亚洲经济分析

中国投资占GDP比重步入结构性下行通道 (摘要)

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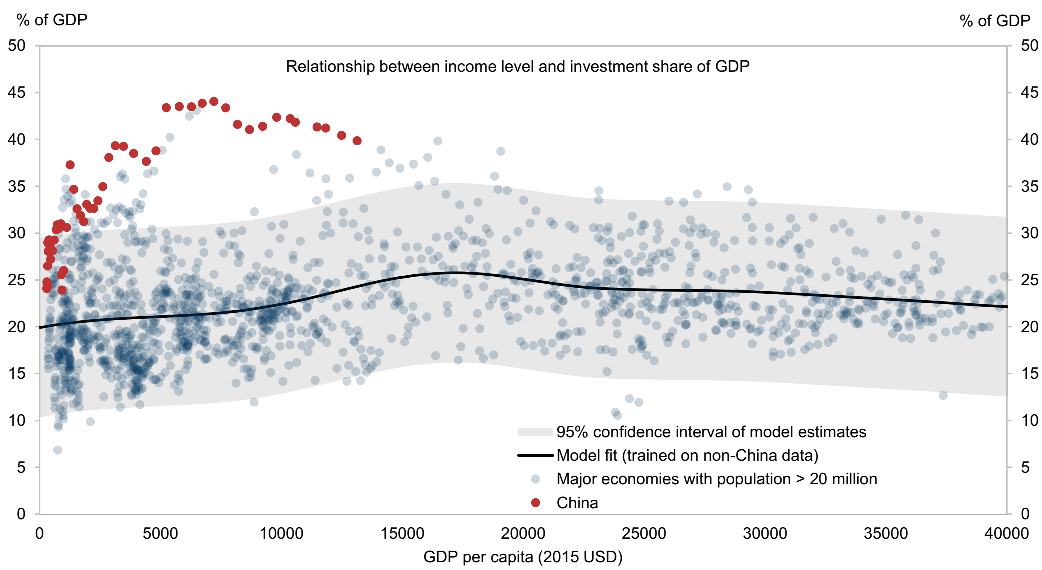
- 中国投资占GDP的比重近二十年来保持在40%以上，持续时间远超许多预测人士的预期。然而，我们认为支撑这一高占比的结构性力量正在减弱，表明长期以来投资异常强劲的局面正在转变。
- 从自上而下的角度看，中国的资本存量相对于大多数其他经济体已不再处于低位，其债务负担随着时间的推移急剧上升（债务与GDP之比超300%），且资本回报率已经下降。综合来看，这些趋势表明继续依赖债务驱动投资的理由正日益减弱。从国际经验看，特别是参考其他东亚经济体的发展轨迹，投资占GDP比重最终往往会趋于回落。
- 从自下而上的角度看，经过数十年的快速发展，中国大部分的交通和环保基础设施已较为完善，而人口减少、出生率显著下降等人口发展趋势则意味着对教育等部分社会基础设施的需求减弱。尽管通信（包括AI相关投资）、能源和医疗保健领域投资仍有增长空间，我们认为这不足以抵消其他领域基础设施需求趋于成熟所带来的更广泛拖累。
- 政策对旧有的投资驱动型增长模式的支持也有所减弱。尽管这一转变可能在十多年前已经开始，但围绕“全国统一大市场”和“反内卷”的政策表述（旨在应对一些行业的产能过剩问题），以及近年来尽管面临较大的增长阻力，仍致力于收缩房地产行业规模以及不再出台大规模的刺激政策，均指向了根本性改变。诚然，当经济增长未能达到目标时，决策层仍会适度及暂时加快政府主导投资，为经济托底。但对于过去数十年来债务驱动型投资热潮的偏好已不及从前。
- 在我们的基准预测下，中国投资占GDP的比重将从2025年的40%降至2035年的34%。如果在投资需求放缓的同时储蓄率仍然较高，我们认为国内利率可能会长期维持低位、出口应保持强劲，而人民币兑美元及其他主要货币应将继续升值。

