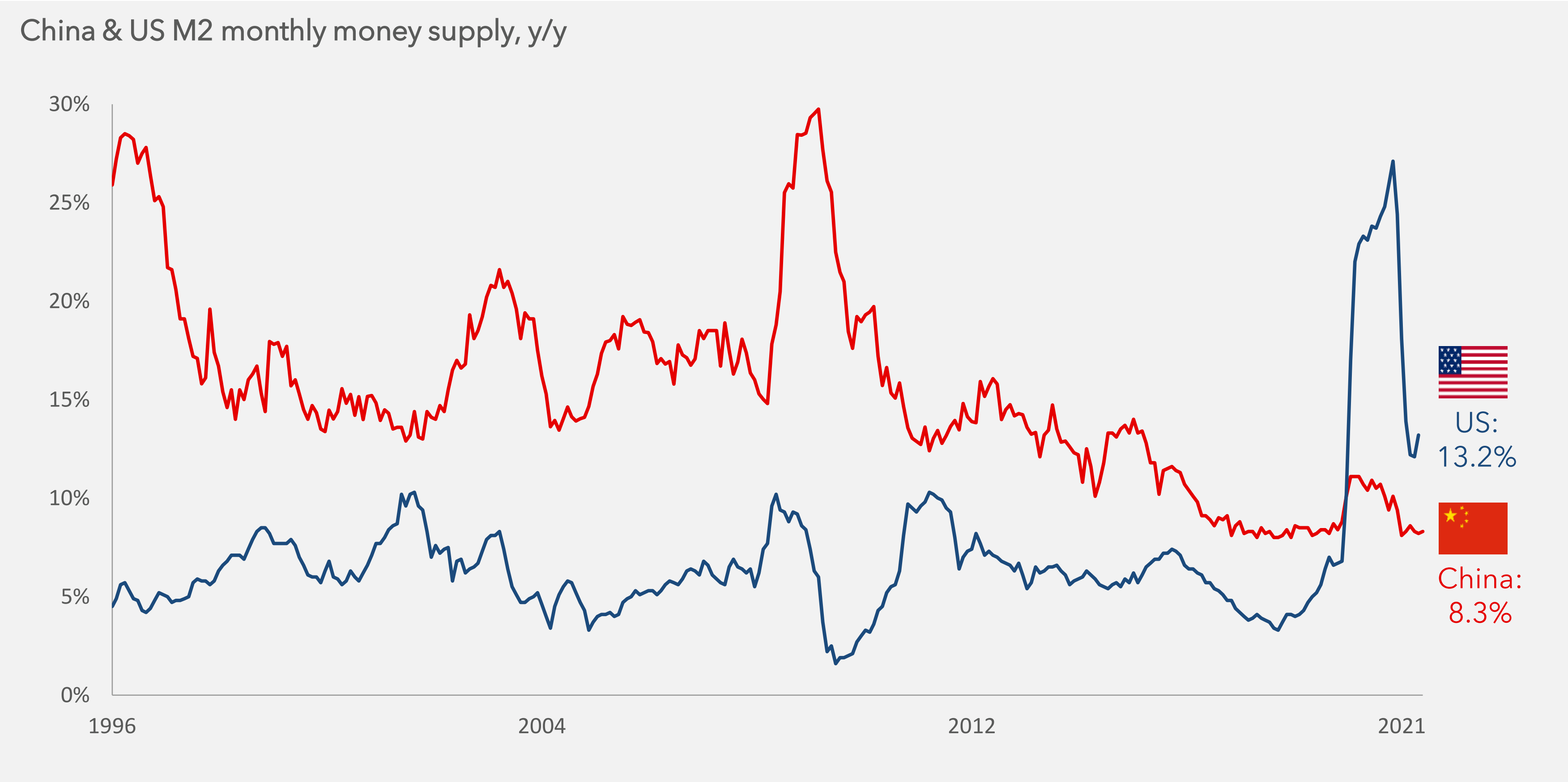
Source: (1) Oxford Economics. Data as of October 25, 2021.

Headwinds for China's economy

- Recent fiscal & monetary tightening
- Recent regulatory activism in private sector
- Cooling property market
- Virus related restrictions
- Power & electricity shortages
- Production cuts related to climate policy
- Supply side / chain pressures

PBOC Reigning in Credit Growth

For the first time in 25 years, M2 money supply growth in the US has exceeded that in China. After decades of reasonably loose monetary policy, the PBOC has begun to rein in credit which will act as a headwind to China's growth going forward.

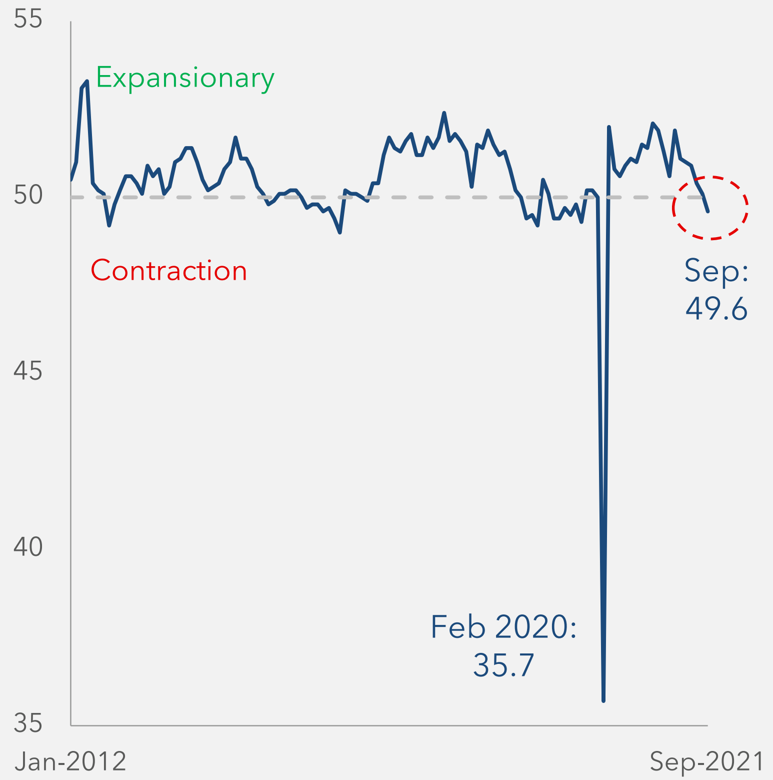


Source: (1) Bloomberg "The Happy Mood Music in Markets Is Ignoring China" (John Authors). Data as of October 25, 2021.

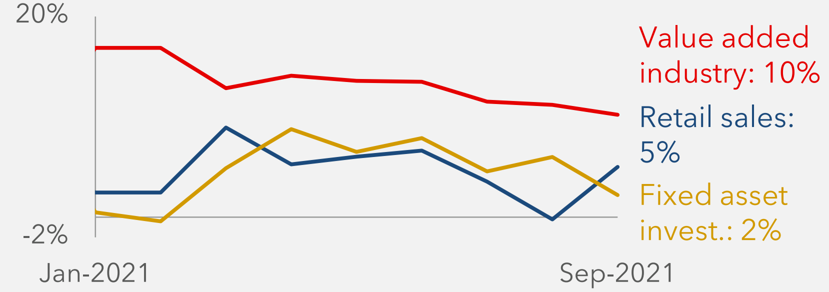
China's Economy is Slowing Down

China's official manufacturing PMI slowed to 49.6 in September, the weakest reading in two years (apart from when the pandemic hit). While there is still room for further recovery in services activity as COVID-related restrictions are lifted, look for continued weakness in manufacturing activity resulting in economic activity contraction in the near-term.

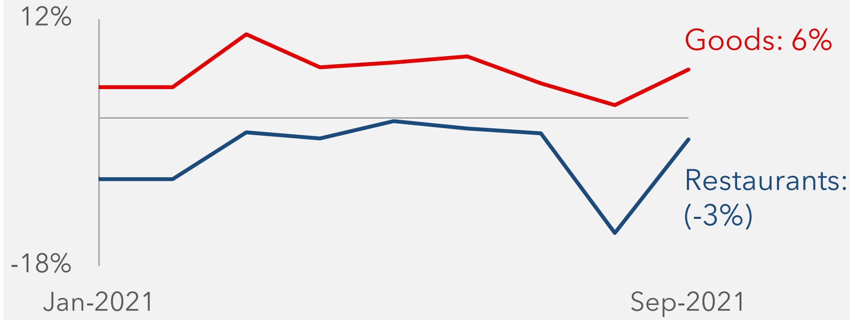
China official manufacturing PMI



Key cyclical indicators, % growth from same month in 2019



Retail sales, % growth from same month in 2019

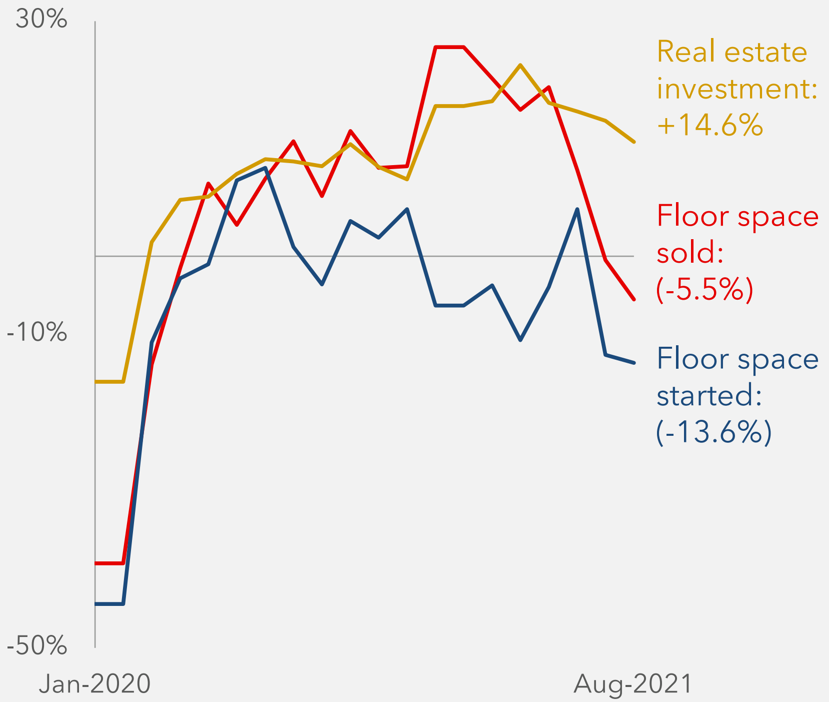


Source: (1) Bloomberg. Data as of October 25, 2021. Source: (2-3) Oxford Economics "Country Economic Forecast – China" (September 28, 2021).

