

Investment Management Division

Walled In: China's Great Dilemma



We believe China's debt burden, the inevitable rebalancing of the economy, unfavorable demographics, structural fault lines and the weight of history will bear down on its growth rates.



Sharmin Mossavar-Rahmani

Chief Investment Officer
Investment Strategy Group
Goldman Sachs



Jiming Ha

Managing Director
Investment Strategy Group
Goldman Sachs



Maziar Minovi

Managing Director
Investment Strategy Group
Goldman Sachs



Matheus Dibo

Vice President
Investment Strategy Group
Goldman Sachs

Additional Contributors
from the Investment
Strategy Group:

Gregory Mariasch

Vice President

Robin Xing

Vice President

Harm Zebregs

Vice President

Amneh AlQasimi

Associate

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Overview

Concerns about the slowdown in China's economy and the Chinese government's tenuous and, many would say, opaque policy responses have been the primary driver of the last two significant downdrafts in global equity markets. Between August 10 and August 27 of 2015, a 21.5% drop in local Chinese equities

as measured by the CSI 300 Index triggered a 5.5% decline in US equities as measured by the S&P 500 Index, an 8.1% drop in non-US developed equities as measured by the MSCI EAFE Index and an 8.4% decline in the MSCI Emerging Markets Index. Similarly, in the first two weeks of 2016, China jolted the financial markets with a 16.4% drop in Chinese equities, triggering an 8.0% decline in the S&P 500 Index and an 8.8% and 10.7% drop in the MSCI EAFE and MSCI EM indexes, respectively. In both instances, changes to the mechanism for setting the renminbi exchange rate have created even further uncertainty about the Chinese government's policy objectives, since what was initially billed as a "one-off" currency change on August 11, 2015, has morphed into a series of "one-off" depreciation measures against the US dollar. We believe that investors should brace themselves for more of the same.

We expect China to remain a significant source of volatility in financial markets and commodity-driven economies over the next several years. China faces a great dilemma and has limited attractive options. It faces the herculean challenge of rebalancing the economy toward consumption and a more sustainable growth path while avoiding disorderly and destabilizing adjustments. At a minimum, meeting this challenge requires successful implementation of the reform agenda set out following the Third Plenum of 2013.

China is walled in. If the reforms are implemented too quickly, the country risks a sharp slowdown. If the reforms are implemented too slowly or not at all, China risks an unsustainable increase in its debt-to-GDP ratio, which could push the country past the tipping point into

economic and, in all likelihood, political instability. China is also walled in by its deep structural fault lines, ranging from weak demographics and low rankings on human capital factors such as tertiary education, to low rankings on business environment indicators such as the Heritage Foundation's Index of Economic Freedom and the World Bank's Ease of Doing Business Index and Worldwide Governance Indicators.

China faces these challenges against a backdrop of slow global growth and an increasing list of countries whose own currencies are depreciating against the US dollar. Its leadership must also contend with a United States that is more vigilant about protecting against alleged Chinese cyberattacks, promoting a level playing field for American companies doing business in China and pushing back against China's military intentions in the South China Sea.

This *Insight* reviews the current state of China's economy and examines the extent of China's impact on the rest of the world's economies and financial markets. We show that the swings in the financial markets—particularly in the United States—are excessive relative to the direct and indirect impact of a slowdown in China. We review the progress—or lack of progress—made to date on the reform agenda of 2013. We present our short-, intermediate- and long-term economic outlook for China and conclude with the portfolio implications of our views. Our 2013 *Insight* report, *Emerging Markets: As the Tide Goes Out*, contained a recommendation to our clients to reduce their strategic asset allocation to emerging market assets. This 2016 *Insight* report, *Walled In: China's Great Dilemma*, recommends a further reduction to emerging market assets.

Contents



Walled In: China's Great Dilemma

4	Walled In: China's Great Dilemma
7	China's Economy: Slowing and Slowly Rebalancing
7	Quality of GDP Data
10	How China Matters to the Rest of the World
16	Is China Growing at 3%, 7% or Somewhere In Between?
18	Rebalancing the Chinese Economy
21	Identifying the Tipping Point in Chinese Debt
24	Walled In: Balancing Reforms with Economic Stability
24	A Brief Review of the Reform Agenda
26	Taking Stock of the Progress on Reforms
26	SOE Reform



30	Financial Market Liberalization	48	Implications of a Large and Growing Debt Burden
33	Rural Land Reform and <i>Hukou</i> Reform	51	Diminishing Export Competitiveness
35	One-Child Policy	51	The Weight of History
36	Environmental Regulation	53	Persistent Structural Fault Lines
38	Fiscal Reform	55	A Japan-Style Slowdown
40	In Summary	58	Minimal Impact from New Initiatives
40	The Economic Outlook: Short, Intermediate and Long Term	59	Investment Implications
41	2016 Outlook	62	2016 Return Expectations
44	2016–20 Outlook	62	2016–20 Return Expectations
46	Base Case Scenario	63	Longer-Term Implications
47	Alternative Scenario	65	Conclusion
47	Longer-Term Prospects		

Walled In: China's Great Dilemma

NOT A DAY GOES BY without at least one attention-grabbing article, if not several, on China. Some are quite alarming. In “The Thucydides Trap: Are the US and China Headed for War?” Graham Allison of Harvard University details how, when a “rising power” has challenged a “ruling power,” war has resulted in 12 of 16 cases over the past 500 years, and warns of a similar outcome between the US and China.¹ In “The Coming Chinese Crackup,” David Shambaugh of the Brookings Institution argues that China is approaching a “breaking point.”² In “The Great Fall of China,” the *Economist* suggests that investors are right to be nervous given that a slowing China drags down emerging markets, commodities and countries such as Germany that have significant exports to China.³ In “Chinese Domino Effect Still Threatens World Markets,” the *Wall Street Journal* reports how problems in China are reverberating across the world and affecting the outlook for global growth.⁴ In “China’s Biggest Export Could Be Deflation,” the *Financial Times* forewarns market participants that China is exporting deflationary pressures across the world.⁵

Admittedly, there has also been a smattering of positive commentary. Not surprisingly, much of it comes from the Chinese state-sponsored *People’s Daily*, *China Daily* and Xinhua news agency, but the positive reporting also extends to the West.



In “False Alarm on a Crisis in China,” longtime China observer Nicholas Lardy of the Peterson Institute for International Economics contends that the negative narrative on China is not well supported by the facts, and that China is growing at an annual pace of about 7%.⁶ In “China’s Woes Are Overplayed—It’s an Opportunity,” the *Financial Times* advocates that a major inflection point upward is coming.⁷ And to top off the positive sentiments, London arranged several days of pomp and ceremony for President Xi Jinping in October 2015 to launch what Prime Minister David Cameron has called the “golden era” of Sino-British relations.⁸

The latest economic news out of China—a gross domestic product (GDP) growth report of 6.9% in 2015—has helped fuel the positive sentiments. Yet such a report raises more questions than it provides answers for economists and investors alike.

How reliable is the underlying economic data? What is the exact size of China’s foreign exchange reserves? Will the People’s Bank of China (PBOC) devalue the renminbi gradually or will we suddenly wake up to a 15–20% devaluation that will invariably destabilize developed and emerging financial markets? Are the reforms set forth by the Third Plenum of the 18th Central Committee of the Communist Party of China (CPC) meeting in November 2013 proceeding apace, or are China’s deep structural fault lines so entrenched that progress will be slower than anyone expected? What trade-offs is the CPC leadership prepared to make in the transition from an export-oriented and investment-driven economy to a balanced, consumer-focused economy? At what point will ever-increasing debt as a percentage of GDP lead to a credit crisis?

“One plus one equals two. But it’s not always the case, especially when you are talking about ... local and national gross domestic product (GDP) data in China.”

—Xinhua

The list of questions is a long one, and all point to the same dilemma: China is walled in. If it rebalances the economy too quickly, China may face a hard landing. If it opens its capital account too quickly, China may face significant outflows that would weaken the currency and destabilize the economy. If it embraces reforms too quickly, the CPC leadership may lose control of the economy. If the central government stands behind too much of the debt issued by local governments and state-owned enterprises (SOEs), it risks engendering a belief that all such debt is “implicitly guaranteed” by the central government.⁹ If it steps back too quickly from such guarantees, the central government risks introducing more uncertainty into the financial system and the economy. If China fully opens its markets to foreign competition, SOEs may suffer. If it consolidates too many SOEs, absence of local competition—let alone meaningful foreign competition—may compromise quality and reduce already limited efficiency. If China fights corruption too aggressively, there is a risk that government officials and SOE executives will delay decisions and approvals for fear of making a mistake or being caught in a future corruption probe. Here again, the list is long. Moreover, as evidenced by the measures taken to manage the equity and currency markets over the last several months, the risk of policy mistakes looms large. China faces these challenges against a backdrop of slow global growth and an increasing list of countries whose own currencies are depreciating against the US dollar. Its leadership must also contend with a United States that is more vigilant about protecting against alleged Chinese cyberattacks, promoting a level playing field for American companies doing business in China and pushing back against China’s military intentions in the South China Sea.

This *Insight* will address these issues in order to assess their impact on our clients’ portfolios. We acknowledge that some of the answers are largely unknowable: Data is limited and of poor quality, and the policy objectives and decision-making processes of the central and local governments are somewhat opaque. Nevertheless, we believe that we can draw some important conclusions with respect to China’s short-, intermediate- and long-term prospects and any implications thereof.

We begin with a review of China's economy, highlighting how China matters to the rest of the world's economies and financial markets. We then revisit China's structural fault lines, which were discussed in our 2013 *Insight* report, *Emerging Markets: As the Tide Goes Out*, to examine any progress resulting from the reform agenda of the Third Plenum of 2013. We then present our view of China's short-, intermediate- and long-term economic outlook. Finally, we conclude with the investment implications for our clients' portfolios.

China's Economy: Slowing and Slowly Rebalancing

Investors are concerned about China's economy because of its direct impact on their Chinese holdings and non-Chinese holdings that have sales and profit exposure to China, as well as its indirect impact on the growth of developed and emerging markets. Worries about a slowdown in China reverberated throughout the financial markets in the summer of 2015 when local Chinese stocks nosedived and the PBOC altered the renminbi exchange rate fixing mechanism. US equities, for example, dropped nearly 13% in one week. Similarly, in the first two weeks of 2016, China jolted global financial markets again, triggering an 8% drop in US equities. We address three critical issues affecting our clients' portfolios:

- First, we examine the direct and indirect channels through which China affects the global economy and financial markets.
- Second, we estimate the degree to which China is slowing.
- Third, we gauge the extent to which China has rebalanced away from an investment-led and export-driven economy toward a consumption-focused economy so it can grow on a more sustainable path.

Before we proceed, we provide some context on the quality of Chinese data.