*全文翻译随后提供

Investment Share of GDP on Structurally Declining Path

China’ s investment share of GDP has been among the highest in the world. It has defied many forecasters’ previous predictions, remaining above 40% for nearly two decades (图表 1). However, we think the underlying dynamics have started to change. In this note, we discuss top-down, bottom-up, and policy reasons why China’ s investment share of GDP should gradually decline in the coming years. In our baseline, it falls from 40% in 2025 to 34% in 2035. With the savings rate still high and investment demand softening, interest rates are likely to remain much lower in China than in other countries, search-for-yield motives among domestic savers should persist, exports should stay strong, and the RMB should appreciate against the USD and other major currencies in response to China’ s growing trade surpluses.

图表 1: China’ s investment share of GDP has been much higher than other countries for a long time



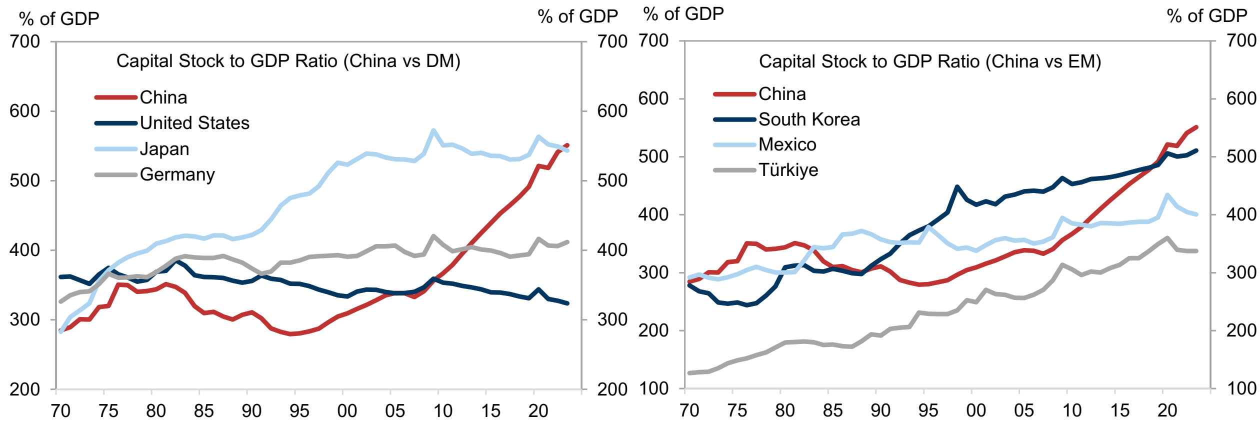
We use the Generalized Additive Model (GAM) in fitting the non-linear relationship between GDP per capita and investment share of GDP using data from 1970 to 2024.

资料来源：Haver Analytics, 高盛全球投资研究部

A Top-Down View

If a country starts with a low capital stock, investment can remain strong for a long period as the capital stock is built up. This was partly true for China in the 1990s relative to both DM and EM economies, helping drive strong investment growth and rapid capital stock accumulation in the 2000s and 2010s (图表 2). By now, however, China’ s capital stock-to-GDP ratio has surpassed that of most DM and EM economies. In other words, China’ s catch-up phase of rapid capital accumulation appears to be over.

图表 2: China’ s capital stock-to-GDP ratio was low in the 1990s but has now surpassed that of most DM and EM economies