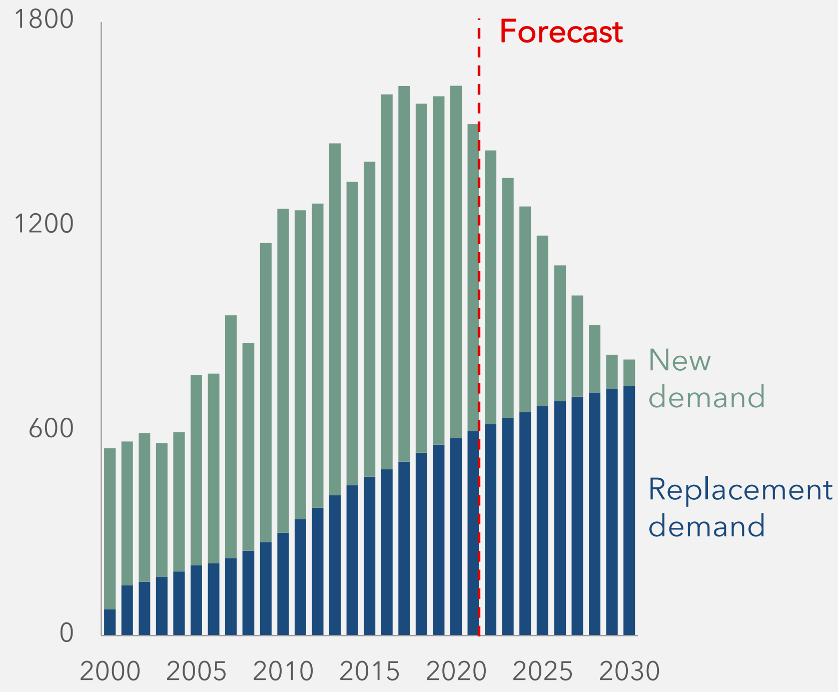
Cooling Real Estate Sector

On top of COVID caution, electricity shortages and production cuts, Evergrande's troubles are likely to intensify the ongoing property sector slowdown. China housing starts and sales have started to weaken considerably with the less volatile fixed asset investment in real estate expected to slow significantly in Q4 2021. Furthermore, as China's urbanization trend slows, future demand for housing is expected to halve from current levels.

% growth from same month in 2019



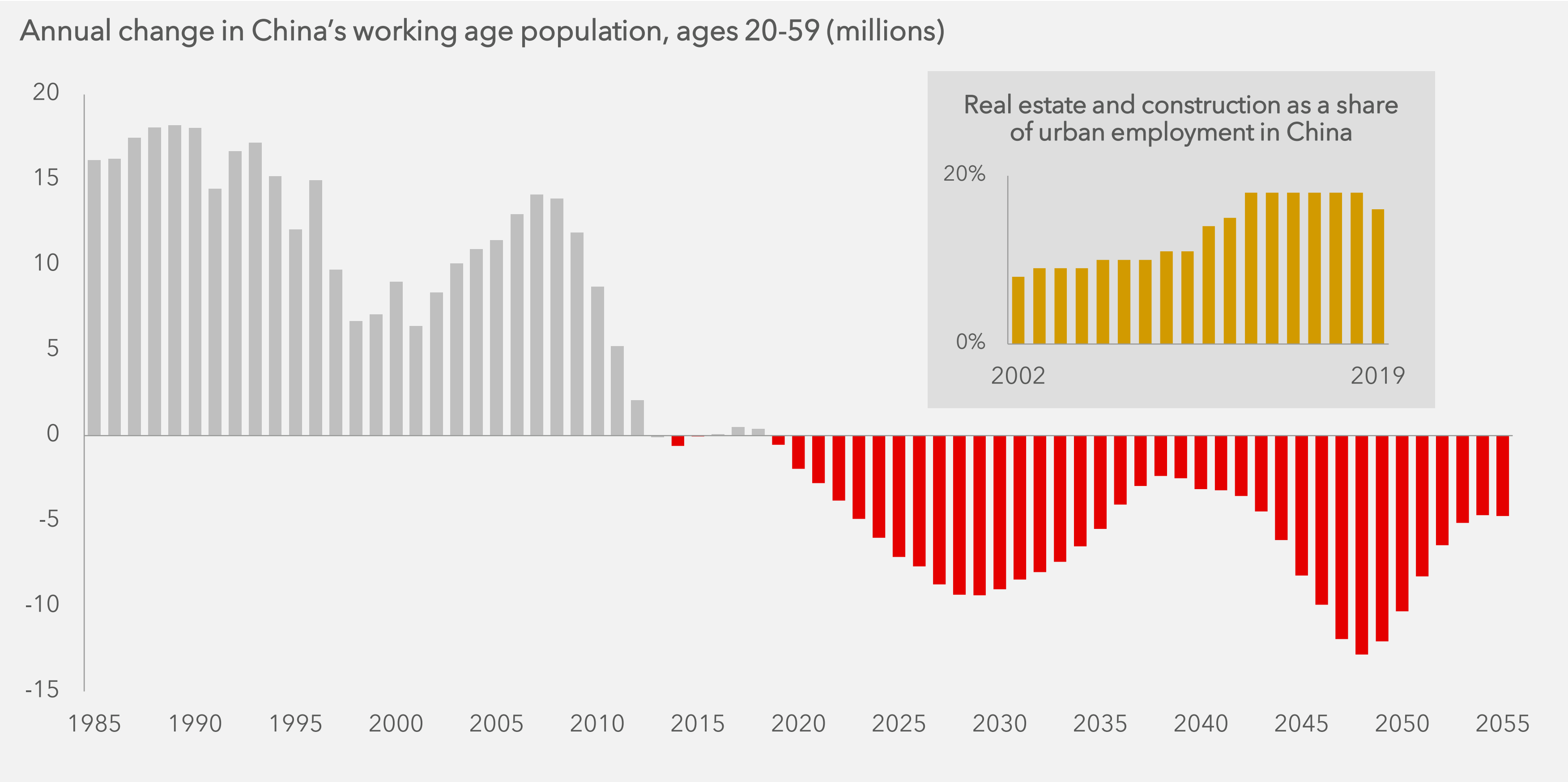
China urban housing demand, million square meters



Source: (1) Oxford Economics "Growth outlook weakens, despite expected policy easing" (October 4, 2021). Floor space sold and started is residential. Real estate investment is residential, nominal. (2) Capital Economics "Property crunch will be followed by lasting decline" (September 15, 2021). Wind Financial. CEIC. Forecast is Capital Economics.

Productivity & Employment Challenges

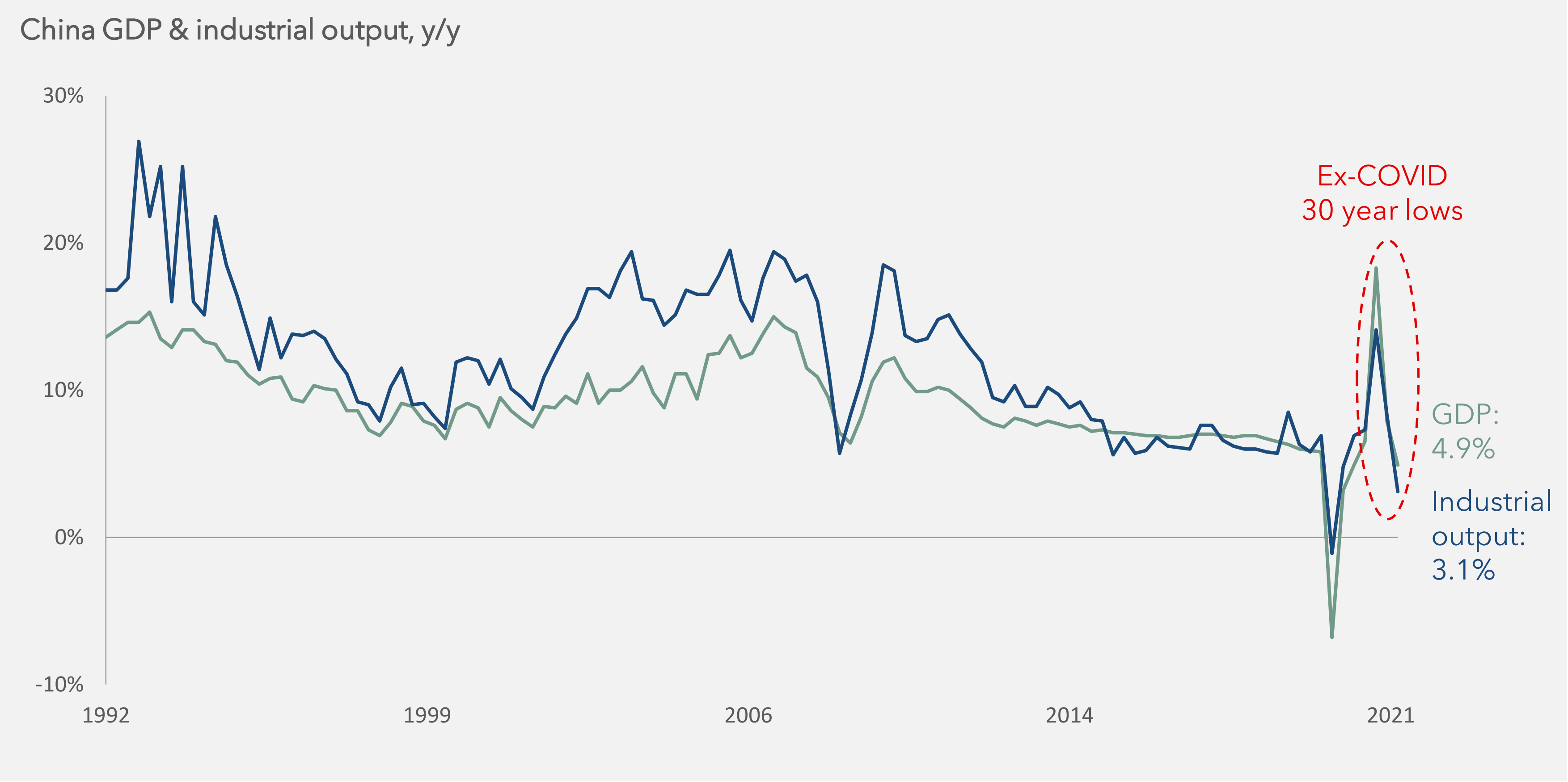
With a declining working age population and over 15% of urban employment tied to the slowing real estate and construction sectors, China will face productivity headwinds going forward



Source: (1) UN World Population Prospects 2019. (2) Bloomberg. "China's Evergrande Debt Crisis is a Stress Test No One Wanted" (September 23, 2021).

