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Economic Research Note

China's saving rate

- **China's saving rate is among the highest in the world**
- **Household and corporate savings declined modestly in recent years**
- **Demographic changes could reduce the saving rate from 46% of GDP in 2013 to 35% in 2020…**
- **…with important implications for economic restructuring and the financial sector outlook**

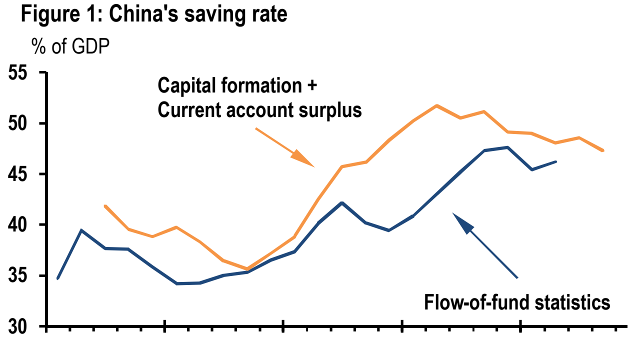
A high national saving rate is a key feature of the Chinese economy. Changes in demographic structure, especially the fall in the dependency ratio, could lead to a significant decline in China's saving rate from 46% in 2013 to around 35% by 2020. A lower saving rate will have important implications for China's economic rebalancing as well as financial risk.

China's saving rate

There are two principal methods to measure China's gross national saving (GNS). The first uses expenditure-based GDP and estimates GNS as the sum of gross capital formation and the current account balance. The second takes production-based GDP and estimates GNS from the flow-of-funds statistics, which allows a breakdown of GNS by sector (see Guonan Ma and Wang Yi: "China's high saving rate: myth and reality," *BIS Working Paper no 312*, June 2010).

While the two approaches both have limitations and are not fully consistent, both put China's national saving rate among the highest in the world (Figure 1).

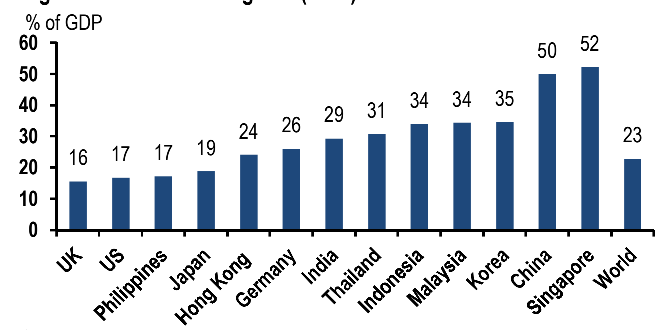
Figure 1: China's saving rate



Source: NBS, Flow of funds

China's saving rate rose from 35% at the beginning of this century to around 50% at its peak in 2011, and then fell to about 46%. According to the World Bank, China's national saving rate was 50% of GDP in 2014 (using an expenditure-based approach), the highest in the high-saving Emerging Asia except for Singapore, and much higher than the US (17%), the UK (16%), and the world average (23%, Figure 2).

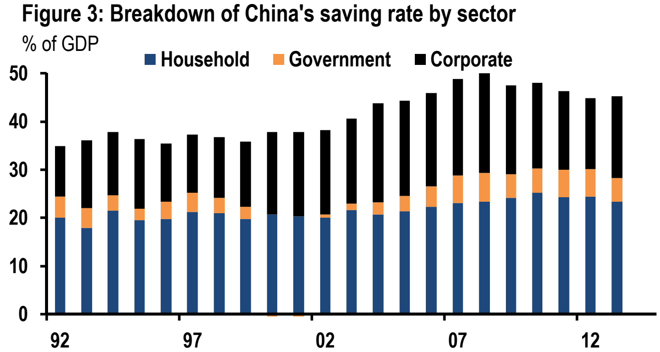
Figure 2: National saving rate (2014)



Source: World Bank

The flow-of-funds statistics separate China's savings into three components (Figure 3). All three components, household, corporate, and government saving, rose in the first decade of this century, before easing modestly more recently. Household saving has moved within a 20%-25% of GDP range, and corporate savings between 15% and 20% of GDP, both high by international standards.