Quality of GDP Data

Questioning the quality of China's economic data is not new. Since the mid-1990s, Professor Harry Xiaoying Wu, currently of Tokyo's Hitotsubashi

University, has contended that China's official GDP data is unreliable.¹⁰ In 2007, Premier Li Keqiang, then Communist Party Secretary of Liaoning province, reportedly said that China's GDP data is "man-made."¹¹ This led to the creation of the Li Keqiang Index, composed of electricity consumption, rail freight volume and bank lending, indicators that Premier Li Keqiang thought were a better gauge of economic activity. More recently, in 2014, Xinhua News Agency, the official press agency of the Chinese government, published a "Xinhua Insight" titled "The Enigma of China's GDP Statistics," in which it wrote, "one plus one equals two. But it's not always the case, especially when you are talking about ... local and national gross domestic product (GDP) data in China."¹²

The US-China Economic and Security Review Commission (USCC), created in 2000 by the US Congress, published an extensive report in 2013 on the unreliability of China's official statistics.¹³ It attributed this unreliability to decentralized data gathering, inconsistent quality and methods across the country, tax evasion by the private sector (including households and private corporations), and manipulation of data by the central and local governments and SOEs.

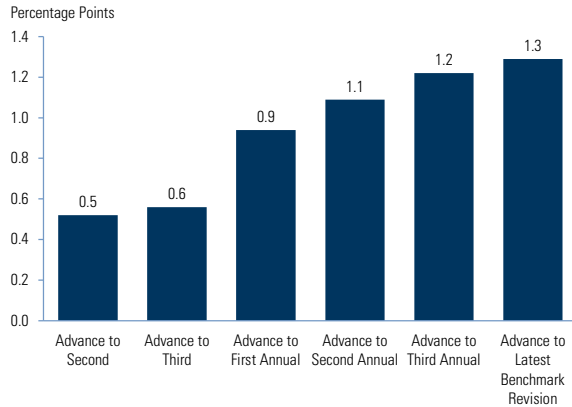
The poor quality of China's data manifests itself in several ways; examples include how quickly GDP data is released and the type of revisions that follow, the deviation between aggregated data and the sum of the underlying components, and the very low volatility of China's GDP. We briefly review these three examples.

China is one of the first countries to report its GDP, usually about two weeks after the end of each quarter. This compares with developed economies that collect smaller volumes of data more efficiently and take between four and six weeks. There is also a lack of clarity regarding the revisions. According to the USCC, the "revisions are frequent, large, and not always clearly explained."¹⁴ The National Bureau of Statistics (NBS) of China has revised upward the real level of 2004 GDP by a whopping 16.8% due to greater output from the service sector.¹⁵ Real GDP growth in 2007 has also been revised upward to 14.2% from an initial estimate of 11.9%. The revisions in China are systematically upward and some are very significant.

This is in sharp contrast to the GDP data releases in the US. The Bureau of Economic Analysis (BEA) publishes its advance estimate

Exhibit 1: Mean Absolute Revisions to US Real GDP Growth

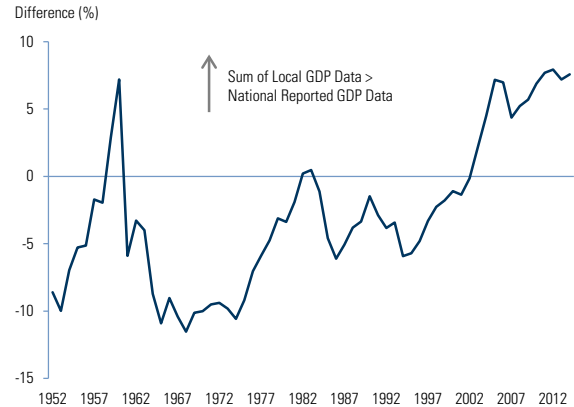
Revisions to GDP growth are much smaller in the US than in China.



Note: Based on data between 1992 and 2013.
Source: Investment Strategy Group, BEA.

Exhibit 2: Difference Between Provincial and National GDP Levels

The sum of local GDP levels does not match the national reported data.



Data through 2014.
Source: Investment Strategy Group, CEIC, NBS.

near the end of the month following the end of each quarter. As more data is received, second and third estimates are released near the end of the second and third months, respectively. Finally, quarterly GDP estimates that incorporate annual and comprehensive revisions are released in July of each year. A final version published five years later incorporates changes in methodology to better reflect the evolving US economy. As shown in Exhibit 1, the third quarterly revisions in US GDP data have deviated an average of 0.9% on an absolute basis relative to the first advance estimate, and the final estimate has deviated an average of 1.3% on an absolute basis. The largest absolute deviation is 4.5%. Most importantly, these deviations are both positive and negative and have averaged less than 0.1 percentage point in terms of their impact on US GDP growth rates.

Many China observers believe that local province officials systematically exaggerate growth to secure promotions.

There is also considerable discrepancy between aggregated data and the data underlying the aggregated data in China. One of the most frequently used examples is the difference between local GDP data from China's 31 provinces and the national GDP. Since 2003, the sum of the GDP levels reported by the provinces has been on average 6.1% higher than the national data; in 2012, the sum was nearly 8% higher. Many China observers believe that local province officials systematically exaggerate growth to secure promotions. In fact, a National Bureau of Economic Research (NBER) report found that higher city-level GDP growth has been highly correlated with CPC secretarial and mayoral promotions.¹⁶ Tom Orlik, chief Asia economist for Bloomberg and author of *Understanding China's Economic Indicators*, believes that this overstatement is a remnant of the 1958–61 Great Leap Forward, when local officials exaggerated the harvest to meet Chairman Mao Zedong's goal of creating an agricultural surplus to fund the industrialization of China.¹⁷ The USCC points to a popular Chinese idiom, *guanchu shuzi, shuzi chuguan*, which means "officials falsify economic statistics because economic statistics determine their achievement, implying that manipulating statistics is a custom

dating back to pre-modern China's mandarin bureaucracy."¹⁸ Exhibit 2 shows the difference between the sum of the provincial GDP levels and the reported national level. Over the entire history of the data series, the sum of provincial data has actually been lower than national GDP more often than it has been higher; the Great Leap Forward era and the post-2003 period are the exceptions.

It is likely that statistics are manipulated when officials are incentivized. If this is the case, then incentives to manipulate statistics exist in today's environment given the stated goal of doubling China's GDP and GDP per capita over 10 years. This goal was first stated by then-President Hu Jintao in 2012,¹⁹ and was most recently reiterated by both President Xi Jinping²⁰ and Premier Li Keqiang.²¹ We should note that since 2011, all enterprises have been required to report data directly to the NBS via an online system in order to reduce the impact of local government overstatement of growth. However, this policy measure has not narrowed the gap between local and national data, as shown in Exhibit 2.

A third reason for questioning the quality of China's data is the lower volatility of its GDP relative to the volatility of other developed and emerging market countries' GDP, as well as relative to other measures of economic activity in China. The volatility of China's real GDP (detrended to capture economic cycles) is 25% less than that of the US, 56% less than that of Japan, and half to one-third that of Asian economies such as South Korea and Indonesia. We can also compare the volatility of China's GDP to the volatility of China's economic activity indicators. We examined two such measures: the Emerging Advisors Group (EAG) China Activity Index and the Goldman Sachs Global Investment Research (GIR) China Current Activity Indicator. The EAG China Activity Index is a compilation of nearly 50 different data series that includes expenditure and income estimates from households, corporations and the government sector, as well as direct physical production figures.²² Although the series starts in 1992, EAG believes the data from 2000 onward is more reliable. Over the last 16 years, the activity indicator has both exceeded and lagged China's reported GDP, as shown in Exhibit 3. In aggregate, underlying economic activity based on this index is 50% more volatile than the reported real GDP growth rates. Such lower volatility

Exhibit 3: Measures of Economic Activity in China

Alternative measures of economic activity exhibit more volatility than China's reported GDP.



Data through Q4 2015.
Source: Investment Strategy Group, Emerging Advisors Group, Goldman Sachs Global Investment Research, NBS.

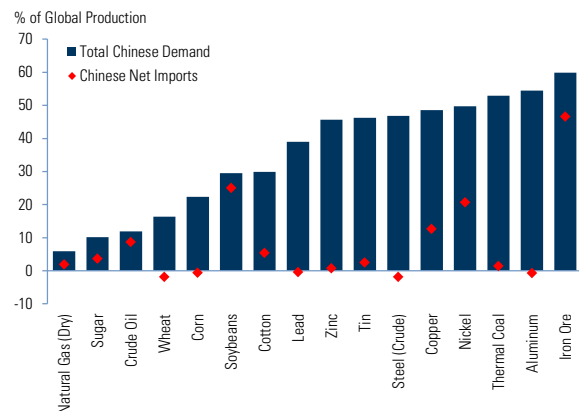
compared with that of other countries and relative to various activity indicators has led most China observers to conclude that the NBS smooths the reported GDP data.

The unreliability of data also applies to other data series beyond GDP. For example, Derek Scissors of the Heritage Foundation has concluded that retail sales growth has consistently been overestimated, since retail sales have outpaced personal income at the same time that personal savings have increased.²³ Higher consumption has to be funded by either higher income or lower savings. The USCC similarly points out that retail sales may be overestimating true sales because they are based on output by suppliers rather than goods actually purchased by consumers; retail sales are not adjusted for goods that are “dumped in warehouses.”²⁴

Finally, much of Chinese data is based on production—the net output of agriculture, industry and services—while most developed economies rely more on expenditure-based data. In China, the discrepancy between the two measures is too wide for either data series to be very reliable. The recent upward revision of coal consumption by a massive 17% a year since 2000 illustrates how even a single commodity's production data can be significantly revised with no explanation.²⁵ To put this number in context, the increase in 2012 equates to 70% of total US coal consumption annually.

Exhibit 4: Chinese Share of Global Demand for Commodities

China accounts for a significant share of demand for many commodities.



Note: 2015 estimates except for natural gas (2014) and steel (2013).
 Source: Investment Strategy Group, Bloomberg, British Petroleum, US Energy Information Administration, Goldman Sachs Global Investment Research, US Department of Agriculture, World Bureau of Metals Statistics.

There is reason to believe that the quality of data coming out of China will improve over time. At the International Monetary Fund’s (IMF’s) annual meetings in Lima, Peru, in October 2015, China announced that it had subscribed to the IMF’s Special Data Dissemination Standard.²⁶ In the meantime, however, we remain circumspect about the quality of its reporting.