Industrial Production Slowing Down

China's most recent GDP growth and industrial production numbers dipped below 5%, the lowest such readings (ex-COVID) in more than 30 years

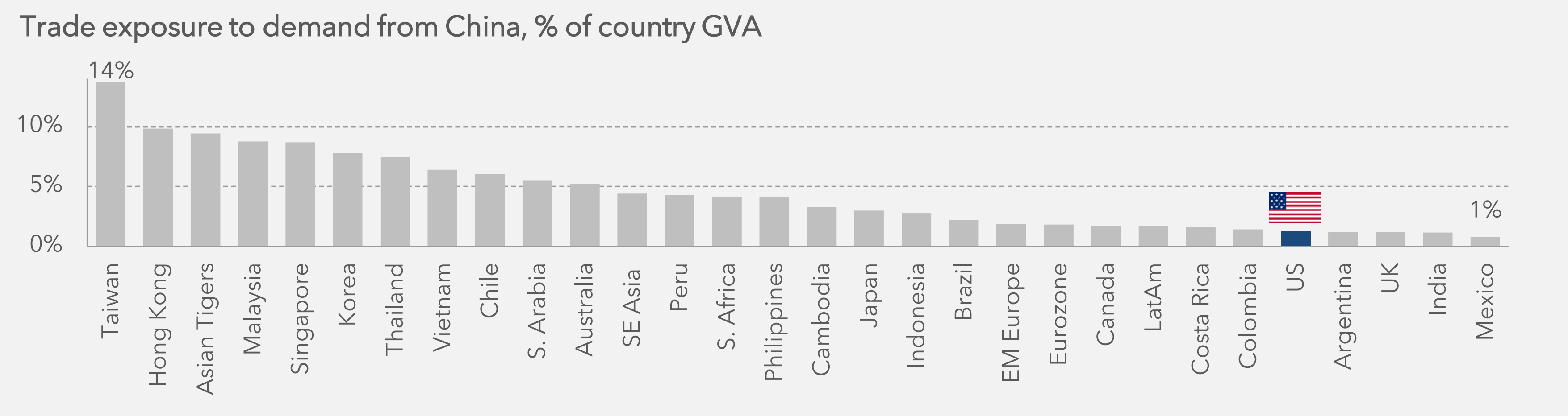


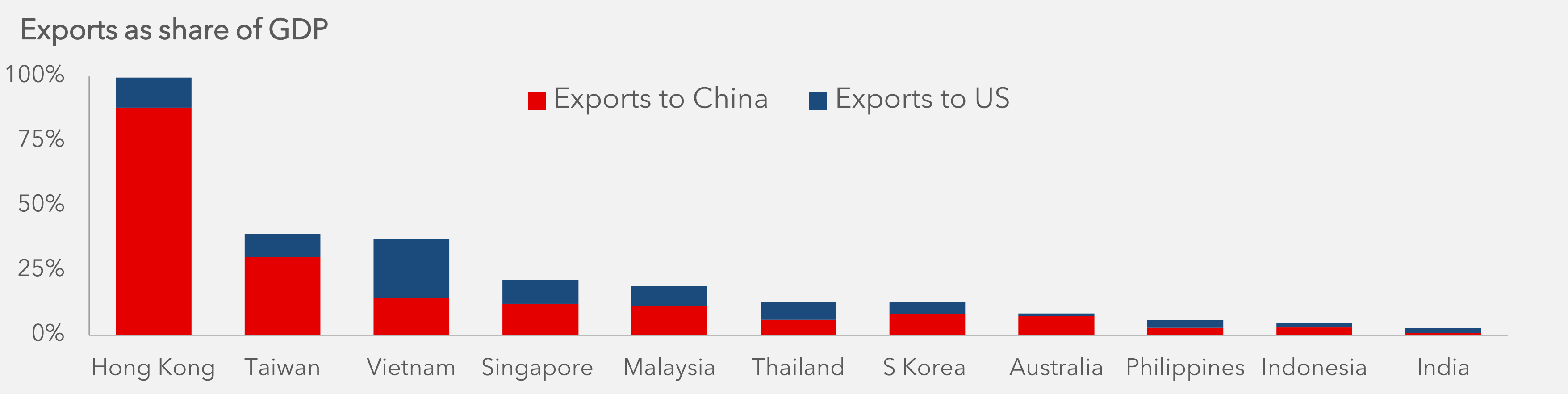
Source: (1) Bloomberg "The Happy Mood Music in Markets Is Ignoring China" (John Authors). Data as of October 25, 2021.

12 Macro Channel Contagion

Emerging Markets More Exposed via Trade Dependence

If the slowdown in China's property sector precipitates a larger slowdown for China's economy, many of China's emerging market neighbors would be impacted through their trade exposures given their reliance on China for end market demand. For the most part, Asian economies have higher demand exposure to China than to the US.

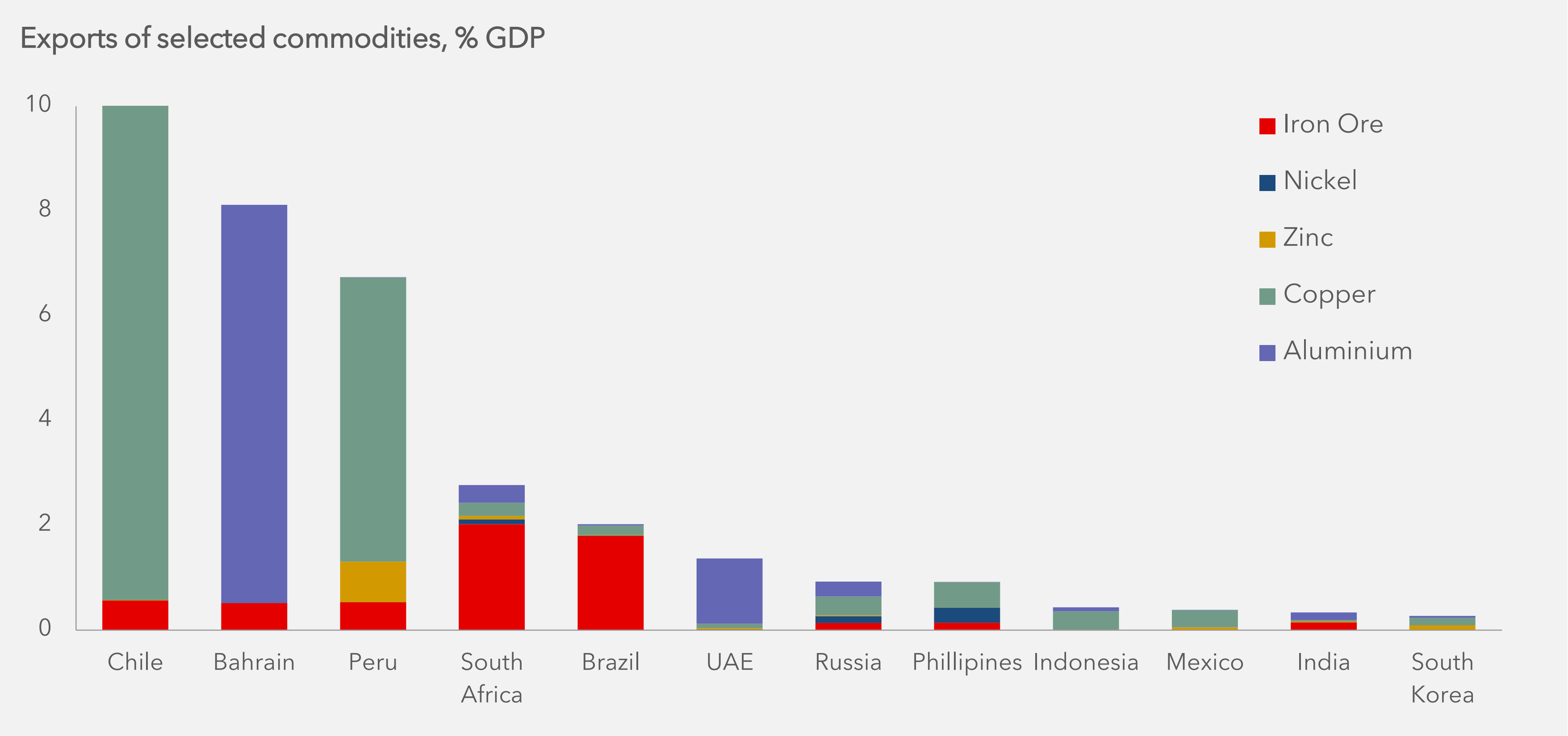




Source: (1 Capital Economic "Thinking Through how we Could be Wrong on Evergrande" (September 22, 2021). OECD. Refinitiv. CEIC. SE Asia excludes Malaysia and Latin America excludes Chile. (2) Oxford Economics "A Rising Renminbi; We See Evergrande Containment" (September 24, 2021).

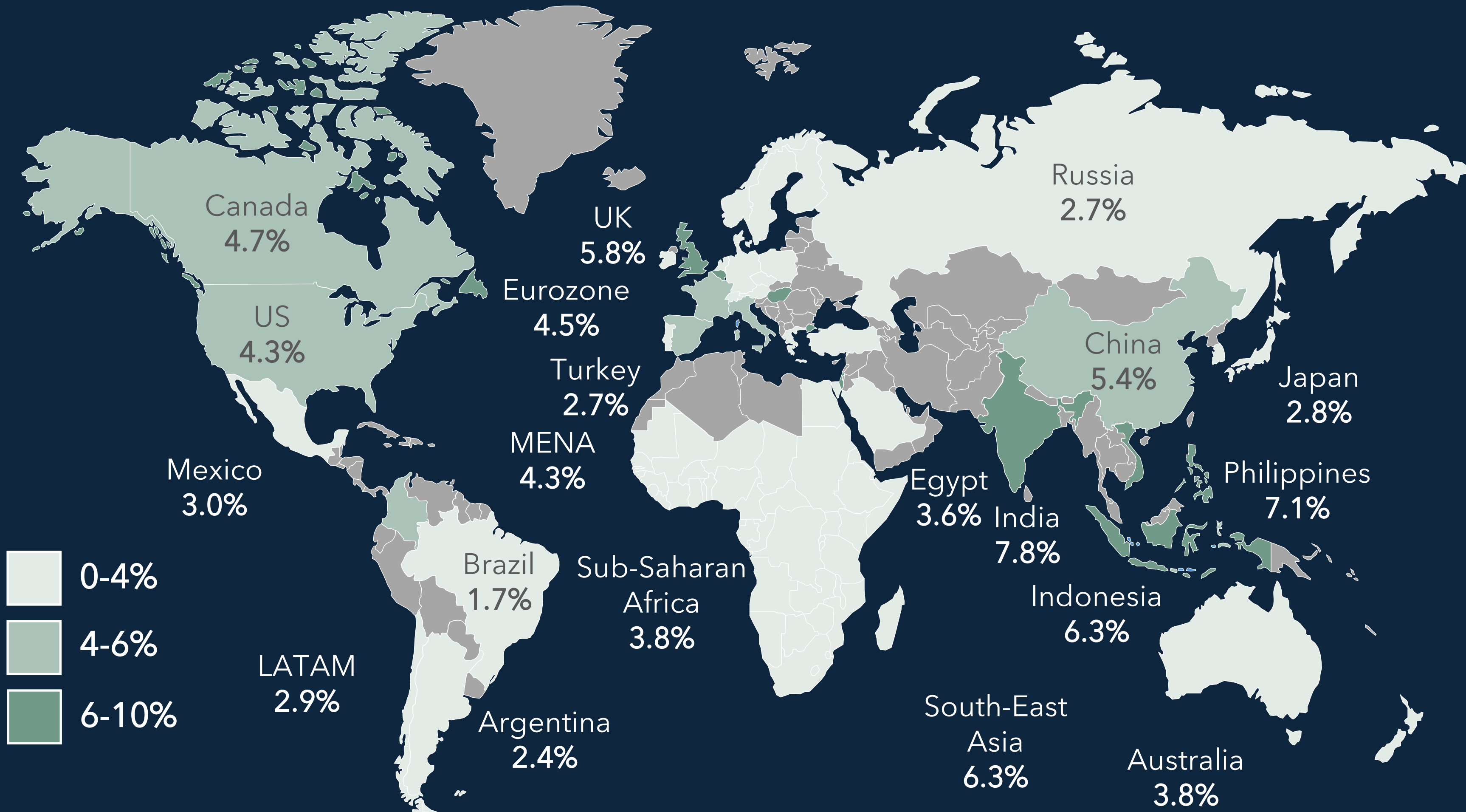
Commodity Exporters Challenged

China is the world's largest consumer of many commodities (roughly 50% of industrial metal consumption). If the construction sector faces a meaningful or prolonged slowdown, demand and prices for metals such as aluminum, zinc, copper, nickel and steel will decline. While the global economy is unlikely to be adversely impacted by falling industrial metal demand, emerging market economies dependent on commodity exports could be hard hit.