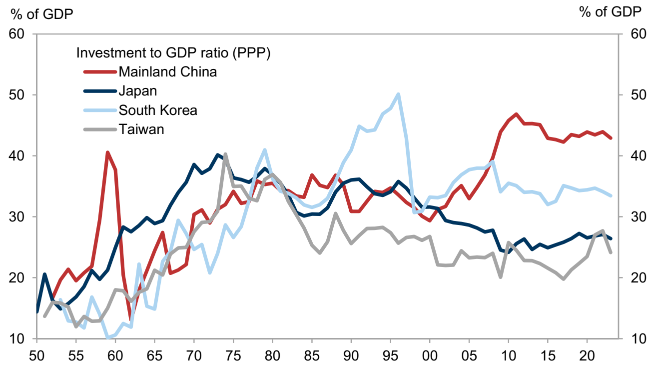
资料来源：PWT, 高盛全球投资研究部

Other East Asian economies such as Japan, South Korea, and Taiwan preceded Mainland China in raising investment and expanding manufacturing capacity. In the 1970s, the investment share of GDP in Japan and Taiwan peaked at around 40% (图表 3). Today, it is close to 25% in both. In South Korea, the investment share of GDP remained very high—between 40% and 50%—in the 1990s, but has stabilized at slightly below 35% in recent years. If Mainland China follows the experience of these East Asian economies, its investment share of GDP should also decline in the coming years and decades.

Another top-down reason for slower investment growth in China is its high debt-to-GDP ratio and low return on capital. PBOC data show that China’ s non-financial debt-to-GDP ratio rose from 139% in 2008Q4, before the RMB 4tn infrastructure stimulus, to 209% in 2015Q1, before the shantytown redevelopment stimulus, and to 309% in 2026Q1. 图表 4 shows that the return to capital in China has declined significantly since the 1990s.[1] Moreover, before 2009, each additional yuan of GDP was associated with an average 1.5 yuan increase in debt; over the past three years, it has taken 5.5 yuan of additional debt to generate one yuan of GDP growth. High debt levels and low returns imply less opportunities for productive investment going forward.

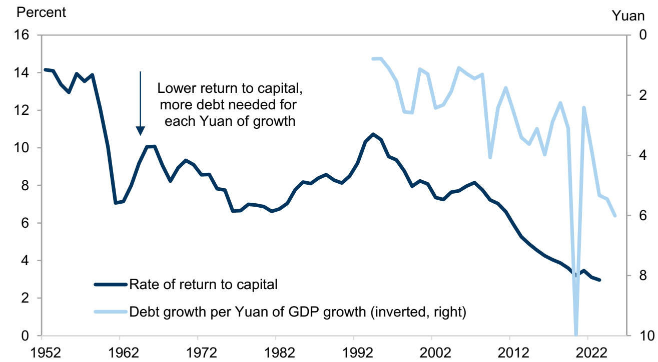
1 We use a simplified version of Chong-En Bai, Chang-Tai Hsieh, and Yingyi Qian (2006), “The Return to Capital in China”, Brookings Papers on Economic Activity in our calculation. The precise levels of the estimates are sensitive to capital depreciation rate assumptions, but the broad trend is not.

图表 3: Investment shares of GDP in Japan, South Korea and Taiwan eventually declined



资料来源：PWT, 高盛全球投资研究部

图表 4: The rate of return to capital has declined in China since the 1990s



资料来源：Federal Reserve Bank of St. Louis, PWT, Haver Analytics, 高盛全球投资研究部

A Bottom-Up Look

After three decades of rapid buildout, China’s infrastructure has become among the most advanced in the world in many areas. By end-2024, China had 191,000 km of expressways, covering 99% of cities with populations above 200,000. China’s high-speed rail network reached 48,000 km, accounting for more than 70% of the global total. 图表 5 compares the Beijing-Shanghai, London-Paris, and New York City-Washington DC high-speed rail lines; the Beijing-Shanghai route is both faster and more frequent than the other two.

图表 5: The Beijing-Shanghai high-speed train is faster and more frequent than London-Paris and New York City-Washington DC high-speed rail lines

High-speed rail	Rail distance	Top speed	Fastest travel time	Frequency
Beijing - Shanghai	1318km (819 miles)	350km/h	4h18m	50 daily departures
London - Paris	491km (306 miles)	300km/h	2h16m	15-18 daily departures
New York City - Washington DC	364km (226 miles)	257km/h	2h55m	35-40 daily departures

Note: Statistics are based on information collected in May 2026

资料来源：高盛全球投资研究部

In ports and maritime transport, China’s container throughput reached 354 million TEUs in 2025, equal to 36% of the global total. China now accounts for eight of the world’s top ten ports by cargo throughput and six of the top ten by container throughput. By comparison, in 2000, Shanghai was the only Mainland China port in the global top ten (图表 6).