Given the unreliability of data and limited transparency with respect to policy objectives and decision-making processes, one may well ask how the Investment Strategy Group can provide investment recommendations with some degree of confidence. On this topic, we are reminded of our discussion with Pieter Bottelier, senior adjunct professor at Johns Hopkins University’s School of Advanced International Studies and a China scholar: He warned that “anyone who speaks with great certainty [about China] needs their head examined.”²⁷ We agree. There is a range of confidence intervals around all our views. For example, we have greater confidence that China will maintain reasonable growth over the next year or so. We also have greater confidence that China will not successfully rebalance its economy toward consumption without lowering long-term growth targets. Similarly, we believe China

will not challenge US preeminence in this century and is unlikely to escape the “middle-income trap” (where middle income is defined as GDP per capita between 10% and 40% of US levels based on Geary-Khamis dollars) over the next decade. However, we have limited confidence regarding whether actual 2015 real GDP growth was 6.5%, 5.5% or even less. We have even less confidence regarding whether the renminbi will be devalued by 5%, 10% or 15% by the end of 2016. Such uncertainty has been factored into our investment recommendations. We proceed with caution.

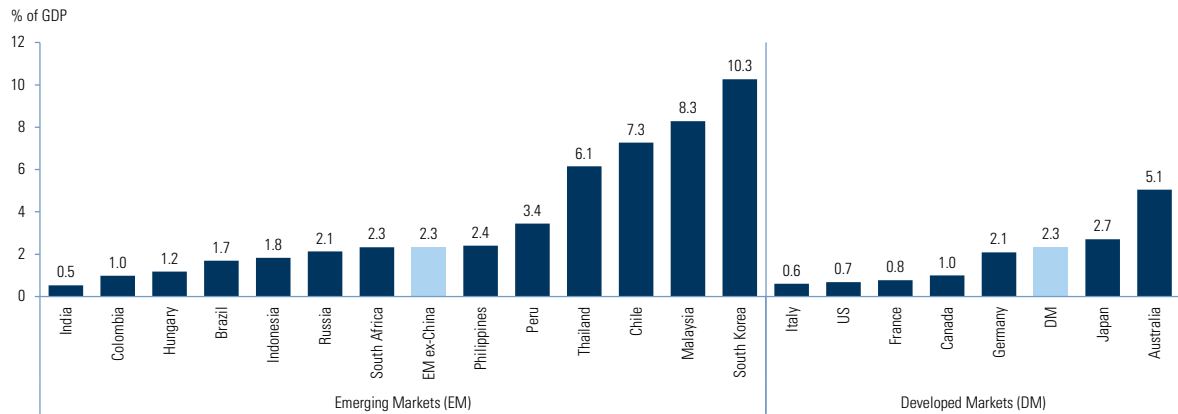
How China Matters to the Rest of the World

In mid-2013, our colleagues in Goldman Sachs Equity Research wrote, “China has provided several shocks to the world: cheap labor and hence cheap goods, cheap capital via export of excess savings, and lastly, a massive demand shock for commodities, particularly basic commodities.”²⁸ How the tide has turned. Today, policymakers, economists and investors worry that China is on the verge of providing a major deflationary shock to the rest of the world. At her September 2015 press conference, Federal Reserve Chair Janet Yellen referenced “heightened concerns about growth in China” as one of the reasons for not raising interest rates.²⁹ She expressed concern about



Exhibit 5: Exports to China as a Share of GDP

The impact of a China slowdown on developed and emerging markets has been overstated.



Data from Q3 2014 through Q2 2015.

Note: Based on merchandise exports.

Source: Investment Strategy Group, IMF.

the spillover effects of slower growth in China to emerging markets, to Canada as an important US trading partner, and to the US itself.

Let us examine the salient facts about China's economy to see how its slowdown can affect other economies and financial markets. We note that this impact cannot be measured precisely because data is not available across all countries and sectors. Most importantly, we cannot, *ex ante*, know the impact of a slowdown in China on risk aversion and market sentiment.

There is no question that China matters to the rest of the world. The question is how much it matters and whether the volatility in global financial markets has been commensurate with the direct and indirect economic impact of a slowdown in China. China is the second-largest economy in the world, as measured by its GDP of \$11.4 trillion. It is the most populous country in the world, with 1.375 billion people. Most importantly, China accounts for 13% of global exports and 10% of global imports. Its demand accounts for 50–60% of the global production of iron ore, nickel, thermal coal and aluminum, and a significant share of copper, tin, zinc, steel, cotton and soybeans (see Exhibit 4). While its imports of commodities make up a smaller percentage of global production, we believe total demand is more relevant since excess production

relative to local Chinese demand will have a dampening effect on relevant commodity prices globally, especially when the excess production is exported. Witness the preliminary decision by the US Commerce Department to impose 236% duties on imports of corrosion-resistant steel from China, due to what the US steel industry has called "illegal and unfair practices."³⁰ ArcelorMittal's third-quarter 2015 earnings report also cited low international steel prices "driven by unsustainably cheap Chinese exports."³¹

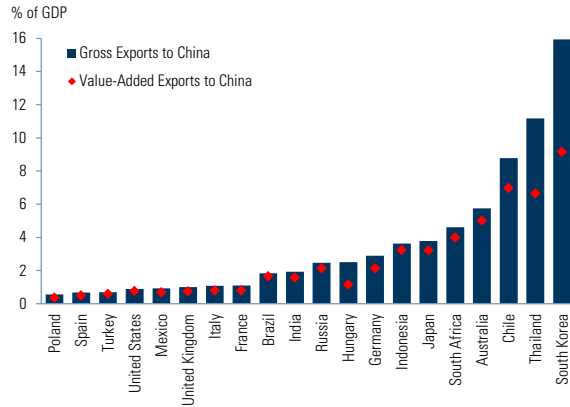
China has also been an export market for many developed and emerging market countries. As shown in Exhibit 5, exports to China account for 2.3% of developed markets' GDP; in Australia, exports to China are much higher, at 5.1% of GDP. Of Australia's total merchandise exports, over one-third are exported to China. In the US, exports to China account for just 0.7% of GDP. Merchandise

"Anyone who speaks with great certainty [about China] needs their head examined."

—Pieter Bottelier, Senior Adjunct Professor at Johns Hopkins University

Exhibit 6: Exports to China

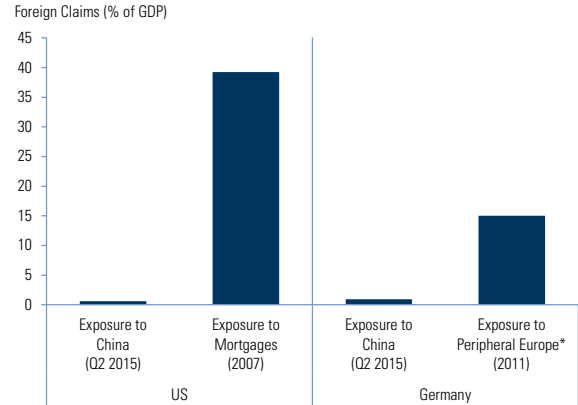
Exposure based on value-added exports is lower than gross exports imply.



Data as of 2011 (latest available).
Source: Investment Strategy Group, OECD.

Exhibit 8: Banking Sector Exposures

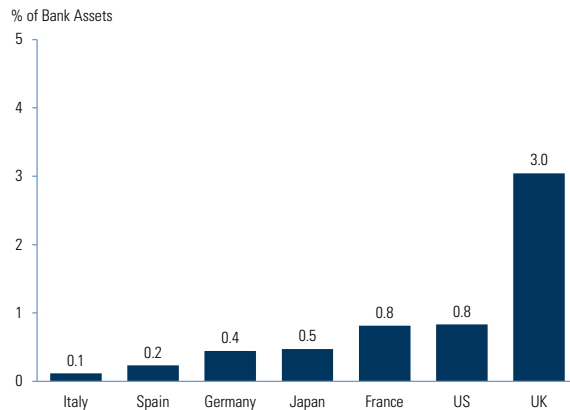
US and German banks are not meaningfully exposed to China.



Source: Investment Strategy Group, Bank for International Settlements, Federal Reserve.
* Claims on Greece, Ireland, Italy, Portugal and Spain.

Exhibit 7: Banking Sector Exposure to China

Loans to China are only a relatively small share of developed market banks' assets.



Data as of Q2 2015.
Note: Based on consolidated claims on China on an ultimate risk basis as a share of total assets.
Source: Investment Strategy Group, Bank for International Settlements.

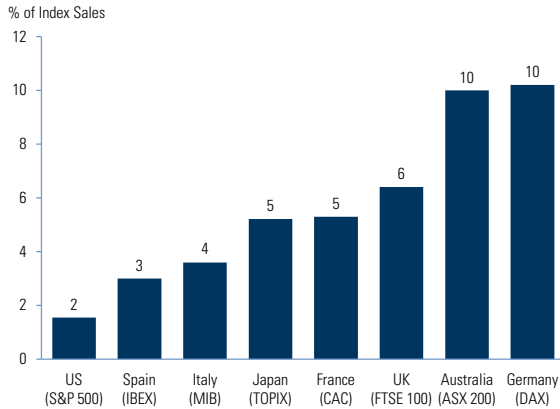
exports to China also account for 2.3% of emerging markets' GDP, reaching as high as 10.3% in South Korea. Of South Korea's total exports, one-quarter are exported to China. We note that exports to China as a share of GDP are even higher in countries such as Oman and Angola, but their combined GDP is less than 0.3% of world GDP.

Hence, the share of GDP affected by a China slowdown is not large in either developed or emerging market economies, at 2.3% in each case. Furthermore, these trade linkages overstate the true economic exposure because many exports to China are reprocessed and exported outside China. In their report "China's Changing Growth: Trade Spillovers to the Rest of Asia," our colleagues in GIR use value-added exports to China as a more effective measure of true economic exposure.³² For example, while exports to China account for 5.1% of Australia's GDP, about one-third of this exposure is to final demand outside China, i.e., China is reprocessing those Australian goods and re-exporting them to other countries. As shown in Exhibit 6, value-added exposure to China is often less than the gross trade exposure.

In addition to direct exposure through exports and commodity prices, global economies are exposed to a slowdown in China through their banking sectors' loans to China. This exposure is limited, as shown in Exhibit 7. Exposure in the developed economies ranges from a low of 0.1% of bank assets in Italy to a high of 3.0% in the UK (primarily driven by HSBC Holdings PLC and Standard Chartered PLC), with a modest 0.8% in the US. To put these numbers in context, US and German banks' exposure to mortgages and to European sovereign debt, respectively, was substantially higher (see Exhibit 8).

Exhibit 9: Sales Exposure to China

US companies are less reliant on China than their developed market peers.



Data as of 2014.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

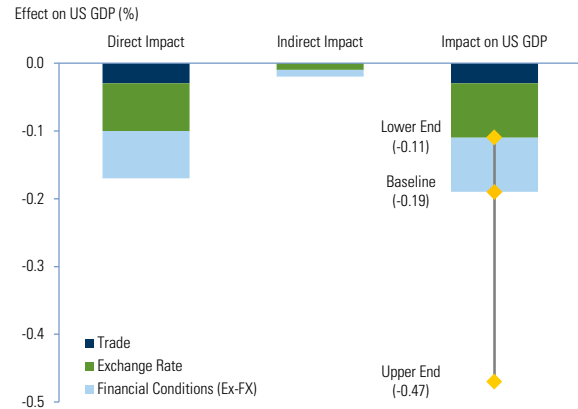
Countries are also exposed to a slowdown in China through their corporate sectors. Large multinational companies derive sales and profits from goods manufactured and sold in China and from services provided in China; this corporate profit is not captured by exports. Lower profits stemming from a slowdown in China have a second-order effect on global economies as equity markets may weaken, resulting in tighter financial conditions.