Source: (1) Capital Economics "China's long-term property decline: the fallout for EMs" (October 7, 2021). Refinitiv. Data is as of 2020.

2022 Global Growth More Subdued



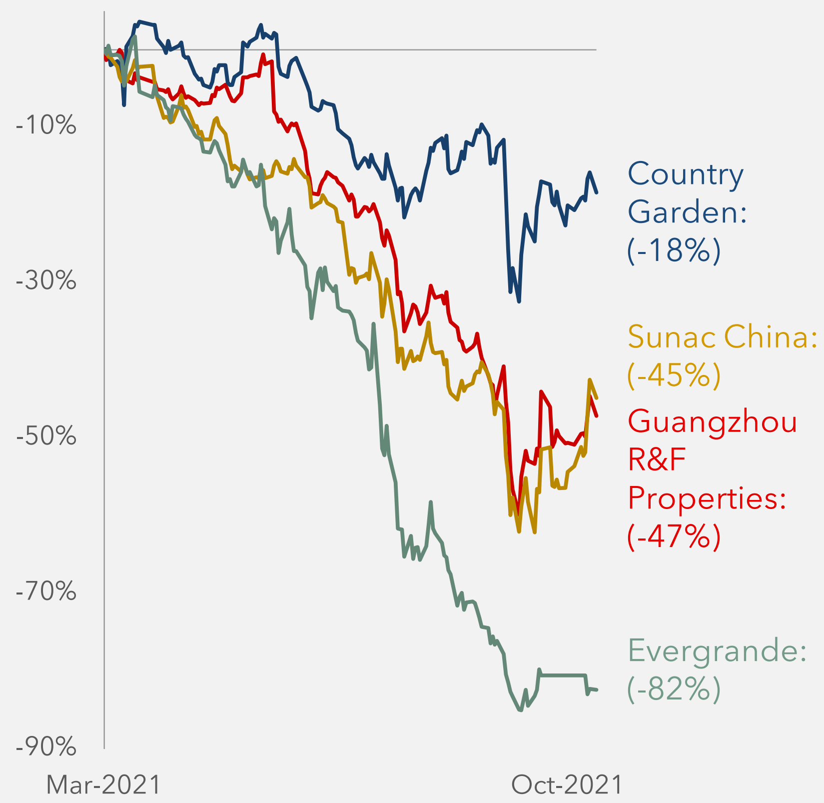
Source: Oxford Economics. Data as of October 25, 2021.

13 Financial Market Contagion

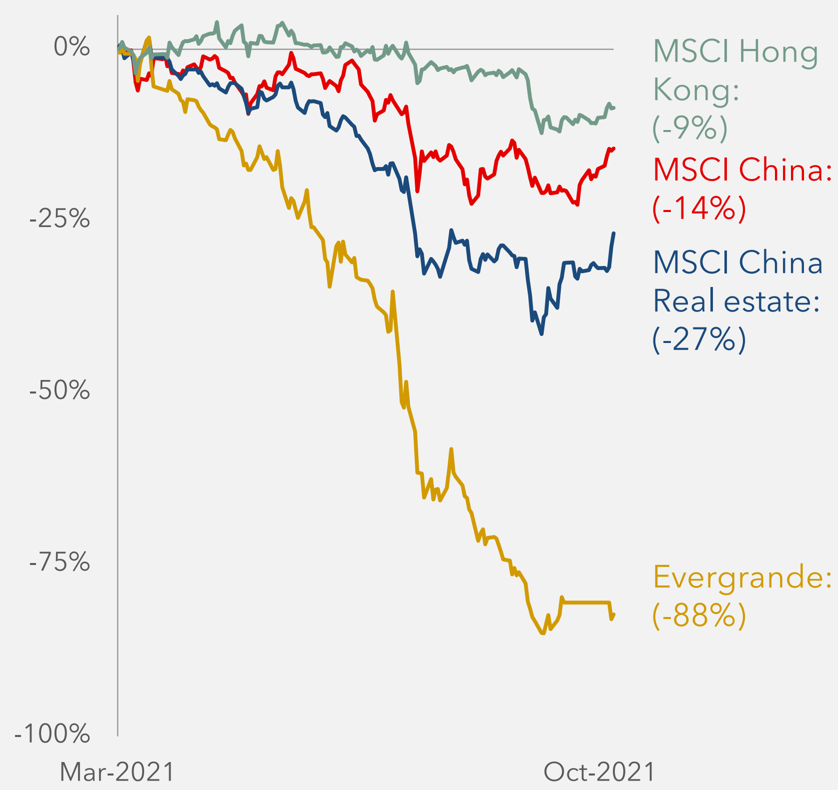
Contagion Highest for Property Sector

While global financial market contagion has been limited, Evergrande's sell off has sparked concerns in other Chinese property developers and the real estate sector

Performance since March 16, 2021



Real estate stocks, performance since March 16, 2021

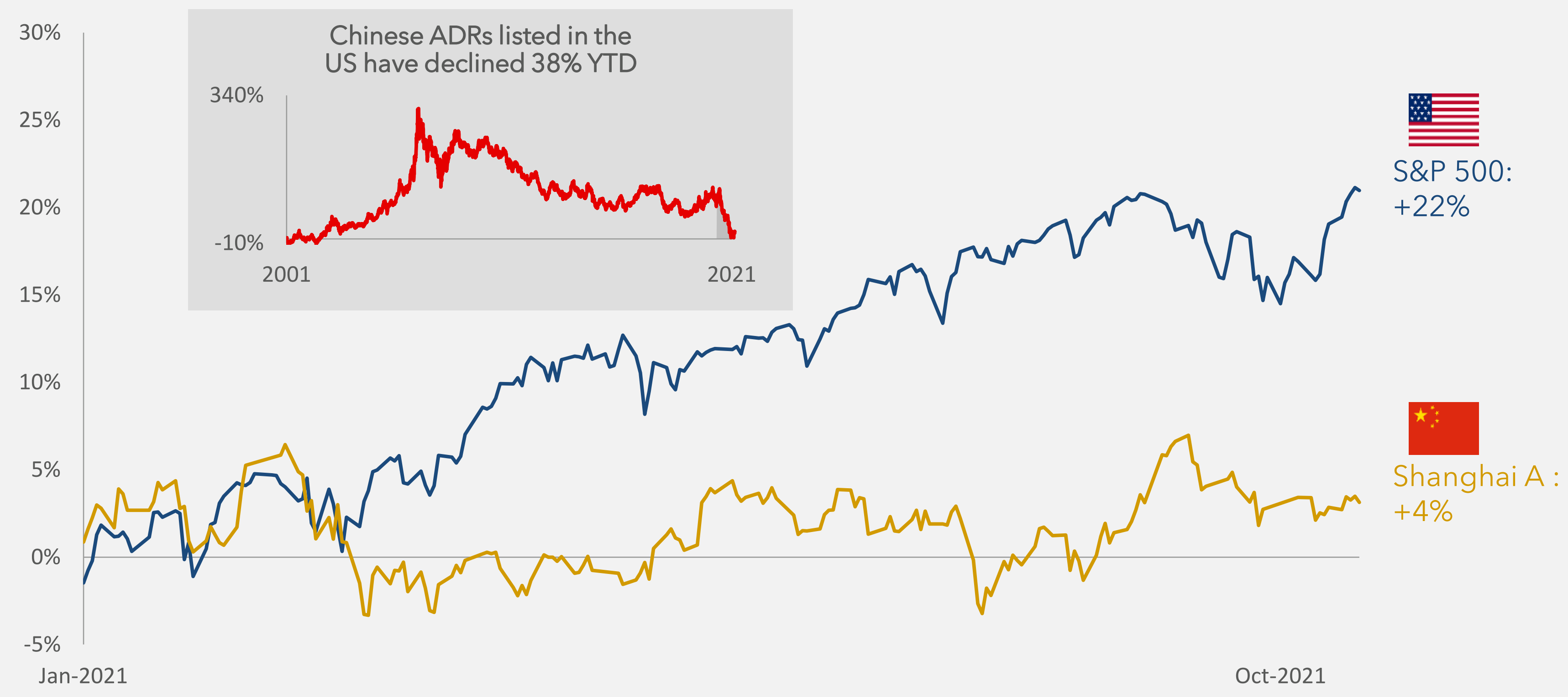


Source: (1-2) Oxford Economics "Evergrande Matters but it's not a Lehman Moment" (September 30, 2021). Bloomberg. Data as of October 25, 2021.