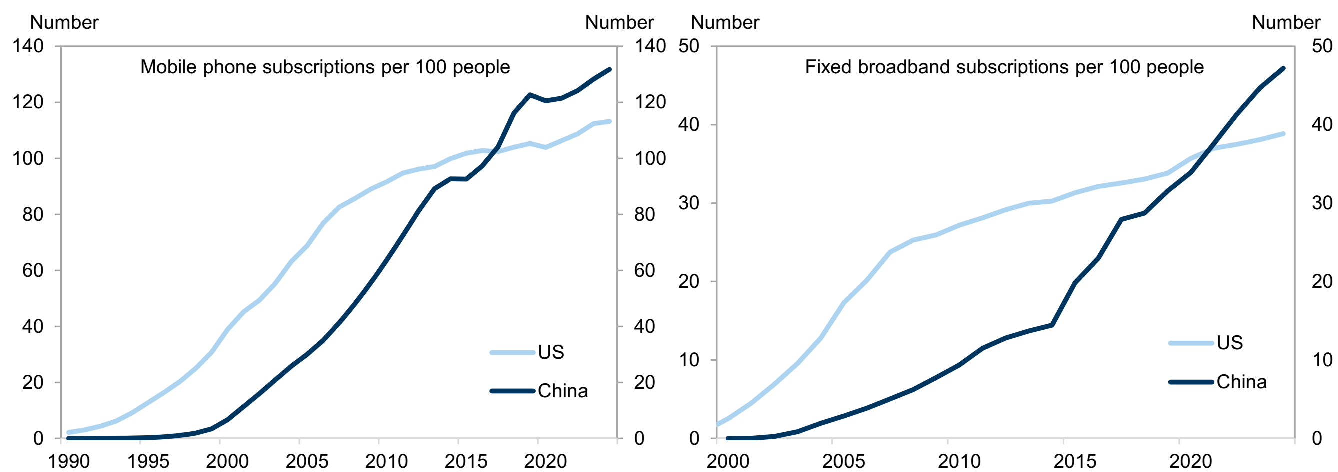
图表 6: Six of the top ten ports globally by container throughput were in China in 2025

Rank in 2000	Port	Throughput (Million TEUs)	Rank in 2025	Port	Throughput (Million TEUs)
1	Hong Kong	18.1	**1**	**Shanghai**	**55**
2	Singapore	17.1	2	Singapore	45
3	Busan	7.5	**3**	**Ningbo-Zhoushan**	**43**
4	Kaohsiung	7.4	**4**	**Shenzhen**	**35**
5	Rotterdam	6.3	**5**	**Qingdao**	**34**
6	**Shanghai**	**5.6**	**6**	**Guangzhou**	**27**
7	Los Angeles	4.9	7	Busan	25
8	Long Beach	4.6	**8**	**Tianjin**	**24**
9	Hamburg	4.3	9	Jebel Ali	16
10	Antwerp	4.1	10	Port Klang	15

资料来源：高盛全球投资研究部

In communications infrastructure, China also advanced rapidly. Although the US was far ahead of China in the 2000s, by 2024 China's per capita subscriptions for mobile phones and fixed broadband exceeded those in the US by a meaningful margin. In mid-2025, the number of 5G base stations in China reached 4.6 million, representing more than 60% of the global total.

图表 7: China's per capita subscriptions of mobile phones and fixed broadband exceeded those in the US by a meaningful margin in 2024



资料来源：Haver Analytics, 高盛全球投资研究部

Beyond these examples, we also examine sub-sectors within China's official fixed asset investment (FAI) series. Admittedly, FAI data have significant measurement issues and at times diverge from alternative measures of construction and investment such as steel and cement consumption. That said, we think the long-term trends and relative performance across sectors are still informative.

Specifically, we divide infrastructure FAI into seven categories: (1) environment (i.e., water conservancy, environment, and public utilities management), (2) transportation (i.e., railway, road, water, aviation, and city public transportation), (3) energy (including coal, oil, and gas mining), (4) communication (i.e., information transmission, computer, and software), (5) community (i.e., culture, public management, and resident services), (6) education, and (7) healthcare infrastructure.[2] In 2025, environment, transportation, and energy were the largest infrastructure sectors, accounting for 80% of total infrastructure investment combined (图表 8).