Our colleagues in GIR have estimated the sales exposure of companies represented by major equity market indexes. As shown in Exhibit 9, this exposure ranges from 2% in the US to as much as 10% in Germany and Australia. We must note, however, that it is very difficult to quantify the exposure of major markets' corporate sectors to China with much precision. Many major multinational companies aggregate their Asia-Pacific sales and do not break out China separately. Therefore, estimates of sales to China, in all likelihood, understate actual sales. Moreover, earnings, which are most relevant, are not attributed to specific regions, so we have to turn to the national income accounts for a gauge of profit exposure to China. Such exposure is much smaller, measuring 0.7% in the US and about 3% in Japan.

We conclude that the direct and indirect economic and banking sector exposures to China are not of a scale to have significant impact on major economies and financial markets. The

Exhibit 10: Impact of a 1% Reduction in Chinese GDP on US Real GDP at End-2016

Financial conditions will ultimately determine the drag on the US economy.



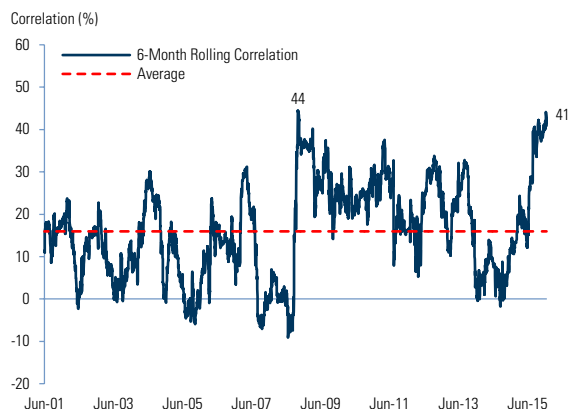
Data as of 2015.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

substantially greater risk from a slowdown in China emanates from its impact on financial markets and investor risk aversion. In their report “The Drag from China: Many Channels, Limited Impact,” our colleagues in GIR break down the impact of a slowdown in China on the US economy by trade, exchange rate and financial conditions.³³ Some of the impact is direct, as in the case of exports to China, and some of the impact is indirect, such as exports to other developed and emerging market countries that do business with China. As shown in Exhibit 10, the direct impact is nearly eight times as great as the indirect impact. But most importantly, the impact of financial conditions may be as big as—if not bigger than—the direct impact. The confidence interval around the impact of financial conditions is wide: if the impact is negligible, a 1% reduction in Chinese GDP lowers US GDP by 0.11% by the end of this year; if the impact is significant, US GDP declines by 0.47%. In such a scenario, the impact of financial conditions will dwarf the direct and indirect impact of economic and banking sector factors.

The Organisation for Economic Co-operation and Development's (OECD's) latest semiannual “Outlook” also concludes that the drag from changes in financial conditions could be greater than the economic impact.³⁴ It estimates that a two percentage point decline in domestic demand growth in China would slow global growth

Exhibit 11: Correlation Between US and Chinese Equities

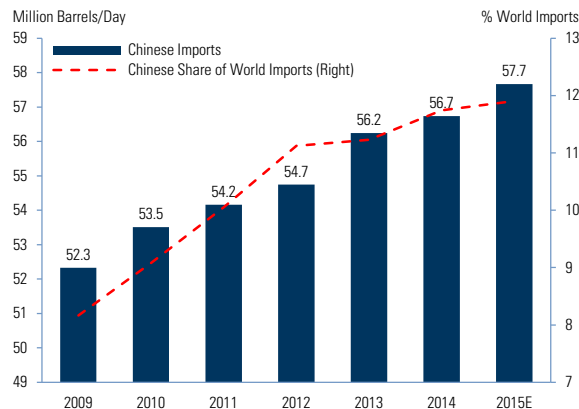
The correlation has risen to levels last seen during the financial crisis.



Data through January 2016.
Source: Investment Strategy Group, Datastream.

Exhibit 12: Chinese Imports of Crude Oil

Imports have increased steadily over the last several years.



Data through 2015.
Note: ISG estimate for 2015.
Source: Investment Strategy Group, US Department of Energy.

by 0.33% per year for two years. However, if such a decline negatively impacts the financial markets, global growth would slow by 0.75–1% per year for two years. The IMF also highlighted China’s financial market impact in its October 2015 “Global Financial Stability Report”: “The main spillover channels from China to the rest of the world remain economic growth and trade, but confidence channels and the direct financial linkages have also become stronger since 2010.”³⁵

We believe that developed financial markets will, in all likelihood, overreact to deteriorating conditions in China. Part of the overreaction will be driven by expectations of further deterioration in emerging markets, especially if a continued slowdown in China corresponds to further depreciation of the renminbi. However, some of the overreaction will be driven by the inevitably greater focus of market participants on the latest headlines. As Nobel Laureate in Economics Daniel Kahneman has pointed out, the availability of information that readily comes to mind affects how individuals formulate their investment views.³⁶

In the second quarter of 2015, the key theme highlighted by the Goldman Sachs “S&P 500 Beige Book” report was “earnings at risk from Chinese slowdown.”³⁷ The report highlighted companies such as General Motors Co., Ford Motor Co., Caterpillar, Inc., United Technologies

Corp., Johnson & Johnson Inc. and others in the industrial and commodity-linked sectors. The third-quarter “S&P 500 Beige Book” report highlighted examples of companies with exposure to China in the information technology and consumer discretionary sectors, such as Apple Inc., McDonald’s Corp. and Starbucks Corp., with very favorable commentary on their sales to China. Since these names readily come to mind when we think of China, it is likely that the US equity market would overreact to news of an economic slowdown in China relative to the country’s 2% (or slightly higher) share of S&P 500 sales and the meager 0.7% share of profits in the US economy.

The increase in the correlation between US and Chinese equities in recent years reinforces this notion. As shown in Exhibit 11, the correlation has now reached levels last seen during the global financial crisis, and its increase is greater than what would be suggested by the direct and indirect economic impacts.

We also believe that the attribution of the broad-based decline in commodity prices to the slowdown in China has been overstated. Some commodities, such as the ones our colleagues in GIR call the “capex commodities”³⁸ (commodities used in heavy industry to create infrastructure, such as iron ore, steel, cement and copper), are affected by the slowdown in China. Others, such as what

they call the “opex commodities” (commodities used to operate the economy, such as oil and natural gas), have not declined because of the slowdown in China.

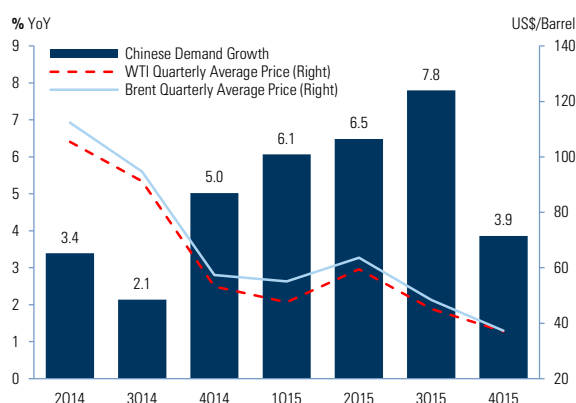
A closer examination of the supply and demand for crude oil best illustrates this misattribution of the price declines. Crude oil is the largest commodity produced and consumed in the world; it accounts for about half of global commodity production. And like that of most other commodities, its price has declined significantly over the last several years: 63% from its post-crisis peak in April 2011 and 59% since its most recent peak in July 2014, as measured by Brent. Yet, as shown in Exhibit 12, Chinese demand has increased steadily since 2011. Exhibit 13 provides additional evidence that China is not the driver of prices in the most important commodity in the world. Since the second quarter of 2014, when oil prices peaked, Chinese demand has increased by 8.2%, or 0.9 million barrels per day, according to the International Energy Agency (IEA). Over this period, crude oil prices have dropped by about 65%. Clearly, China has not been the price setter as the marginal consumer of oil; in fact, the two-year rolling correlation between Chinese demand and crude oil prices is at -0.82 and at its lowest since 1999.

As Michael Pettis, professor at Peking University in Beijing and author of *The Great Rebalancing*, has so aptly stated, “China, like Japan in the 1980s, is the biggest arithmetical component of growth, but with its huge current account surplus, it creates negative demand. The US is the engine of global growth because it provides net demand.”³⁹ Michael Pettis concurs that market participants have overestimated the impact of a slowdown in China on the rest of the world. In its latest country report, the IMF also points out that the near-term slowdown in China will have a “relatively minor” impact on other major economies.⁴⁰

We conclude that while China’s economic slowdown matters to the rest of the world, the extent of the impact has been overestimated by the financial markets. Hence, the developed financial markets have overreacted and will probably continue to overreact in the near term to any unanticipated changes in the economy or policy measures in China.

Exhibit 13: Chinese Demand Growth vs. Oil Prices

Oil prices have fallen despite healthy demand from China.



Data through Q4 2015.
Source: Investment Strategy Group, Bloomberg, IEA.

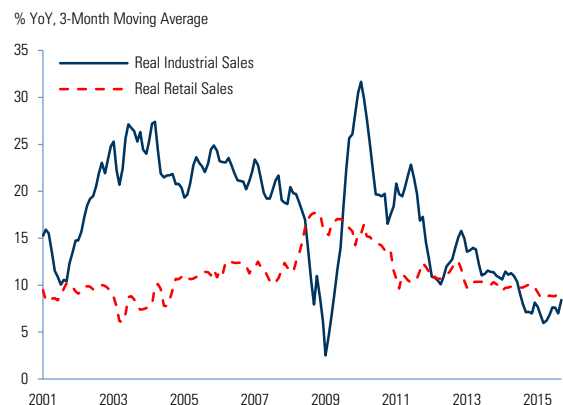
Eventually, the market reaction may converge to the real economic impact, but in the meantime, any unanticipated slowdown will negatively impact the financial markets. Moreover, limited transparency in the decision-making process and the rationale for certain policy measures heightens investor uncertainty, which inevitably reveals itself in the form of higher market volatility. Of course, in the extreme case of a hard landing (less-than-3% growth rates), along with a sudden currency depreciation of more than 15% (still substantially less than the 60% depreciation of the Brazilian real and the Russian ruble), global economies and financial markets would be severely impacted.

“China, like Japan in the 1980s, is the biggest arithmetical component of growth, but with its huge current account surplus, it creates negative demand. The US is the engine of global growth because it provides net demand.”