Chinese & US Equities Diverging

Both Chinese equity markets and the American depository receipts (ADRs) of Chinese companies trading in the US have come under pressure in 2021 as Beijing pursues a more "activist" regulatory regime towards several industries including the property, technology, education and gaming sectors

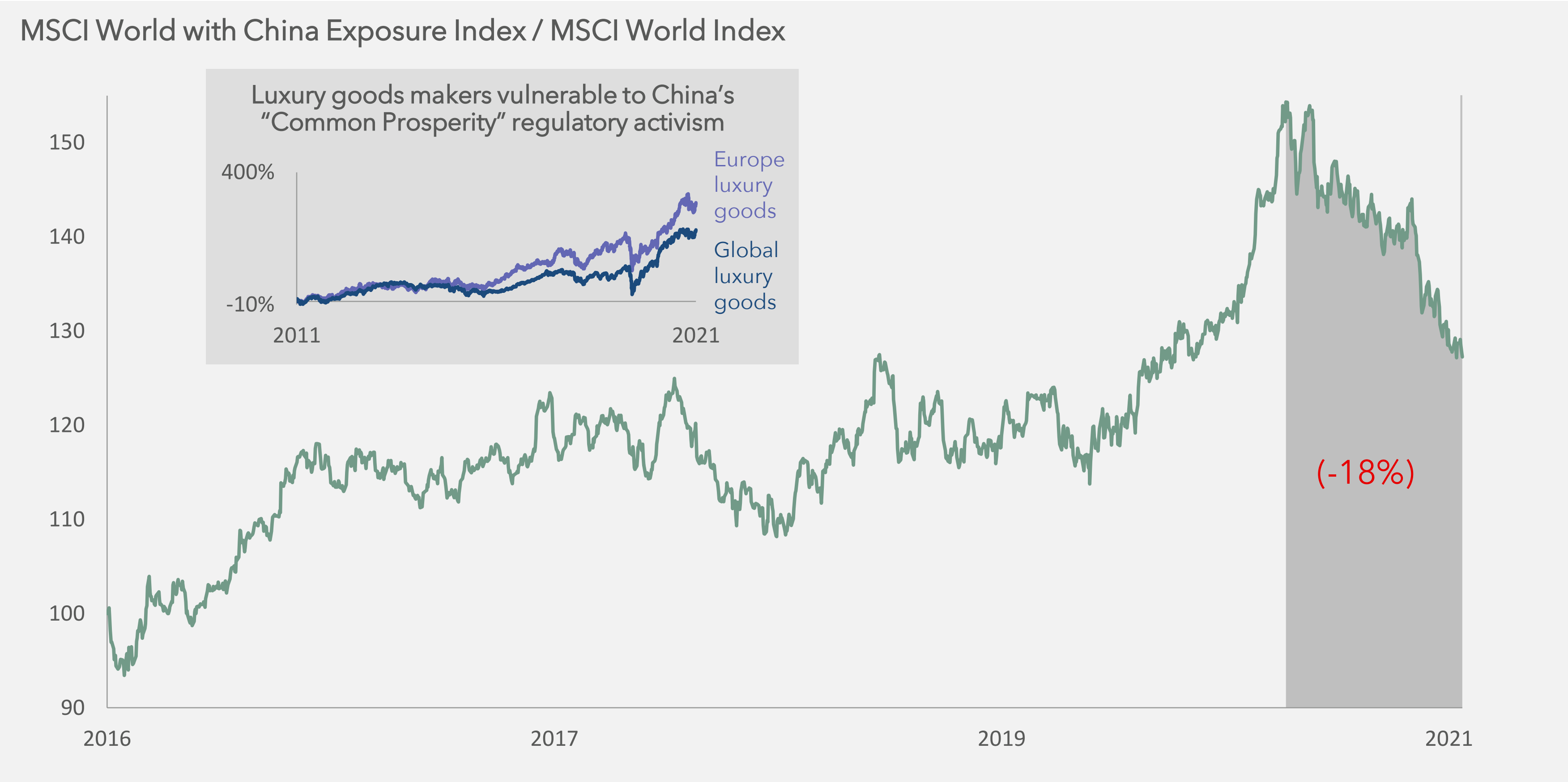
S&P 500 & Shanghai A Share YTD performance



Source: (1-2) Bloomberg "The Happy Mood Music in Markets Is Ignoring China" (John Authors). Data as of October 25, 2021. Chinese ADR index is S&P/BNY Mellon China ADR Index (USD) / S&P 500 Index.

Global Equities with China Exposure Also Impacted

Global investors are reacting to increased governance and political risk in China by pulling back from stocks with larger exposure to the Chinese economy. Similarly, luxury goods makers, which have benefited dramatically from China's rapid growth in the past several years, are now vulnerable to the global impact of China's "Common Prosperity" initiative.



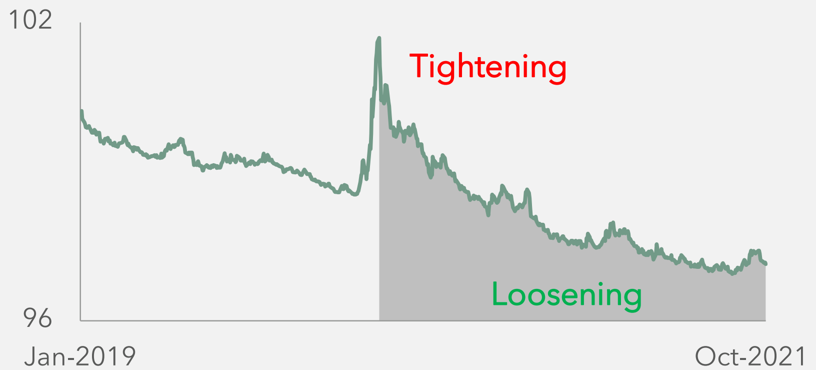
Source: (1-2) Bloomberg "The Happy Mood Music in Markets Is Ignoring China" (John Authors). Data as of October 25, 2021.

Global Financial Conditions Remain Easy

In 2015, fears of a "hard landing" in China caused a dramatic sell-off in global financial markets, though did not have a lasting impact on global economic growth. While there are concerns that a property-led downturn in China could lead to a hard landing, global financial conditions remain easy as markets largely expect damage from Evergrande to be contained.

China financial conditions index

US financial conditions index

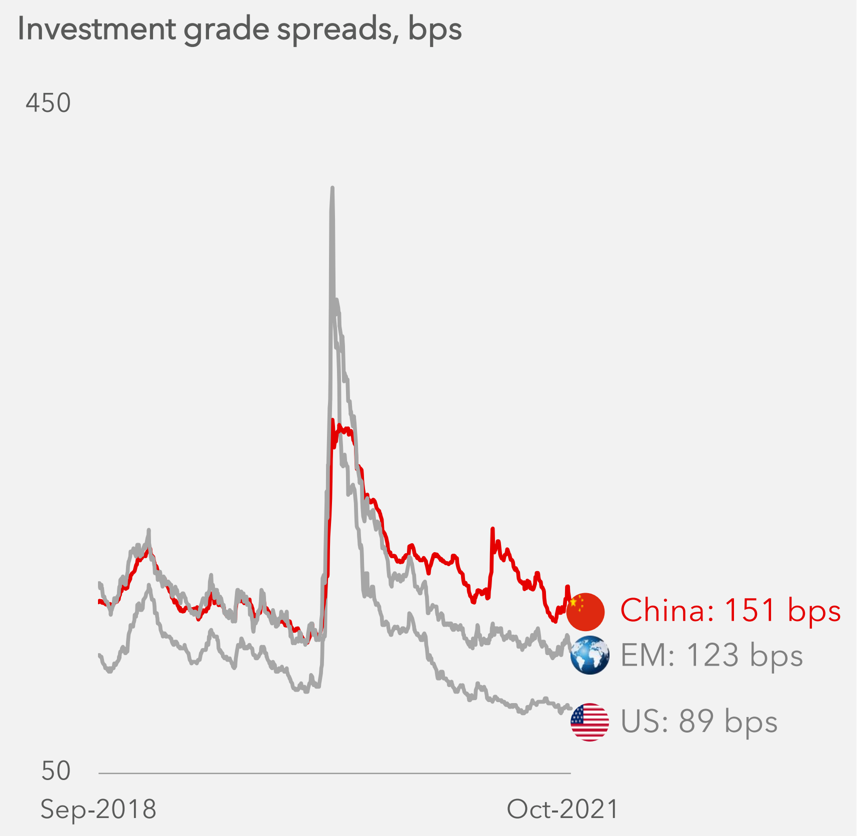


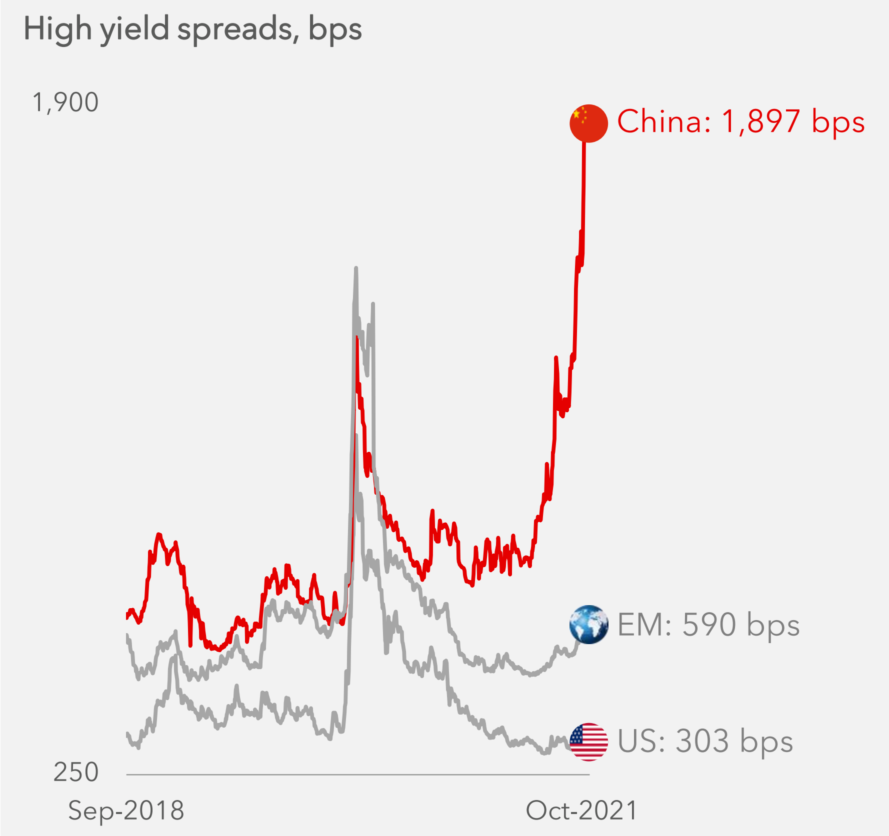
Euro Area financial conditions index

Source: (1-3) Bloomberg. Data as of October 25, 2021. Financial conditions index is Goldman Sachs FCI.

US Credit Markets Resilient to China Concerns

Evergrande is the largest high-yield dollar bond issuer in China, accounting for 16% of outstanding notes. A disorderly restructuring would push the default rate in China's high yield dollar bond market to 14% from 3% in September. However, with only $20bn of USD denominated debt, exposure to Evergrande for broader corporate credit markets has been limited. Spreads in US credit markets are still near their post-GFC tights while EM spreads have remained relatively stable.