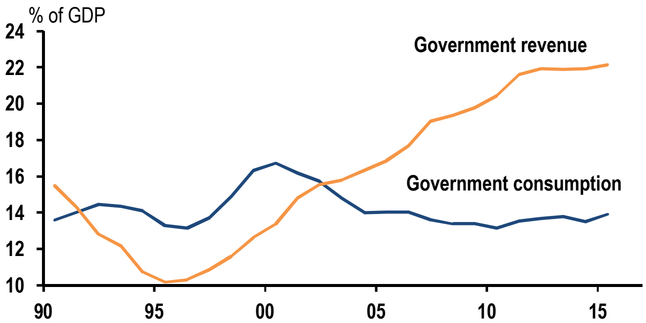
Figure 3: Breakdown of China's saving rate by sector



Source: NBS, Flow of funds

The standard wisdom points out several institutional factors behind China's high saving rate. First, the increasing share of the working-age population until 2010 led to a high household saving rate. Second, financial underdevelopment, limited access to external financing, and poor corporate governance (including low dividend payments) explain high corporate savings in China, as corporates hoard retained earnings to hedge uncertainties and use internal funds to finance business expansion. Third, corporate restructuring in the 1990s eroded the enterprise-based cradle-to-grave social safety, and the 1997 pension reform reduced pension benefits, both leading to higher household saving. Fourth, productivity growth, efficiency gains from corporate restructuring and lower wage growth than economic growth increased corporate profitability and retained earning in the 2000s, leading to high corporate saving. Last, the 1994 fiscal reform generally increased government income yet government consumption has been stable around 15% of GDP, lifting government saving and investment (Figure 4).

Figure 4: Government consumption and revenue



Source: Ministry of Finance

Decline in saving rate in recent years

China's saving rate started to decline modestly in recent years, with both household saving and corporate saving down slightly, and government saving flat-lining at about 5% of GDP (Figure 1 and 3). We attribute the decline in saving rate to the following:

First, China's population has aged (see below for detailed discussion) and the social safety network has improved. Medicare and pension reform in the past four to five years have benefited a larger share of the population, especially in rural areas, though the coverage is still very narrow.

Second, corporate profits slowed and even contracted in 2015. The 4-trillion yuan stimulus package in late 2008 fostered overinvestment and overcapacity in a number of key industries, including steel, real estate, cement, coal mining, glass, and shipbuilding, resulting in a sharp decline in rate of return on investment. The decline in total factor productivity (TFP) growth and weakened corporate profits reduced the corporate sector's ability to rely on retained earnings to fund investment (Figure 5).

Figure 5: Corporate saving in China

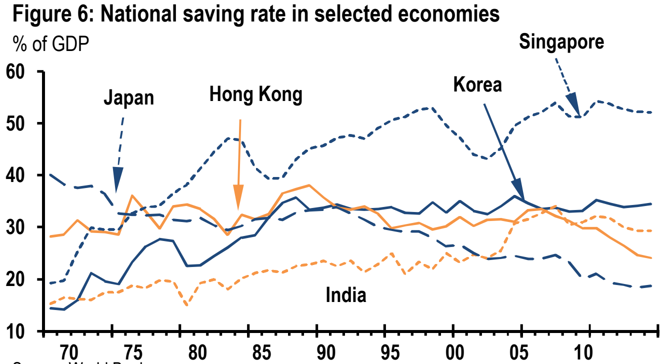
Source: NBS, J.P. Morgan

Third, interest rate liberalization and financial market developments improved corporate access to external financing.

Last, government revenue growth had outpaced economic growth in the past decade, but it has slowed to be in line with nominal GDP growth. As a result, the gap between government revenue growth and government consumption growth started to stabilize and government saving as % of GDP leveled off (Figure 4).

A key question for China, in our view, is whether the recent decline in the saving rate is temporary, or the start of a long-term trend like Japan has experienced since the 1990s. Japan had high saving rate in its rapid-growth era, but the saving rate fell from 34% in 1991 to 25% in 2001, and then further to 18%-19% since then (Figure 6). That slump in the national saving rate coincided with "Japan's lost 20 years." On the other hand, despite ups and downs, Singapore's savings rate stayed among the highest in the world, while Korea's saving rate was relatively stable.

Figure 6: National saving rate in selected economies

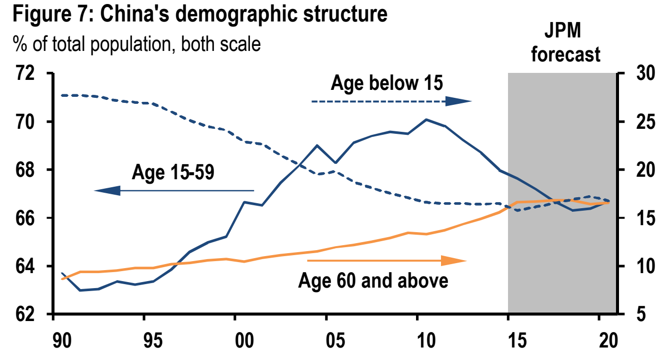


Source: World Bank

A key driver: Demographics

Among the above-mentioned factors, the change in China's population structure may have the biggest and longest-lasting impact on its saving rate.