—Michael Pettis, Professor at Peking University

Exhibit 14: Industrial and Retail Sales in China

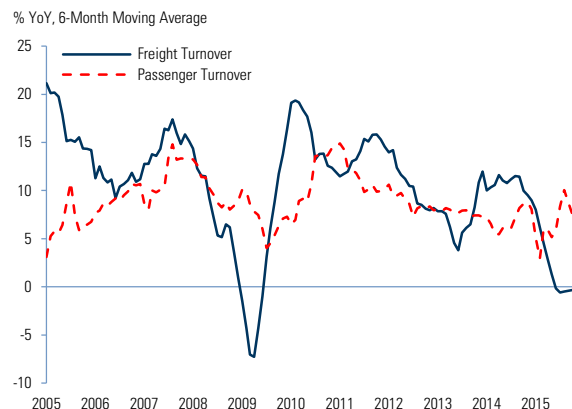
Growth in industrial sales has slowed sharply in recent years.



Data through November 2015.
Source: Investment Strategy Group, CEIC.

Exhibit 15: Passenger and Freight Turnover in China

Freight traffic is declining while passenger traffic is still growing at healthy rates.



Data through November 2015.
Source: Investment Strategy Group, CEIC.

Is China Growing at 3%, 7% or Somewhere In Between?

The interest in China's GDP data has been extensive. As our colleagues in GIR wrote in a September 2015 report: "To state the obvious, China is top of mind."⁴¹ A Google Trend search shows that the increase in interest in a China slowdown was greater than that in a Federal Reserve interest rate hike in 2015.

There is a wide divergence of estimates of China's current growth rate. At the higher end of the spectrum, the IMF, the World Bank and the Institute for International Finance estimated real GDP growth in 2015 at 6.8%, 7.1% and 6.8%, respectively. Nicholas Lardy of the Peterson Institute also believes that the growth rate is closer to the official figure of just below 7%.⁴² At the low end of the spectrum, Marc Faber, the Hong Kong-based editor and publisher of the "Gloom, Boom & Doom Report," estimates growth of 3–4%.⁴³ Bloomberg measures the Li Keqiang Index at 2.8%. The EAG China Activity Index and the GIR Current Activity Indicator grew on average 5.5% and 5.6%, respectively. We believe the latter two activity indicators are more representative of the underlying real growth rate in China.

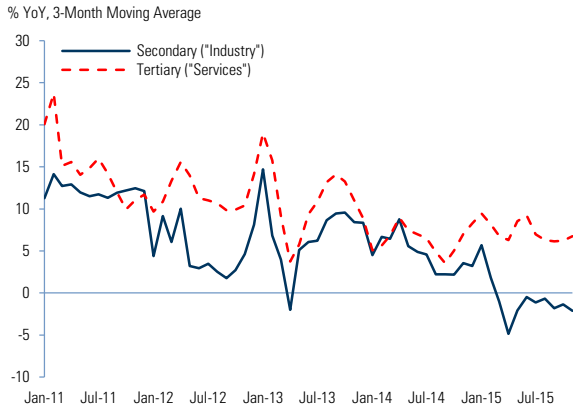
China's growth is a tale of two economies: the older investment-oriented and export-driven economy, which has slowed down considerably, and the consumer-oriented economy, which is growing at a steadier pace, albeit more slowly

than its average pace since 2000. This divergence can be seen across several measures. For example, as shown in Exhibit 14, the old economy as measured by industrial sales has dropped from a growth rate of 20–30% per year in the 2000s to a modest growth rate of about 7%, while the consumer-oriented economy as measured by retail sales has slowed more modestly from a growth rate in the high teens to about 9%. Similarly, as shown in Exhibit 15, the old economy as measured by freight turnover has dropped sharply from peak growth rates of 15–20% to an actual contraction, while passenger turnover has decelerated from a peak growth rate of about 15% to around 7%. The divergence in the two economies can also be observed in electricity consumption—one of the indicators in the Li Keqiang Index. As shown in Exhibit 16, electricity consumption in the secondary sector (comprising mining, manufacturing, construction and utilities) is actually declining on an absolute basis from double-digit growth rates just three years ago, whereas electricity consumption in the tertiary sector (comprising services such as hotels, real estate, financial services, transportation, storage and post, and other such services) increased by 7.5% in 2015.

Data on crude oil and refined products consumption is most illustrative of this divergence. As shown in Exhibit 17, consumption of gasoline and kerosene increased by 19% and 17% in 2015,

Exhibit 16: Electricity Consumption by Industry

Electricity consumption is contracting in the industrial sector, but rising in the service sector.



Data through November 2015.
Source: Investment Strategy Group, CEIC.

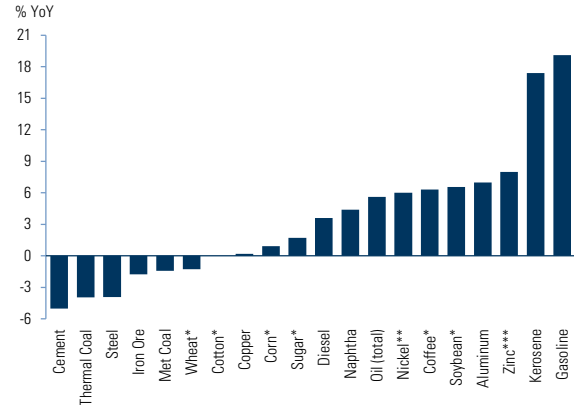
respectively, while naphtha and diesel consumption increased by 4%, again reflecting the higher growth rates of Chinese consumption relative to Chinese industry.

The tale of two economies can also be seen in the growing share of the tertiary sector as a percentage of GDP. The secondary sector's share has been declining steadily from a recent peak of 47.4% of GDP in 2006 to a much lower 40.5% in 2015. The tertiary sector, on the other hand, has been growing steadily and has now reached a high of 50.4% of GDP. It is therefore reasonable to assume that as the role of services increases and the role of industry decreases, data on the industry-oriented components of the economy will not adequately reflect the growth in the whole economy. As discussed earlier, one has to consider multiple sets of data to develop an approximate picture of China's economic growth rates, especially if consumption and service sector data is even less robust than more traditional industrial data.

Clearly—and inevitably—growth rates in China are slowing down. As early as 2003, our colleagues in GIR forecast that China's growth rate would slow to mid-single digits in the 2010–20 period.⁴⁴ In "Asiaphoria Meets Regression to the Mean," Lant Pritchett and Larry Summers, both of Harvard University, warn that "abnormally

Exhibit 17: 2015 Growth in Chinese Demand for Commodities

Demand for industrial commodities is weak.



Data as of 2015.
Note: Goldman Sachs Global Investment Research estimates.
Source: Investment Strategy Group, CRU, Goldman Sachs Global Investment Research, International Energy Agency, US Department of Agriculture, Wood Mackenzie.
* Estimated 2015 annual consumption growth rate (monthly data not available).
** Calculated from apparent stainless steel demand.
*** Zinc galvanizing production.

rapid growth is rarely persistent.”⁴⁵ Moreover, as countries become richer, their per capita income growth rates slow, according to the conditional convergence growth theory.⁴⁶ This can be observed in Exhibit 18 on page 18, which shows that most countries in Asia that relied on an export-led growth model driven by cheap currency and cheap labor experienced rapid growth rates in the early years of development, but inevitably slowed down after a period of rapid growth. In our view, China will not be an exception.

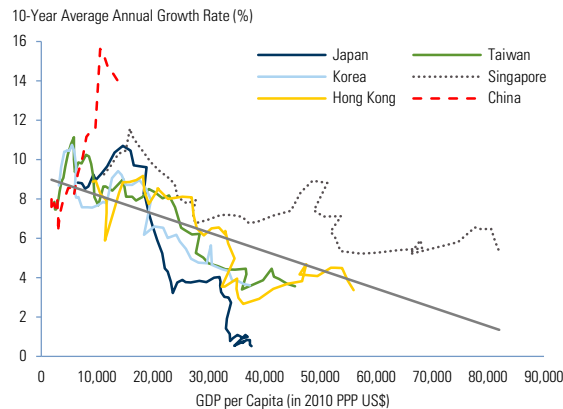
The key question is whether China can sufficiently rebalance its economy toward consumption without risking a significant, and hence destabilizing, slowdown. To answer this question, we first examine the extent to which China has rebalanced its economy.

“To state the obvious, China is top of mind.”

—Goldman Sachs Global Investment Research

Exhibit 18: Selected Countries—Average Growth vs. GDP per Capita

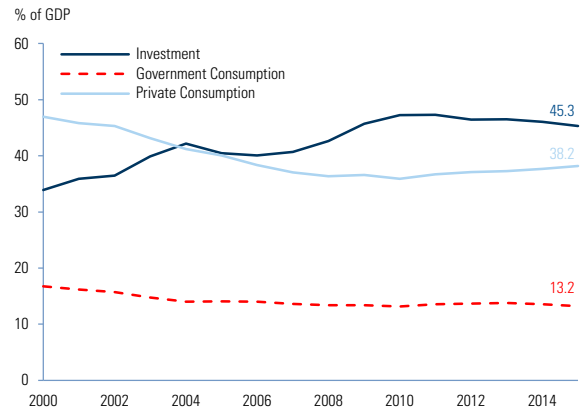
Growth in other Asian countries decelerated after a period of rapid growth.



Data through 2015.
Source: Investment Strategy Group, Conference Board, IMF.

Exhibit 19: Breakdown of Chinese GDP by Expenditures

China's economy remains "imbalanced."



Data through 2015.
Note: ISG estimates for 2015.
Source: Investment Strategy Group, Datastream, NBS.

Rebalancing the Chinese Economy

As early as March 2007, then-Premier Wen Jiabao highlighted the need to rebalance the Chinese economy away from an investment-led, export-driven economy toward a consumption-oriented economy when he told reporters at the National People's Congress that "the biggest problem in China's economy is that the growth is unstable, imbalanced, uncoordinated and unsustainable ... these are all pressing issues that need to be addressed as soon as possible or they will threaten China's economic growth ... The government must boost domestic demand, open markets and promote technological innovation."⁴⁷ In 2006, the latest year for which data was probably available at the time of Premier Wen Jiabao's comments, investment was 40% of GDP and total consumption was 52.3%, of which 14% was government consumption and 38.3% was private consumption. We estimate that at the end of 2015, investment stood at 45.3% of GDP and private consumption at 38.2% (see Exhibit 19). In spite of Premier Wen Jiabao's directive, the economy has not been rebalanced: investment has increased as a share of GDP, and private consumption has decreased slightly. At 45.3% of GDP, investment is high

relative to China's own history. It also exceeds peaks reached by other countries, including the "Asian Tigers" that pursued an investment-led and export-driven growth strategy (see Exhibit 20). Similarly, at 38.2%, household consumption as a share of GDP is extremely low both on an absolute basis and relative to other major emerging market and developed market countries (see Exhibit 21).