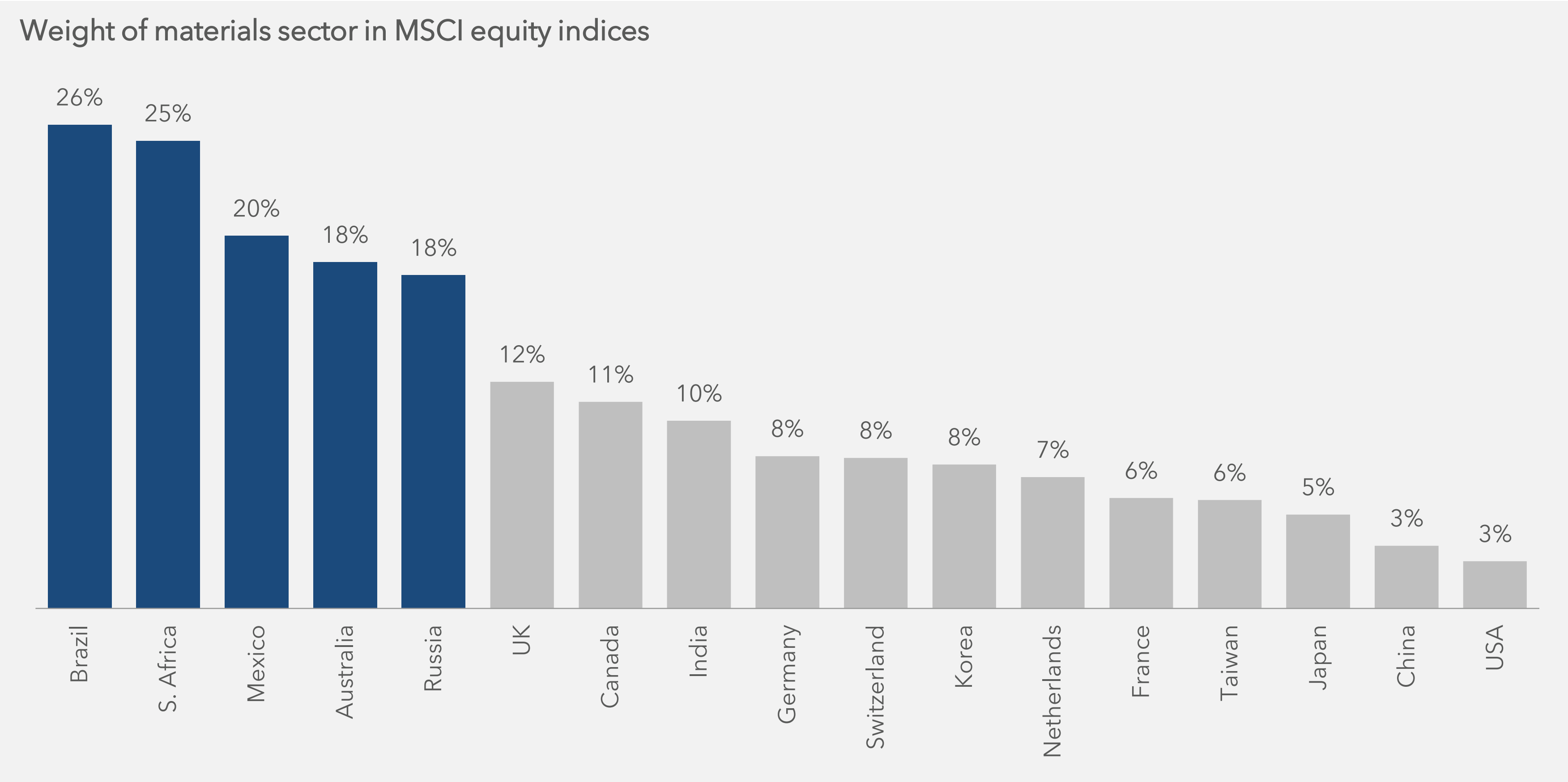




Source: (1) Bloomberg. Data as of October 25, 2021. US IG & HY OAS data is ICE BofA indices. China IG & HY data is Bloomberg Asia Ex-Japan USD Credit China indices. EM IG & HY data is Bloomberg Emerging Markets Average OAS indices.

Equity Markets More Exposed to Materials

Industrial metals have performed well over the last month, mostly due to supply disruptions rather than increased demand. A slowdown in China's property sector will pose major headwinds to markets in which the materials sector has a large weight.



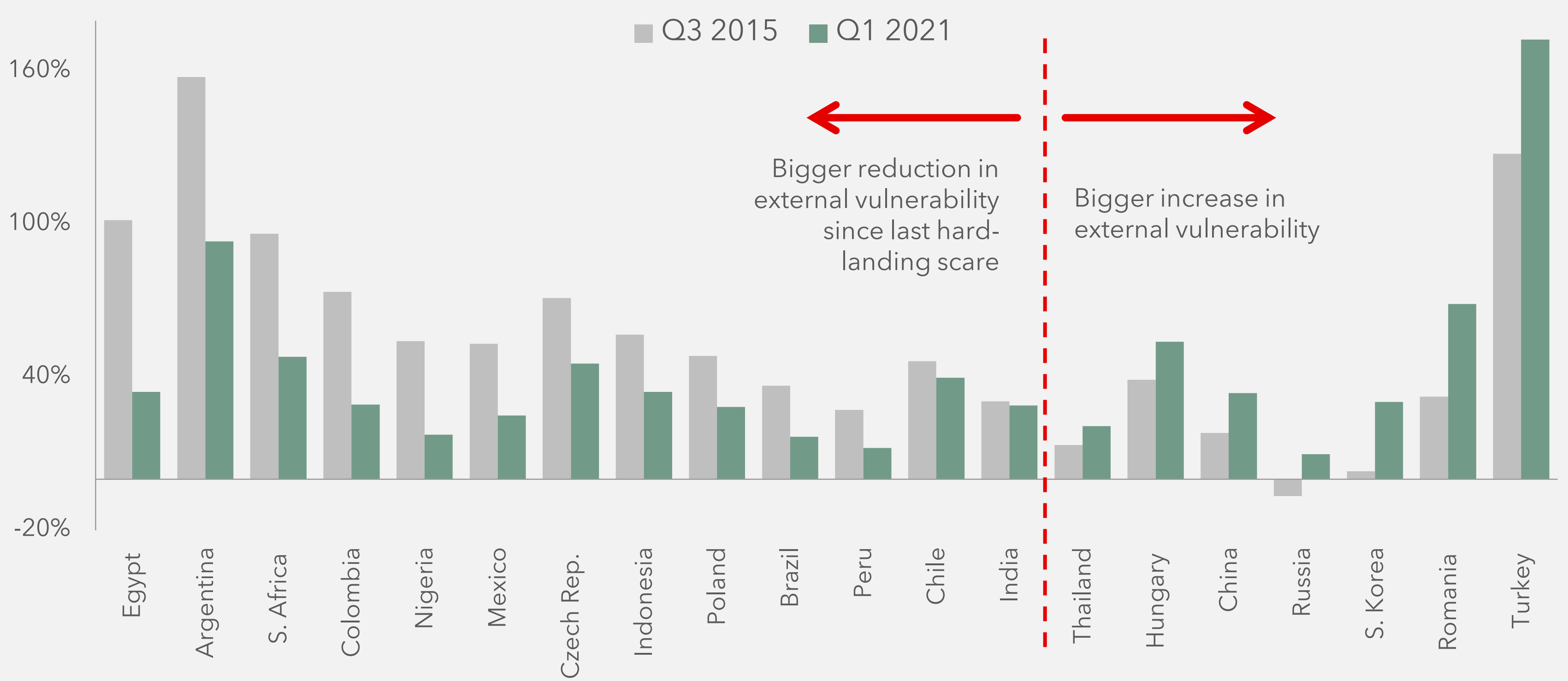
Source: (1) Capital Economics "Developments in China Shake up the Outlook" (September 16, 2021). MSCI.

14 EM Economies & Currencies

EMFX More Vulnerable

Historically, emerging market economies are hit hardest when there is a China slowdown, especially those countries with high current account deficits and large short-term external debts. While there has been an improvement since 2015, large external financing requirements could see higher inflation and interest rates from any Evergrande-induced contagion, in the midst of an already fragile COVID recovery.

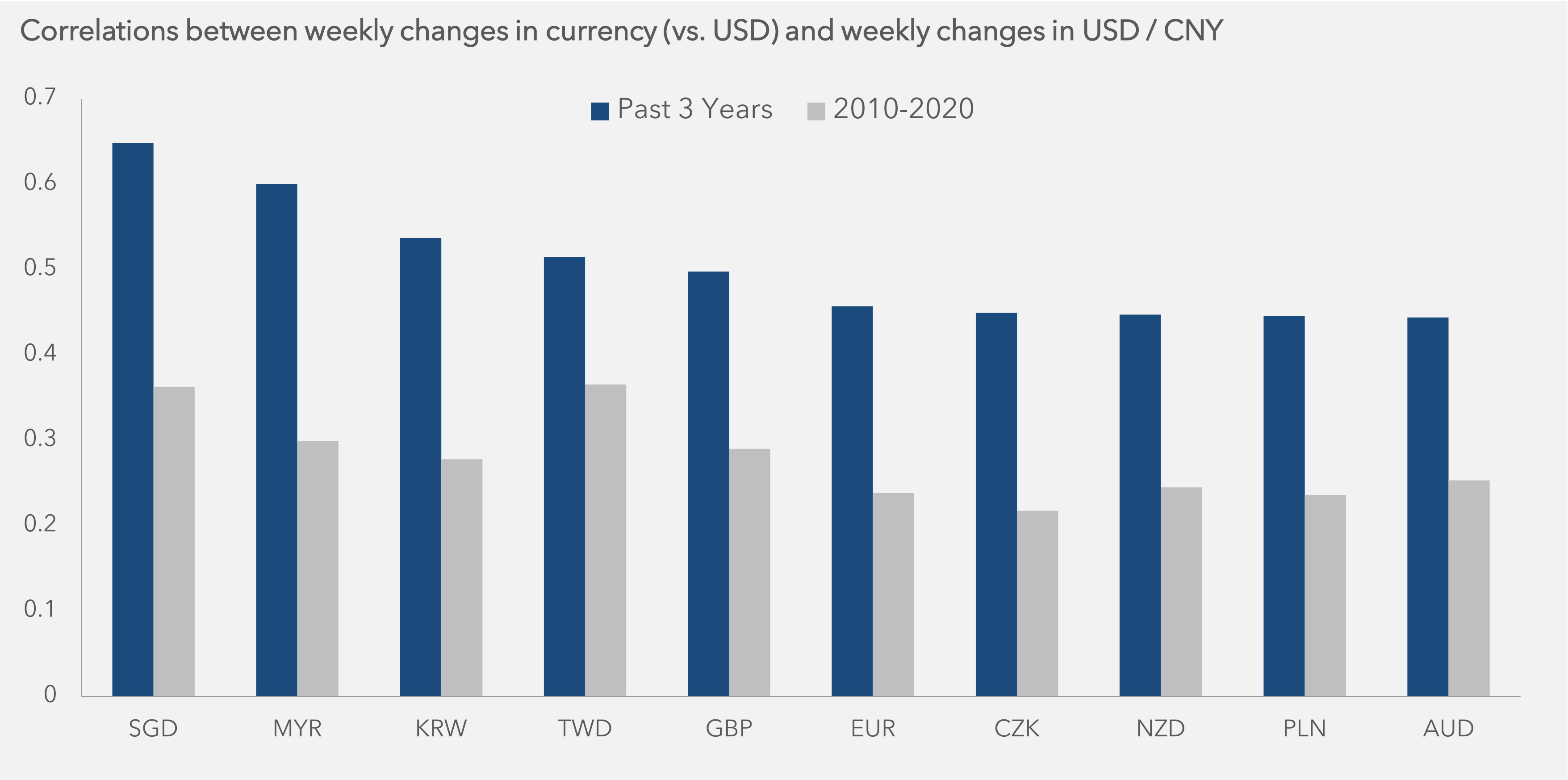
Gross external financing requirements, as % of FX reserves



Source: (1) Capital Economic "Thinking Through how we Could be Wrong on Evergrande" (September 22, 2021). OECD. Refinitiv. CEIC. Gross external financing requirements is current account deficit + external debts with <1 year until maturity.