Figure 7: China's demographic structure



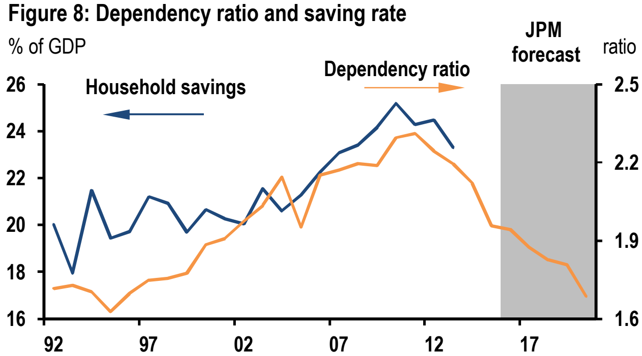
Source: NBS, J.P. Morgan

The year 2011 is a critical one in the discussion on China's population. The working-age population (ages 15-59), both in numbers and as a share of the overall population, peaked in 2011 and has declined steadily since then. The strict implementation of the "one-child policy" since the 1980s (relaxed only recently) successfully prevented a population explosion, but also distorted the age structure of the population over time. Meanwhile, the share of elderly citizens (aged 60 and above) rose from 10.5% in 2000 to 14.9% in 2013, and we expect it to climb further to 16.6% in 2020 (Figure 7).

The change in population structure implies a reversal in the dependency ratio, defined as the ratio of the working age population to the elderly and young population. The dependency ratio rose from 1.7 in the early 1990s to 2.3 in 2011 and since then has fallen steadily. We estimate that the dependency ratio could fall back to 1.7 in 2020.

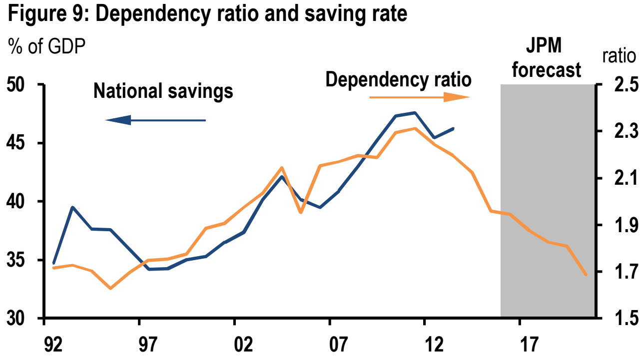
In the past, the dependency ratio has had a close relationship with the household saving rate (Figure 8) as well as the national saving rate (Figure 9). The economic reason is intuitive: a working-age person who needs to support fewer family members can save more, and vice versa. As the population structure changes slowly, its impact of changes on savings and consumption tends to be gradual but long-lasting. In the scenario we described above, if the historical relationship continues to hold, China's household saving rate could decline from 23.3% in 2013 to 18% in 2020, and the **national saving rate could decline from 46.2% in 2013 to 35% by 2020**—still a high saving rate internationally, but a very significant decline.

Figure 8: Dependency ratio and saving rate



Source: NBS, J.P. Morgan

Figure 9: Dependency ratio and saving rate



Source: NBS, J.P. Morgan

The implications if saving rate declines

A large decline in the saving rate could be one of the biggest macroeconomic risk factors China faces in the next five to 10 years, and it has important implications for the economic restructuring and financial sector. China's high investment and rapid growth in (mainly domestic) debt over the past 15 years occurred against the backdrop of a very high saving rate. If the saving rate falls quickly in the next five years, investment as a share of GDP should also drop significantly, constraining the pace of economic restructuring. To avoid such a consequence, China either has to rely more on external borrowing, or will need to improve the efficiency of domestic investment. The first option is unlikely given that China has experienced significant capital outflows in recent years after many years of inflows, and the trend may continue with further liberalization in the capital account and diversification of investment by domestic residents. The second option is the right direction, in our view, but requires meaningful progress on structural reforms.

In addition, nonfinancial sector debt has increased rapidly since 2008, rising by 100%-pts of GDP between 2007 and 2015, and has become a major policy concern. The financial sector has remained stable, largely because nonfinancial firms largely borrowed domestically, supported by the high domestic savings. If the saving rate falls quickly, but the pace of debt growth increases or investment growth does not slow down, it would tend to increase the cost of funding, which will increase the burden of servicing the debt. Alternatively, China can increase external borrowing, but external vulnerability tends to emerge. Hence, we expect dealing with the debt problem will become an urgent task for the government.

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