图表 8: Sector-specific trends do not support continued increases in infrastructure investment

Type of infrastructure	Share of total in 2025	Peaked in official data?	Growth outlook in coming years
Economic infrastructure			
Environment	29%	Yes	Moderate decline
Transportation	27%	Yes	Notable decline
Energy	25%	No	Moderate increase
Communication	4%	No	Notable increase
Social infrastructure			
Community	6%	Yes	Moderate decline
Education	6%	Yes	Moderate decline
Healthcare	4%	Yes	Moderate increase
Total	**100%**	**Yes**	**Modest decline**

资料来源：高盛全球投资研究部

We examine these seven categories separately and draw four conclusions.

- Notable increases in communication infrastructure investment: Given the ongoing AI capex boom, we think investment in communication infrastructure has significant upside over the next few years. That said, its contribution to overall investment should not be overstated as communication infrastructure investment was only 4% of total infrastructure investment in 2025. Moreover, by our equity analysts' estimates, Chinese hyperscalers (Alibaba, Baidu, Bytedance and Tencent) are investing about a tenth as much as their US counterparts.
- Moderate increases in energy and healthcare infrastructure investment: After the 2021 power outages, Chinese spending on energy infrastructure rose significantly. Despite the already heightened levels of spending, we think energy infrastructure investment may increase further, albeit at a slower pace than in 2022-24, given China's determination to pursue energy self-reliance and energy security. Separately, population aging will accelerate rapidly in China. Currently, 2.5% of the population is above age 80; by 2050, it will increase to over 10%. Population aging implies higher demand for healthcare facilities despite falling total population.
- Moderately declining investment in community, education and environmental infrastructure: For social infrastructure such as community and education facilities, demographic trends are key drivers of demand. According to UN projections, China's total population may decline 3% from 2025 to 2035 under the medium-fertility scenario and 5% under the low-fertility scenario, while the number of school-aged children (ages 6–15) may fall by nearly half over the next

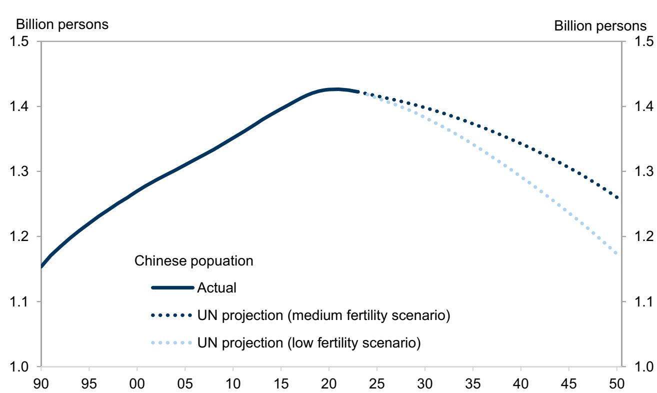
[2] Note that there is no single unified definition of infrastructure investment in China. In our monthly tracking and analysis of official activity data, we also include investment in scientific research but exclude investment in coal, oil and gas mining in infrastructure investment.

decade (图表 9 and 图表 10). As a result, it will likely be difficult for physical investment in these areas to increase over the coming decade. For environmental infrastructure, the peak investment likely occurred in the past decade. From 2014 to 2018, the government waged a “war on pollution” and reduced PM2.5 levels by about 40%.[3] Hence, pollution clean-up related investment should be lower in the future. Even for water networks which the 15th Five-Year Plan emphasizes as an important area of investment during 2026-30, the implied annual average spending of RMB 1.4tn appears to be broadly in line with 2024 levels. Altogether, we think total environmental infrastructure investment should decline moderately in the coming years.

- Notable declines in transportation infrastructure investment: Given the scale of past investment and the advanced state of China’s transportation infrastructure relative to other countries, including developed economies, we expect investment in this sector to decline in the coming years.