Currency Spillover Risk

The Yuan has remained relatively stable and is near multi-year highs against the USD; however, weakness in the property sector is likely to weigh on the currency. This in turn can lead to a spillover to other currencies, specifically those of countries with close links to China's economy.

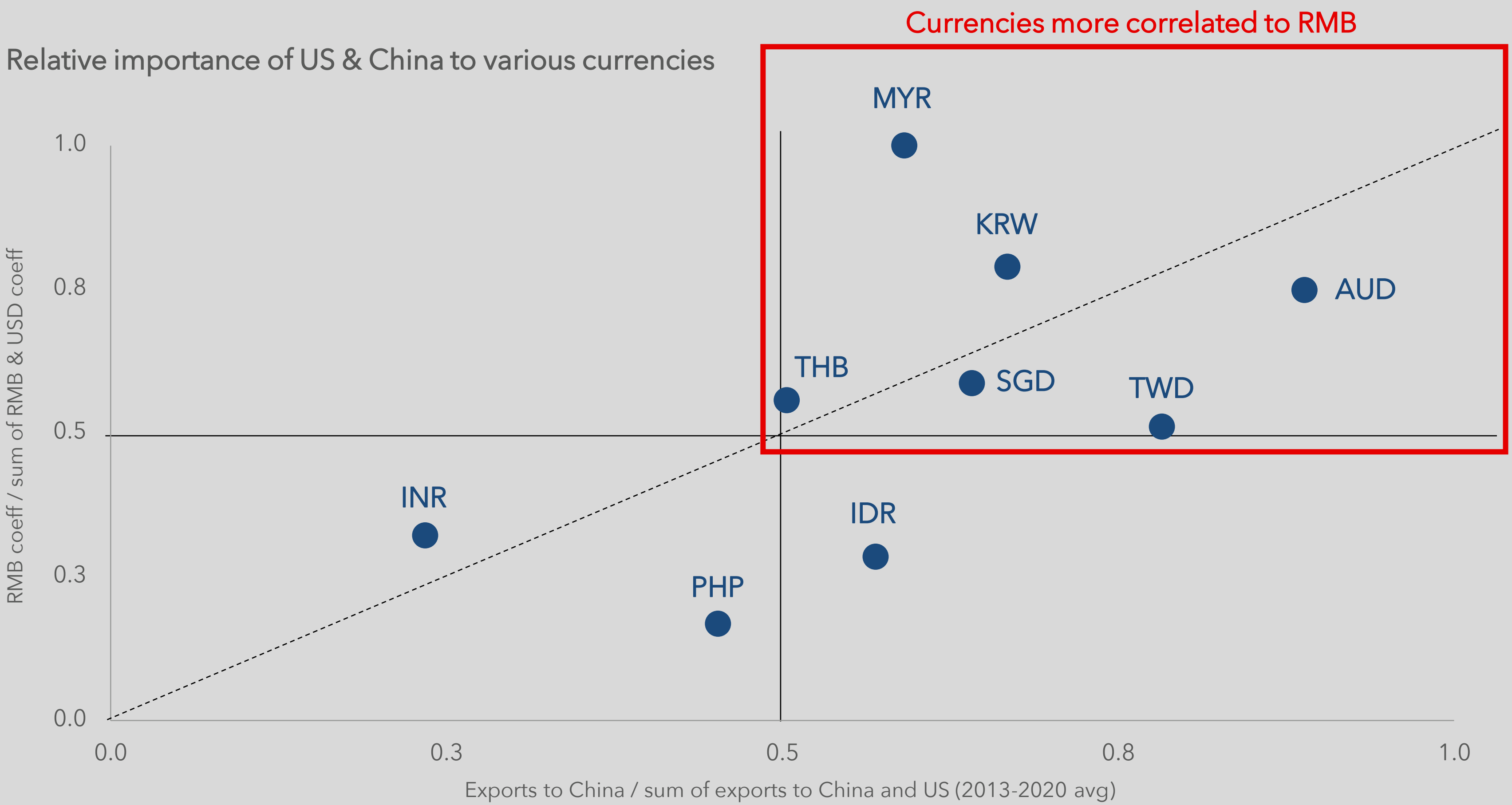


Source: (1) Capital Economics "What China's Economic Slowdown May Mean for FX Markets" (September 16, 2021).

USD vs. RMB Correlations

Currencies from countries with higher trade exposure to China are impacted more by RMB moves than by USD moves

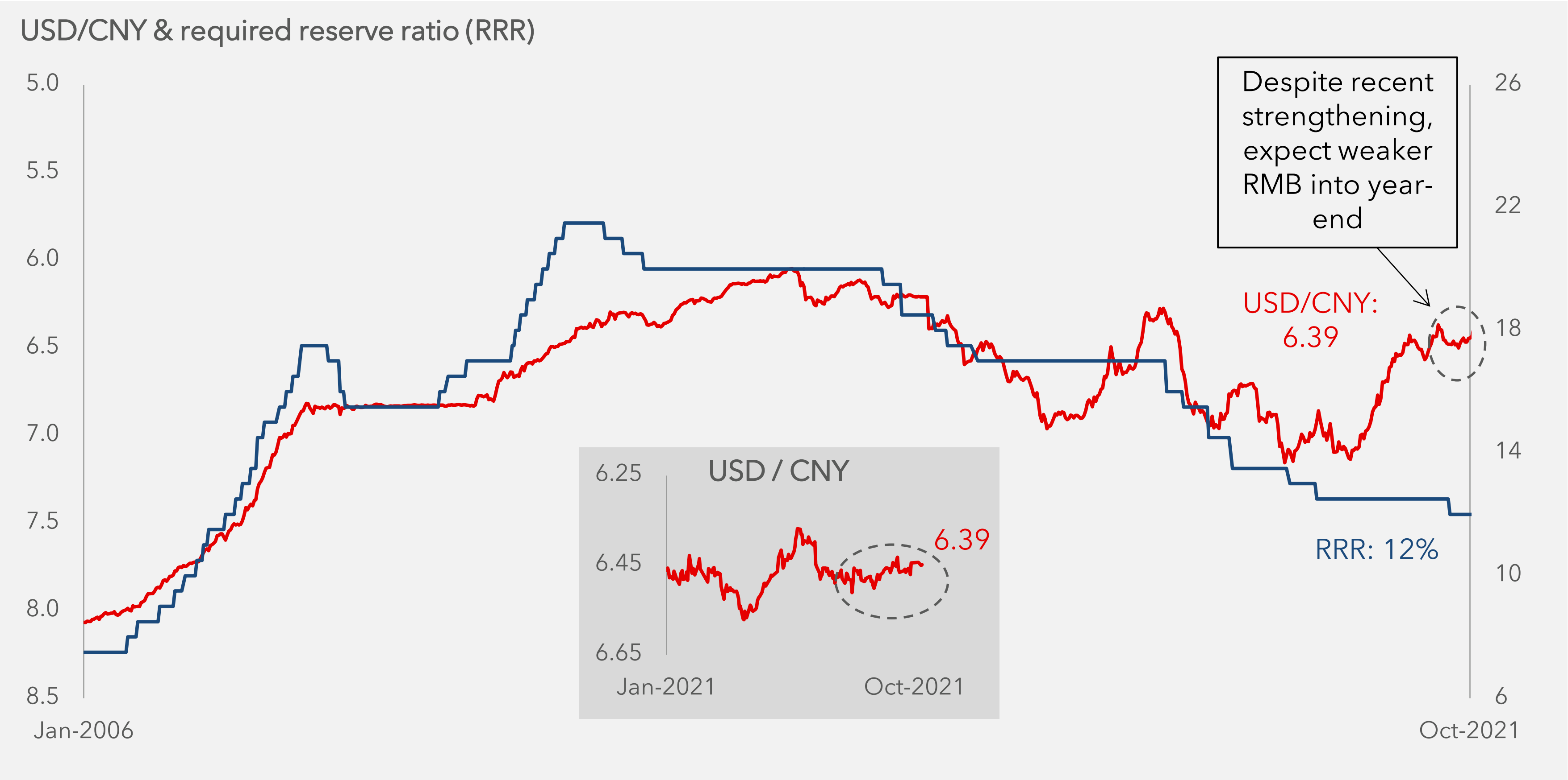
Relative importance of US & China to various currencies



Source: (1) Oxford Economics "A Rising Renminbi; We See Evergrande Containment" (September 24, 2021).

China Currency Weakness Expected

China's currency has thus far been relatively stable through the property sector downturn, though cuts to China's RRR have preceded periods of RMB weakness, historically. Given China's July RRR reduction, and an additional cut expected in the months ahead, accompanied by a decelerating economy, MUFG expects RMB currency weakness into year-end and early 2022.



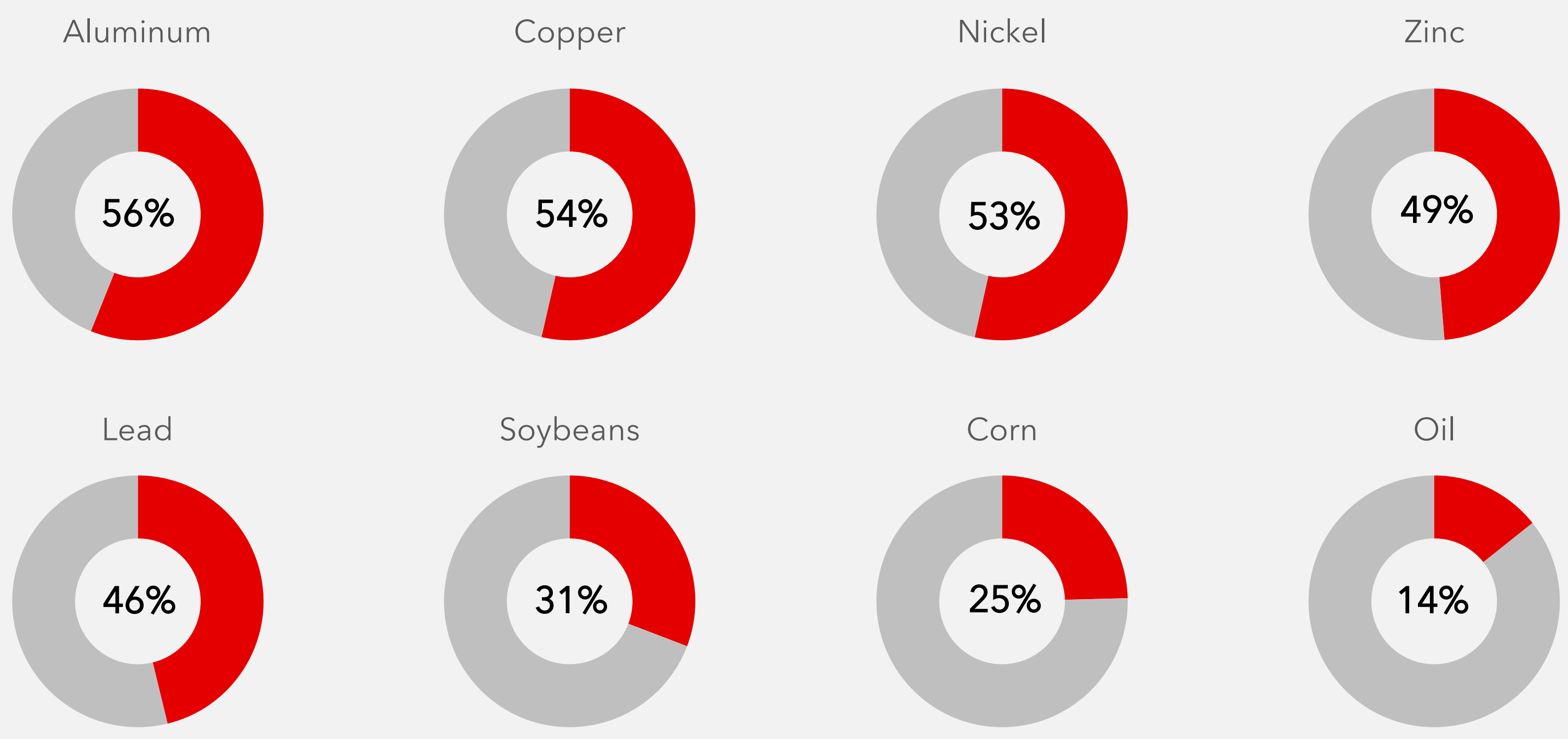
Source: (1) Capital Economics "What china's Economic Slowdown May Mean for FX Markets" (September 16, 2021). Bloomberg. Data as of October 25, 2021.