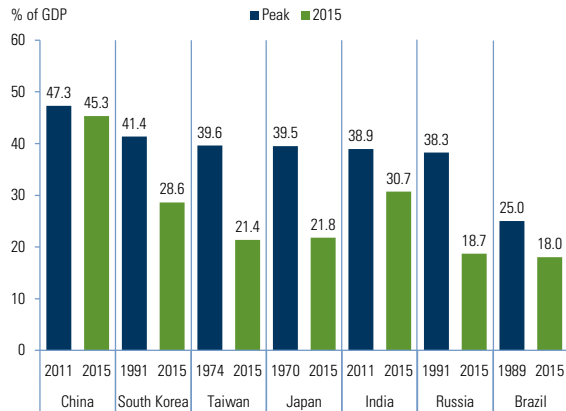
Looking at the most recent data, the long-term trend may finally be reversing. Investment as a share of GDP has declined from a peak of 47.3% in 2011, and consumption has increased from a trough of 35.9% in 2010. Furthermore, net exports have decreased from 8.7% of GDP in 2007 to an estimated 3.3% in 2015. Of course, given the general quality of the data, it may well be false precision to suggest a reversal in investment and

"The biggest problem in China's economy is that the growth is unstable, imbalanced, uncoordinated and unsustainable."

—Premier Wen Jiabao, March 2007

Exhibit 20: Investment as a Share of GDP

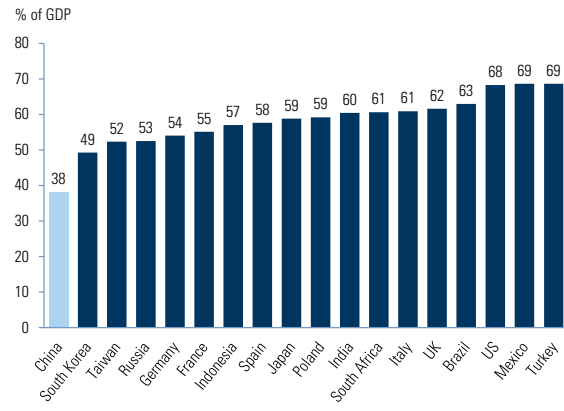
China's investment ratio is higher than the peak reached in other export-driven countries.



Note: Based on data since 1960. ISG estimate for China in 2015, IMF estimates for all other countries. Source: Investment Strategy Group, Datastream, IMF, OECD, national statistical agencies.

Exhibit 21: Private Consumption as a Share of GDP

Chinese household spending is low by international standards.



Data as of 2015. Note: ISG estimate for China, IMF estimates for all other countries. Source: Investment Strategy Group, Datastream.

consumption trends based on changes of around two percentage points.

However, we believe other data confirms an increase in consumption. For example, consumer-oriented multinational companies have reported strong sales in China. In the US, Apple Inc., Nike Inc., Starbucks Corp. and Under Armour Inc. have all highlighted their strong sales in China in third-quarter 2015 earnings reports. As Tim Cook, CEO of Apple, said during his third-quarter 2015 earnings call with analysts, “frankly, if I were to shut off my web and shut off the TV ... I wouldn't know there was any economic issue at all in China.”⁴⁸ Similarly, in Germany, Daimler AG reported a 53% increase in its sales to China after launching the redesigned A-Class compact car and the GLC and GLE sport-utility vehicles in September 2015, and Adidas AG reported a 48% increase in sales. In Japan, Honda Motor Co. reported a 33% increase in sales in 2015 through October, and Fast Retailing Co. (owner of Uniqlo) reported an increase of 46% in revenues from Greater China.

China's Golden Week sales were substantially stronger in 2015 as well. According to the Ministry of Commerce, sales at restaurants and retailers were 11% higher than in 2014, box office revenues were 70% higher and major home appliance sales were 53% higher.⁴⁹

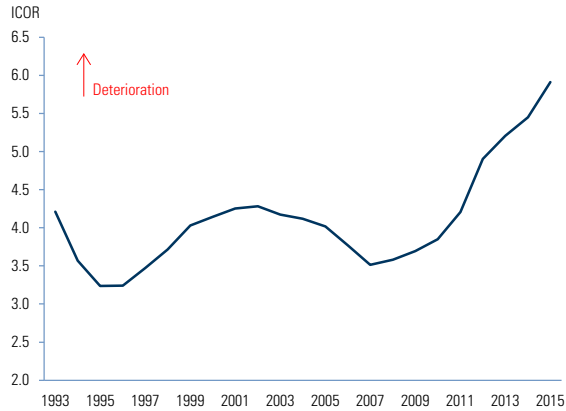
The tale of the two economies may well be pointing toward steady—albeit very slow—rebalancing.

The most important question is whether the Chinese economy can be rebalanced to a more sustainable mix of consumption and investment while maintaining growth at the levels targeted by the Communist Party leadership. At the Fifth Plenum of the 18th Central Committee of the Communist Party of China meeting in October 2015, President Xi Jinping set a goal of 6.5% growth for China's 13th Five-Year Plan for 2016–20.⁵⁰ He also confirmed that China needs to “solve the problem of unbalanced, uncoordinated and unsustainable development.”⁵¹

We have simulated a number of scenarios to address the question of whether China can rebalance its economy without slower growth. There are several variables to consider. For example, what is a reasonable target for investment as a share of GDP? Given that investment was 40% of GDP when Premier Wen Jiabao commented on the imbalanced economy, we believe that 40% is certainly a reasonable target for China—although still high by global standards, as shown in Exhibit 20. Targeting a lower share of investment is too onerous and therefore unrealistic. Similarly, when should this target be achieved? By 2022, at the end of President Xi Jinping's term? What

Exhibit 22: China's Incremental Capital-Output Ratio

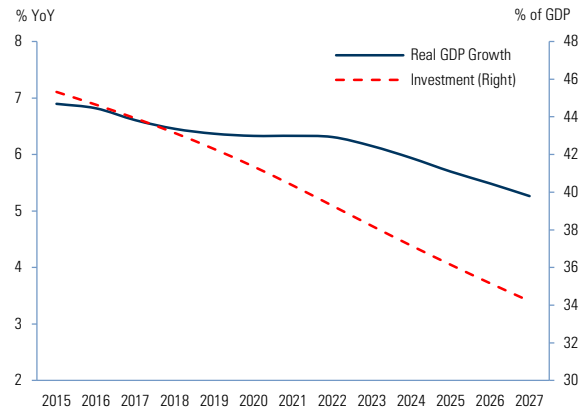
China needs an increasing amount of investment to generate the same rate of GDP growth.



Data through 2015.
Source: Investment Strategy Group, IMF.

Exhibit 23: Scenario 1—GDP Growth and Investment Share of GDP

Faster TFP growth would support a more gradual decline in GDP growth rates.



Forecast through 2027.
Source: Investment Strategy Group, NBS.

total factor productivity (TFP)—a measure of how efficiently labor and capital are used as inputs to generate output—should we assume: the average historical rate achieved over the last five years, or a higher number based on an assumption of steady progress on structural reforms? Alternatively, we can assume that progress on reforms will be harder to achieve, thereby lowering TFP growth. We note that a decrease in TFP growth also implies continued deterioration in the incremental capital-output ratio (ICOR)—in effect, the output yield on every incremental unit of capital—given its steady deterioration since 2008, as shown in Exhibit 22.

We present two of the scenarios below since we think they adequately illustrate the difficulties China's leadership faces in rebalancing the economy to more consumption-driven growth while maintaining high enough growth rates to meet the Communist Party leadership's goal of "improving people's lives so that they can truly benefit from

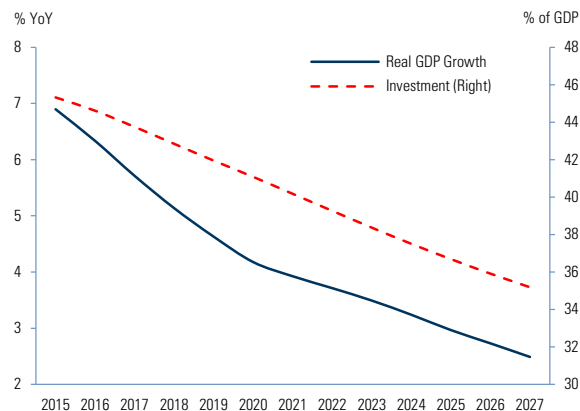
living in a moderately prosperous society."⁵² The two scenarios are as follows:



Services are a growing share of the Chinese economy, while the industrial sector's share is steadily declining.

Exhibit 24: Scenario 2—GDP Growth and Investment Share of GDP

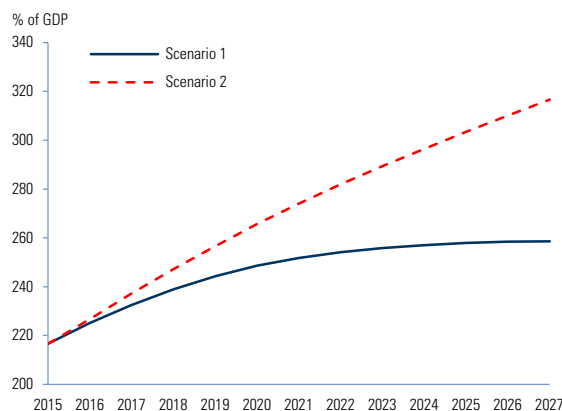
Slow progress on reforms would lead to a sharper deceleration in GDP growth.



Forecast through 2027.
Source: Investment Strategy Group, NBS.

Exhibit 25: Two Scenarios for China’s Debt-to-GDP Ratio

Debt will continue to increase from already high levels in both scenarios.



Forecast through 2027.
Source: Investment Strategy Group, NBS.

- Scenario 1:** Investment as a share of GDP declines to 40% by 2022 and real GDP grows on average 6.5% between 2016 and 2020 (see Exhibit 23), given the stated goal of the 13th Five-Year Plan. Consumption grows at 8.5% and TFP growth rises from an estimated 1.6% in 2015 to 2.5% by 2022. Most importantly, debt (as measured by total nonfinancial debt) increases from 218% of GDP to 257% by 2022.
- Scenario 2:** Investment as a share of GDP declines to 40% by 2022, but TFP growth also declines because of slow progress on reforms. Real GDP growth slows to an average of 4.8% (see Exhibit 24). Consumption is still growing at the robust level of 6.7%. Most importantly, debt reaches 285% of GDP by 2022 and exceeds 300% by 2024.