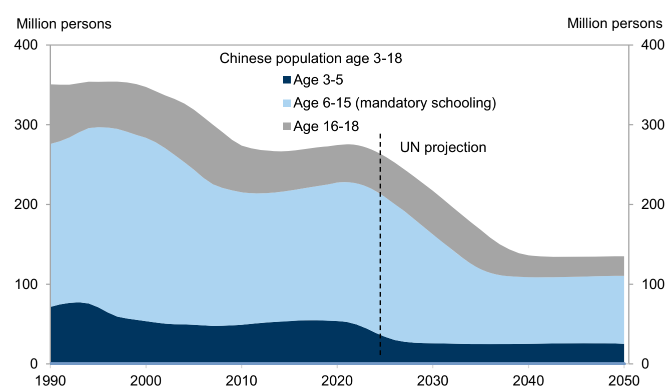
Taking a weighted average across these seven categories, we estimate that overall infrastructure investment faces a modest downward trend. After all, roads and bridges need to be built only once. In our view, the current level of infrastructure investment—38% of total investment and 15% of GDP in China—is unlikely to be sustained in the coming decades.

图表 9: UN projects China’s population to decline 3% and 5% under the medium and low fertility assumptions, respectively



资料来源：United Nations, 高盛全球投资研究部

图表 10: China’s school-aged population is expected to contract by half over the coming decade due to lower birth rates



资料来源：United Nations, 高盛全球投资研究部

Shifting Policy Stance

Apart from top-down and bottom-up fundamentals, policymakers’ stance also matters for China’s investment trajectory. Because China has high savings, a closed capital account, and independent monetary policy, debt-driven, government-led investment could persist for years if policymakers disregard returns to capital and rising debt levels. However, signals over the past few years suggest that

3 See Greenstone, Li, He and Zou (2021), “China’s War on Pollution: Evidence from the First Five Years”, NBER Working Paper 28467 for more details of China’s efforts in reducing air and water pollution in 2014-18.

policymakers' appetite for the previous investment-driven growth model has waned.

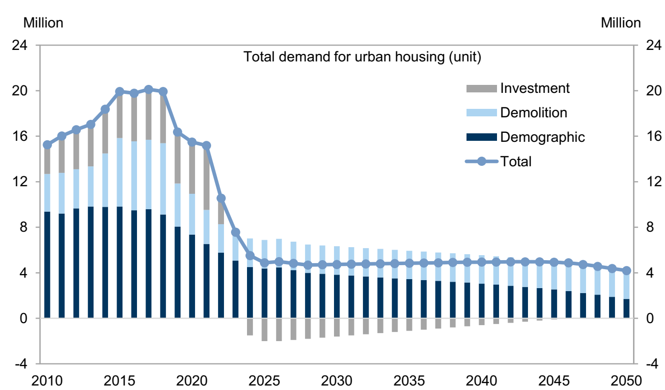
Manufacturing investment has outperformed other types of investment in recent years. During 2021-24, it grew by almost 10% per year, compared with an average of 4% for headline FAI and -8% for property FAI. The increase in manufacturing investment has led to severe overcapacity and low utilization rates in many industries (图表 11). China's PPI averaged -2.6% in 2023-25. In July 2025, President Xi chaired a Central Commission for Economic and Financial Affairs (CCEFA) meeting, calling for reforms to combat excessive competition and price-cutting. The ensuing "anti-involution" campaign, along with efforts to curb local government implicit debt and urge local officials to "establish a correct view of performance," clearly shows the top leadership's desire to reduce local governments' reliance on the debt-fueled, investment-driven growth model. Therefore, even though high-tech manufacturing should continue to see robust investment growth—especially in areas such as semiconductors where China still relies heavily on foreign supply—the pace of overall manufacturing investment growth should moderate going forward.

The property market has been declining for five years, with new starts and property FAI 80% and 46% below their respective peaks in 2020Q4. Our previous research shows that China's long-term urban demand for new home construction is likely to remain low for a long time, mainly because of population decline, slowing urbanization, and still-elevated vacancy rates (图表 12). As such, property investment is unlikely to rise meaningfully in the coming decade.