15 Global Commodities Complex

China's Outsized Demand for Global Commodities

The economic slowdown in China over the coming years will weigh heavily on consumption of industrial commodities. While this will have negative effects for those economies that produce these commodities, low prices will have positive effects for industrial metal consumers.

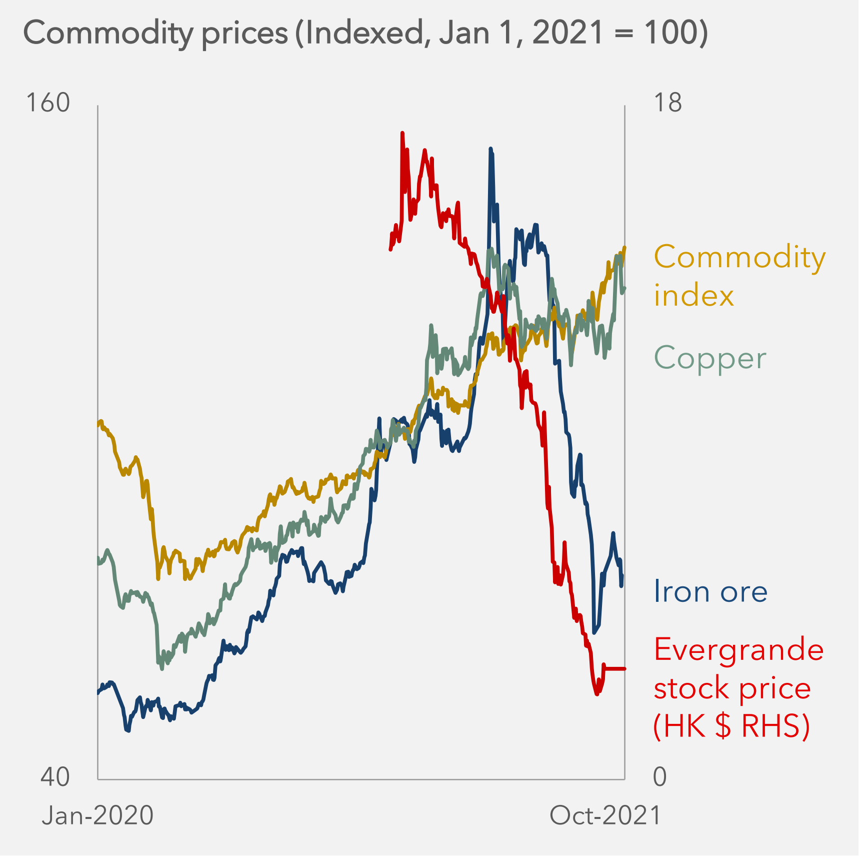
China's share of global end-use demand for major commodities



Source: (1) Capital Economics "Developments in China Shake up the Outlook" (September 16, 2021). Refinitiv. CEIC. Data as of 2019.

Commodities in "Hard Landing" Scenario

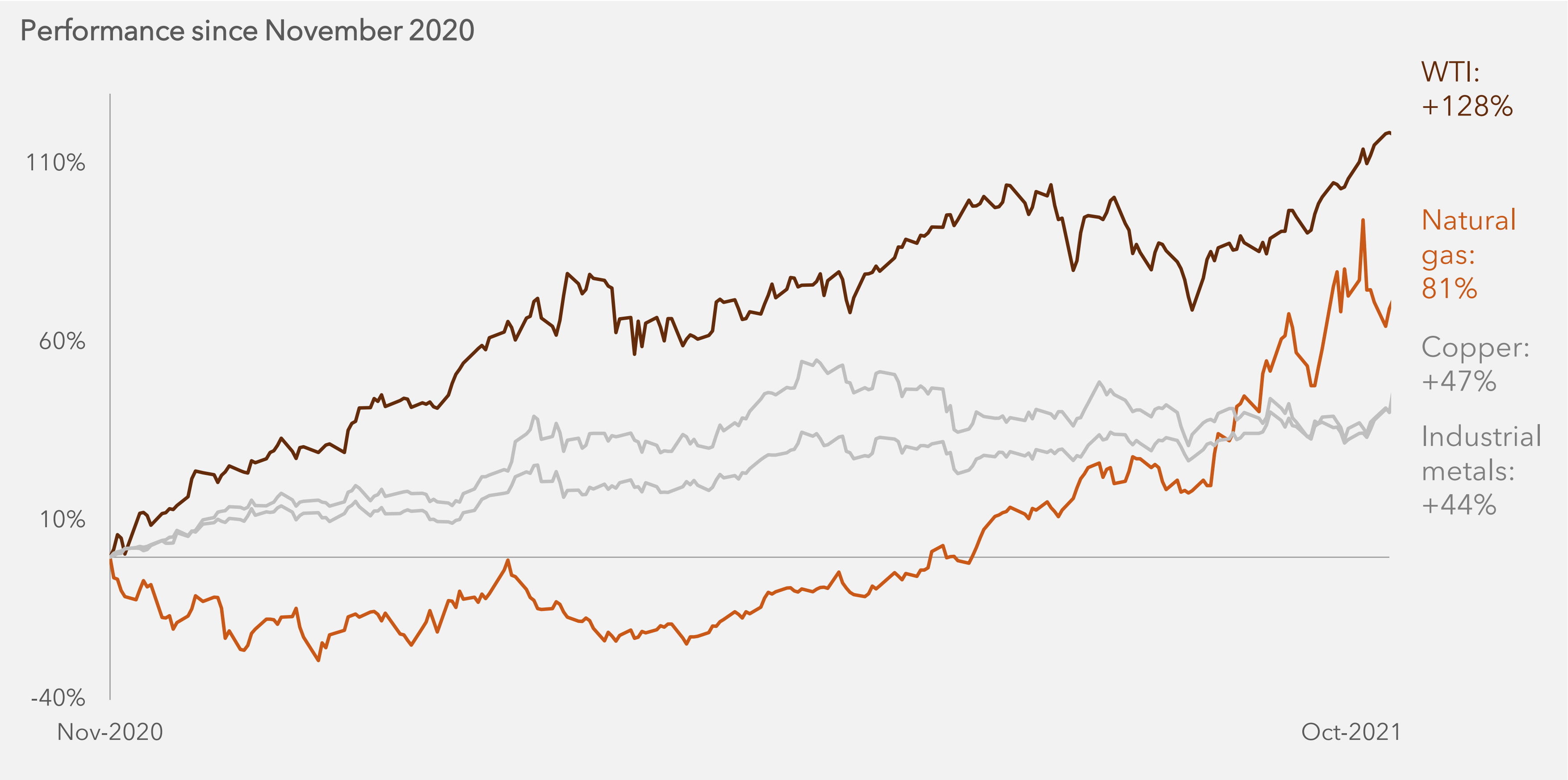
Global commodities generally, and industrial metals in particular, are highly exposed to China's economy. While China's property sector crisis has thus far been more evident in industrial metals than energy prices, the entire commodities complex would be vulnerable in a "China hard landing" scenario.



Source: (1) Capital Economics "Commodities Overview." Data updated as of October 8, 2021. Commodity prices is S&P GSCI Commodity Index. (2) Oxford Economics "Evergrande Matters but it's not a Lehman Moment" (September 30, 2021). Bloomberg. Data as of October 25, 2021. Commodity index is Bloomberg Commodity Index.

Historic Energy-Metals Price Divergence

Supply chain bottlenecks are causing energy prices to rise at a time when China property sector woes are putting downward pressure on industrial metals, creating the largest price divergence in 20 years



Source: (1) Bloomberg. Data as of October 25, 2021. WSJ.

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Tom has over 25 years of Investment Banking experience in New York, London, Hong Kong, and San Francisco. Over the last 15 years, Tom created and built the Capital Markets Strategy role, advising corporate C-Suite executives (Boards, CEOs, CFOs, and Treasurers) on the pervasive macro forces driving markets. Tom also presents at dozens of corporate events each year including Board meetings, CEO ExCo sessions, CFO and Treasury off-sites, corporate leadership events and conferences.

Tom's educational background includes a year of study at Oxford University from 1991 - 1992, a Bachelor of Arts in Political Science from Holy Cross College in 1993, and a MBA from Kellogg Business School, Northwestern University in 2000.

Tom resides in New Canaan, CT with his wife and four sons, where he coaches youth basketball and serves on the Board of Trustees of the New Canaan Library, as well as the Board of the New Canaan Football (Soccer) Club.

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Hailey has a decade of Wall Street experience, including three years as a Consumer Sector Specialist in Equity Sales and seven years as a Capital Markets Strategist. Hailey is also a member of MUFG's Inclusion & Diversity Council and has devoted years to participating in and developing Wall Street recruiting programs.

Hailey graduated with honors from the University of Michigan's Ross School of Business with a BBA and a minor in International Studies.

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Stephanie has spent over three years as a Capital Markets Strategist. At her prior firm, Stephanie was a part of the Americas Women's Network Junior Council and was an active member of the University of Michigan recruiting team.

Stephanie graduated with honors from the University of Michigan's Ross School of Business with a BBA .

MUFG's Capital Markets Strategy Team

The MUFG Capital Markets Strategy team provides monthly publications and weekly policy notes, presenting to Boards and C-Suite executives, on a broad range of transformative themes driving the FX, rates and credit markets including: the COVID-19 recovery, ESG's acceleration, tax code policy changes, US-China decoupling, corporate strategy, geopolitical risk and central bank monetary policy.

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