In most of the scenarios we examined, total gross debt increases as a share of GDP, as shown in Exhibit 25. Such increases are a source of considerable risk in the future. In fact, the IMF has described the current level of debt in China as excessive and a source of vulnerability that could result in a “disorderly correction and/or a protracted period of slower growth.”⁵³

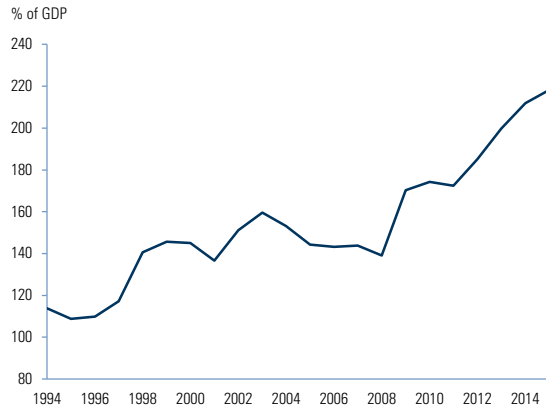
Identifying the Tipping Point in Chinese Debt

It is virtually impossible to identify a specific debt-to-GDP level or time period that will “tip” the Chinese economy into a financial crisis. The economy is evolving and factors that affect the tipping point are constantly changing. For example, as China rebalances its economy and implements some reforms, it faces great uncertainties: the growth rate may well be slower than the stated goal of 6.5%, SOE reform might be harder to implement, and TFP growth may be much lower, all of which would lead to a faster rise in debt-to-GDP. We also have to treat the exact level of debt with a degree of caution, given questions raised earlier about the quality of data. Finally, we note that we agree with the prevailing view that much of the debt of SOEs and of local government financing vehicles (LGFVs) has the implicit guarantee of the central government; it is highly unlikely that the central government will let several major SOEs default on their debt.

It is virtually impossible to identify a specific debt-to-GDP level or time period that will “tip” the Chinese economy into a financial crisis.

Exhibit 26: China's Debt-to-GDP Ratio

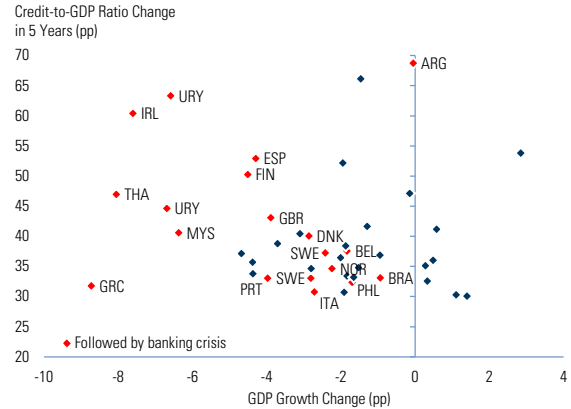
China's debt burden has risen rapidly, especially since the 2009 stimulus.



Data through 2015.
Source: Investment Strategy Group, Bank for International Settlements, IMF.

Exhibit 28: Change in Credit/GDP vs. Change in GDP Growth Rates

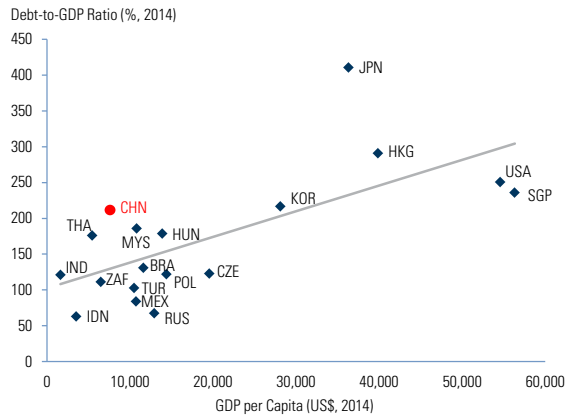
Credit booms are typically followed by a financial crisis or a prolonged slowdown in GDP growth.



Data as of 2015.
Note: Based on data since 1960 for Argentina, Australia, Belgium, Brazil, Denmark, Finland, Greece, Hong Kong, Indonesia, Ireland, Italy, Japan, Malaysia, Netherlands, New Zealand, Norway, Philippines, Portugal, Singapore, Spain, Sweden, Switzerland, Taiwan, Thailand, UK, Uruguay and Vietnam.
Source: Investment Strategy Group, IMF.

Exhibit 27: GDP per Capita vs. Debt-to-GDP Ratio

China's debt is high compared with its low GDP per capita.



Data as of 2014.
Source: Investment Strategy Group, Bank for International Settlements, IMF.

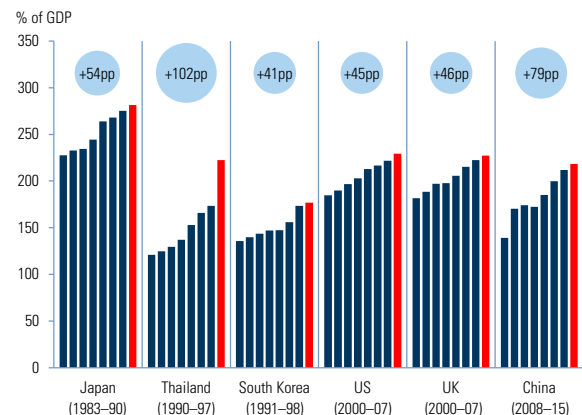
All that said, the rapid growth of China's debt load is cause for concern. Debt in China has grown by double digits over the last eight years, primarily driven by debt in the nonfinancial private sector, which is composed mostly of SOEs. As shown in Exhibit 26, the biggest year-on-year increase occurred in 2009, after the government responded to the global financial crisis by launching

a quasi-fiscal stimulus of RMB 4 trillion (\$570 billion) in November 2008. Such expenditures are generally dispersed over time, but in order to convey the magnitude of the stimulus, we compare it to the GDP at the time of the announcement; it was equivalent to 12.6% of China's 2008 GDP. To provide some context relative to other such programs, in the US, the authorized amount of \$700 billion for the Troubled Asset Relief Program (TARP) was 4.8% of 2008 GDP and the \$789 billion for the American Recovery and Reinvestment Act (ARRA) was 5.5% of 2009 GDP.

Let us begin by comparing China's debt-to-GDP ratio to its GDP per capita. As shown in Exhibit 27, China's debt burden is very high relative to its low GDP per capita and is an outlier relative to countries with similar GDP per capita levels. Its debt-to-GDP ratio is on par with those of the US and Singapore, where GDP per capita is about seven times as high. Comparing the magnitude and pace of the increase in China's debt-to-GDP ratio to those of other countries, we see that China's increase is among the highest in recent history. Every major country with a rapid increase in debt has experienced either a financial crisis or a prolonged slowdown in GDP growth (see Exhibit 28). History suggests that China will face the same fate.

Exhibit 29: Total Gross Debt and Cumulative 8-Year Increase

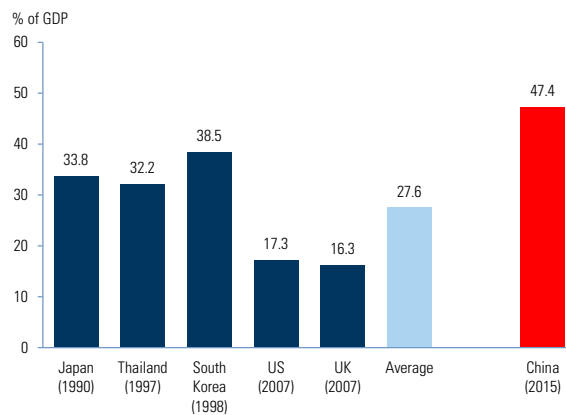
China's increase in debt relative to GDP is among the highest in recent history.



Data through 2015.
Note: Includes gross government, household and nonfinancial corporate debt.
Source: Investment Strategy Group, Bank for International Settlements, IMF.

Exhibit 30: Comparison of Gross National Savings at Crisis

China's high savings rate stands out.



Data through 2015.
Source: Investment Strategy Group, IMF.

We compare China to three of the Asian countries that experienced financial crises, as well as to the US and to the UK. As shown in Exhibit 29, these countries, with the exception of Thailand, had much lower increases in their debt-to-GDP ratios. Most also had lower levels of debt relative to GDP and, again with the exception of Thailand, were far richer than China at the time of their crises. China, however, has a very high savings rate relative to these countries, estimated to be 47.4% of GDP in 2015 (see Exhibit 30). In fact, China has the highest savings rate of any major country in the world. The average savings rate stands at 21.5% of GDP for developed economies and 25.4% for other emerging markets. A high savings rate was not a sufficient condition for South Korea to avoid a financial crisis in 1998, however. It was also far richer at the time of its crisis, with a GDP per capita that was about 45% higher than that of China today. In our view, the key difference is China's limited reliance on external financing and hence limited vulnerability to foreign capital flight. China is more likely to follow Japan's path than South Korea's: debt will continue to grow to higher levels for a few years, drawing on high domestic savings. But, just like Japan, we believe China will eventually face a

period of much slower growth, especially if it delays moving ahead on the structural reforms outlined in the Third Plenum of 2013, as discussed below. The problem for China is that Japan entered its period of slow growth as a much richer country in 1990, with a GDP per capita that was 2.5 times as high as that of China today.

China is indeed approaching a tipping point in its debt levels, but no one knows where it will be over the next several years. While we believe that the tipping point is not around the corner, we also recognize that China's model of maintaining growth by increasing investments that are, in turn, largely financed by debt is not sustainable. China faces an extremely challenging balancing act: It has to slow the pace of debt growth and investments but not by so much that its economy slows down too sharply. This balancing act depends on making further progress on structural reforms to accelerate TFP growth, which would enable China to boost GDP growth without increasing investments and growing debt-to-GDP.

Let us therefore turn to China's progress on its reform agenda to see whether optimism is warranted with respect to TFP and future growth.

Walled In: Balancing Reforms with Economic Stability

China faces the herculean challenge of rebalancing the economy toward consumption and a more sustainable growth path while avoiding a disorderly and destabilizing adjustment. Meeting this challenge requires successful implementation of the reform agenda put forth after the Third Plenum of 2013. If the reforms are implemented too quickly, China risks a sharp slowdown. If the reforms are implemented too slowly or not at all, China risks an unsustainable increase in debt relative to GDP that would push it past the tipping point into economic and, in all likelihood, political instability.

The stakes involved in a successful implementation of reforms in China have been covered widely. In “China Will Stumble if Xi Stalls on Reform,” Robert Zoellick, former president of the World Bank and Chairman of Goldman Sachs’ International Advisors, warned in the *Financial Times* of the risk of retreating to the pre-reform growth model.⁵⁴ Nicholas Lardy of the Peterson Institute believes that “without reforms that raise the ROA [return on assets] of state assets, and thus allow 6–7% growth with much less credit growth, the wheels eventually will fall off.”⁵⁵ The IMF has “urged steadfast and timely implementation of the envisaged reforms” to avoid an increase in “vulnerabilities in the fiscal, real estate, financial and corporate sectors” and reduce the risk of a “sharp and disorderly correction.”⁵⁶ The IMF estimates that reforms would boost China’s TFP growth by 1–1.5 percentage points by 2020.