图表 11: Industrial capacity utilization rate fell followed by the government's "anti-involution" campaign

资料来源：Haver Analytics, 高盛全球投资研究部

图表 12: China's urban demand for new home construction is likely to stay low for a long time



资料来源：高盛全球投资研究部

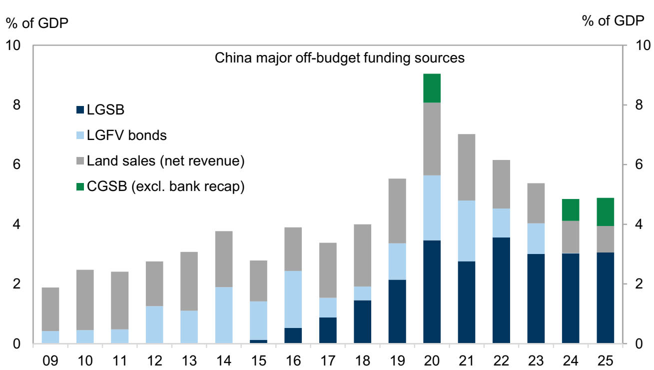
Local governments have financed infrastructure projects mainly through off-budget channels such as local government special bonds (LGSBs), local government financing vehicles (LGFVs), and land sale revenues.[4] In 2020, during the Covid pandemic, and again in 2024-25, central government special bonds (CGSBs) were also issued partly to finance investment in strategic projects and sectors. 图表 13

[4] Here we use net land sales revenue as opposed to gross land sales revenue to capture the likely amount spent on infrastructure building. In addition, due to data availability limitations, we do not observe LGFV loans and use LGFV bonds as a proxy for LGFV borrowing.

shows that the sum of these channels peaked in 2020 and has since declined, reflecting sharply lower land sales and LGFV deleveraging over the past few years. In other words, the top leadership is also pushing local governments to be more selective in infrastructure investment by limiting their financing channels.

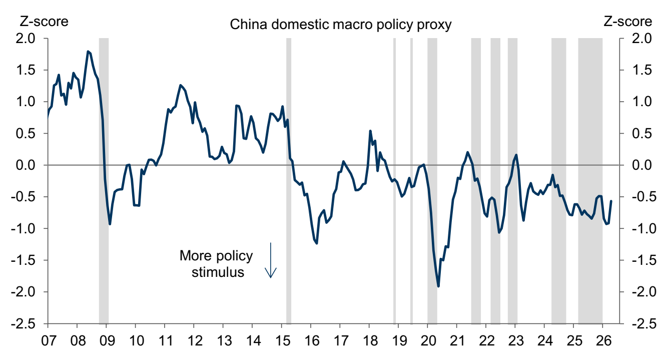
Lastly, our China domestic macro policy proxy—a summary of monetary, fiscal, credit, and property policies—shows the government’s reluctance to stimulate the economy in the face of recent growth headwinds. Compared with 2009, 2015-16, and 2020, the magnitude of policy easing appears much more muted over the past few years (图表 14). Our interpretation is that policymakers are increasingly concerned about deficits and debt levels and will use cyclical easing only to put a floor under a slowing economy, rather than to provide meaningful stimulus. That implies subdued government-led investment going forward. Although recent policy communications have emphasized “investing in people” rather than “investing in things,” we think this probably means more government consumption spending rather than more government investment.

图表 13: Various off-budget channels to finance infrastructure investment have declined from 2020



资料来源：万得, 高盛全球投资研究部

图表 14: Domestic macro policy easing has been more muted in recent years compared to 2009, 2015-16 and 2020



Note: Shaded areas refer to periods when China CAI 3mma growth was below 5%.

资料来源：高盛全球投资研究部

Rates to Stay Low and Exports to Remain High

Because both fundamentals and policy suggest more limited room for investment growth, we expect China’s investment share of GDP to move lower in the coming years (图表 15). If we assume annual average growth of -1% for infrastructure investment, 0% for property investment, 5% for manufacturing, and 5% for other investment (e.g., agriculture and some services industries), then the investment share of GDP should decline from 40% in 2025 to 34% in 2035 under the government’s long-term objective of doubling income from 2020 to 2035, which implies 4.2% average annual real GDP growth over the next ten years.

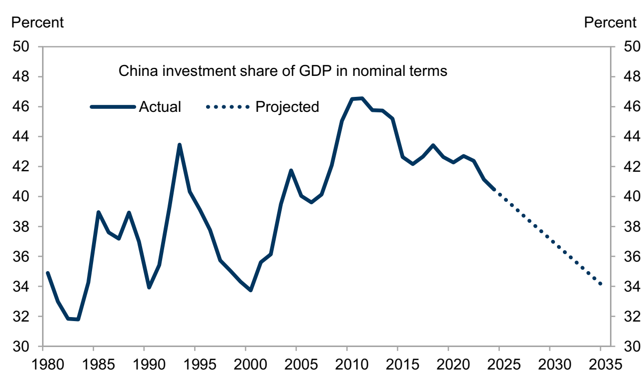
On the other hand, savings rates are unlikely to decline much. Chinese households save more than 30% of their disposable income, and our previous research shows that, despite population aging and the government’s gradual efforts to strengthen the social safety net, it would be very difficult to meaningfully reduce the household savings rate. Academic research shows that private firms maintain high savings to fund capex because of financial market frictions and limited access to credit. Hence, any reduction in private corporate savings would probably coincide with weaker corporate investment demand. As noted above, recent policy communications and actions also suggest limited appetite for fiscal expansion, which does not support a significantly lower government savings rate.

Putting these together, falling investment coupled with elevated domestic savings has two market implications.

First, as long as capital controls remain in place, the ample supply of savings relative to investment demand means domestic interest rates are likely to stay low in China for a long time. As such, search-for-yield motives among domestic savers should be strong, especially given that real estate assets are no longer as attractive an investment vehicle after the severe housing downturn.

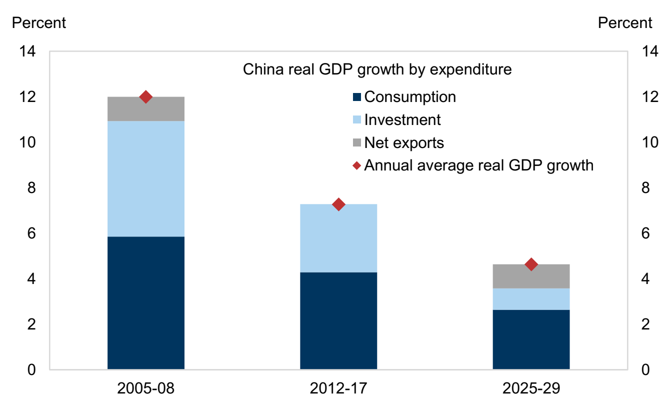
Second, a persistent savings-investment imbalance points to continued strength in Chinese exports, trade surpluses, and the RMB. During 2012-17, Chinese domestic demand grew at a brisk pace and net exports contributed negligibly to real GDP growth. In 2025-29, however, we expect net exports to contribute 1.1pp per year to real GDP growth, the same as in 2005-08 (图表 16). By contrast, we project investment’ s contribution to real GDP growth to fall sharply from 3pp in 2012-17 to just 0.9pp in 2025-29.[5] Robust export growth and continued increases in trade surpluses, combined with policymakers’ desire to accelerate RMB internationalization, provide a solid basis for RMB appreciation against both the USD and other major currencies in the coming years.

图表 15: We expect China’ s investment share of GDP to move lower in the coming decade



资料来源：高盛全球投资研究部

图表 16: We expect net exports contribution to GDP growth in 2025-29 to be similar to 2005-08



资料来源：Haver Analytics, 高盛全球投资研究部

Hui Shan

We thank Ming Yang, an intern of the Asia Economics team, for his contribution to this note.

[5] Note that net exports underestimate the total impact of exports on GDP growth in China. In our previous research, we show that domestic value-added of goods exports as well as export-related manufacturing investment have accounted for around 40% of real GDP growth in recent years, similar to the experience of 2005-08.

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