Put succinctly, China cannot grow at a sufficiently strong pace without a significant boost to its TFP, and faster TFP growth is dependent on the successful implementation of the reforms of the Third Plenum of 2013. What are these reforms and how much progress has been made?

A Brief Review of the Reform Agenda

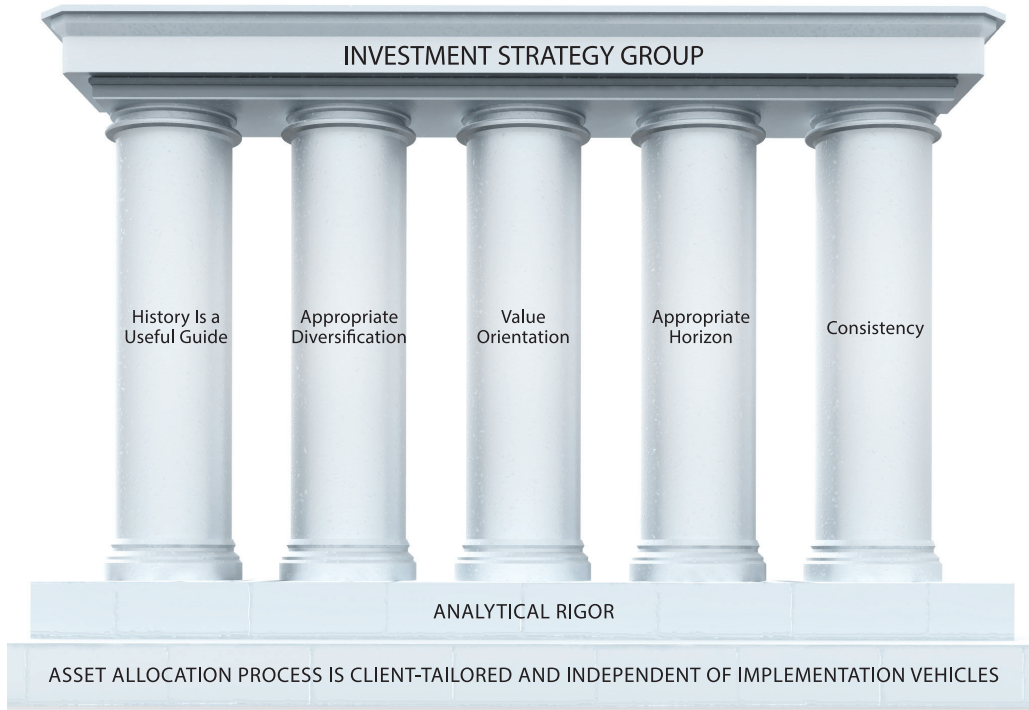
In November 2013, the Third Plenary Session of the 18th CPC Central Committee published a report called “The Decision on Major Issues Concerning Comprehensively Deepening Reforms,” or “the Decision” for short.⁵⁷ The report laid out a 60-point blueprint for reforms that would result in better allocation of resources, increase

efficiencies in the public sector, enhance the role of the private sector, move to market-driven pricing, reduce pollution, shift the demographic profile by changing the one-child policy and improve the rule of law, which encompasses the anti-corruption campaign. There were additional blueprints focusing on social, cultural, military and political reforms that are beyond the scope of this *Insight*.

The US-China Economic and Security Review Commission grouped the proposed economic reforms into six categories⁵⁸:

- **State-Owned Enterprises and the Private Sector:** While public ownership is the pillar of China’s economic system, the private sector has to be developed and SOEs have to be reformed. Proposals include modifying ownership structures; increasing dividend payouts; relying on market-driven pricing except in public utilities and services; and easing entry of the private sector into certain public sectors dominated by SOEs.
- **Financial System:** Increase the role of the market by liberalizing interest rates, the renminbi exchange rate and the capital account; permit private capital to establish small and medium-sized financial institutions; and establish a deposit insurance system and a market-based exit mechanism for financial institutions.
- **Fiscal Policy:** Improve the taxation system by generating more revenues from personal income, real estate and resource taxes; and improve the budget process with more transparency and better allocation of revenues and responsibilities between the central and local governments.
- **Rural Land Reform and *Hukou* Reform:** While maintaining the current system of rural land ownership by village collectives, farmers who lease the land for 30-year periods should have more property rights through better litigation and documentation to avoid coercive expropriation; farmers should be allowed to lease and mortgage their land to third parties. *Hukou* reform proposes changing the *hukou* residency permit system to allow migrants to obtain urban residence permits in order to access the social benefits of residency, including health care, education and housing. The initial focus is on small and medium-sized cities with stricter control in large cities and “megacities.”

Exhibit 31: Pillars of the ISG's Investment Philosophy



- **Market Access and Foreign Investment:** China should allow more inbound and outbound foreign investment and relax market entry requirements. Examples include opening up services such as finance, education, culture, medical care, building design, accounting, auditing and even “ordinary manufacturing industries.”⁵⁹ The number of free trade zones similar to the Shanghai Free Trade Zone (SFTZ) should be expanded.
- **Environmental Regulation:** “A comprehensive system is to be established, featuring the strictest possible rules to protect the ecological system.”⁶⁰ The proposal includes tougher punishment for polluters; stronger natural resource property right systems; and a shift from a GDP-based assessment of local officials to one that includes an audit on natural resources and the responsibility for environmental damage.

While the Decision did not provide a specific timetable for implementing the proposed reforms (except for the increase in dividend payouts from SOEs to 30%, to be achieved by 2020), it explicitly

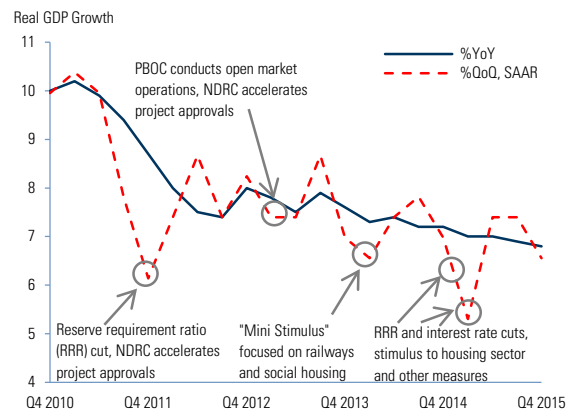
stated that “decisive results are to be obtained in key areas in 2020.”⁶¹ Now, more than two years later, China observers and market participants are concerned that slower growth, volatility in the local equity and currency markets, and significant capital outflows will slow the pace of reforms and further delay the rebalancing of the economy away from investment-led growth and toward consumption-led growth.

According to the *Wall Street Journal's* review of minutes of a September 2015 meeting between the National Development and Reform Commission (NDRC) and the Ministry of Finance, there is considerable debate within the government on whether to prioritize reform at the expense of slower growth, or to prioritize growth through traditional monetary and fiscal stimulus measures at the expense of reforms.⁶²

If history is a useful guide—which is one of the pillars of our investment philosophy, as shown in Exhibit 31—reforms are likely to take a back seat to growth. As shown in Exhibit 32 on page 26, every time growth slows below a stated target level, policymakers resort to monetary and fiscal stimulus. Common measures used over the

Exhibit 32: China Real GDP Growth vs. Stimulus Measures

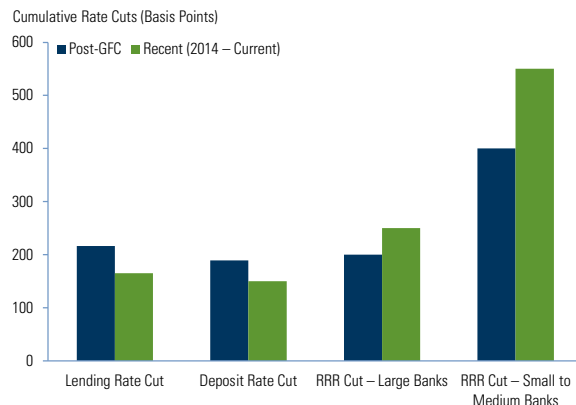
We expect Chinese authorities to continue to provide stimulus to prevent rapid deceleration.



Data through Q4 2015.
Source: Investment Strategy Group, Datastream, Bloomberg.

Exhibit 33: Recent Policy Stimulus vs. Post-Global Financial Crisis (GFC) Stimulus

Measures adopted over the last several months are in line with the post-GFC stimulus.



Data through November 2015.
Source: Investment Strategy Group, Datastream, CEIC.

last several years include boosting infrastructure investment, lowering lending rates and reducing bank reserve requirement ratios (RRRs). The same policy measures unfolded in 2015: The PBOC cut benchmark interest rates six times and lowered the RRR four times. As shown in Exhibit 33, these measures were broadly in line with those implemented after the global financial crisis. Lending has also been encouraged, with the ratio of new loans to GDP increasing by 3.1 percentage points.

Taking Stock of the Progress on Reforms

As we take stock of China's progress on its extensive reform agenda outlined in the Third Plenum report, we are reminded of the words of German poet and playwright Bertolt Brecht in "The Measures Taken":

*And yet your report shows us what is
Needed to change the world:
Anger and tenacity, knowledge and indignation
Swift action, utmost deliberation
Cold endurance, unending perseverance
Comprehension of the individual and
comprehension of the whole:
Taught only by reality can
Reality be changed.⁶³*

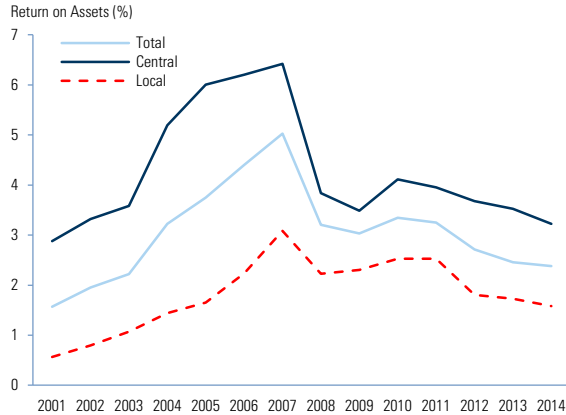
Implementing these reforms would be a herculean challenge under any circumstance. It is even harder when reforms are opposed by entrenched powers such as SOEs, local governments and others with a vested interest in the established system. We will examine six proposed reforms to gauge the level of progress: SOE reform, financial market liberalization, rural land reform and *hukou* reform, the one-child policy, environmental regulation and fiscal reform. We conclude that progress to date has been mixed at best.

SOE Reform

It is widely accepted that while China's SOEs control a significant number of assets, the return on those assets is unacceptably low given the magnitude of subsidies involved, including low interest rates, cheap land, lower tax rates and preferential access to resources. About 150,000 SOEs control over RMB 100 trillion (\$15 trillion) of assets in China, which, in aggregate and excluding financial institutions, returned 2.4% as of 2014. This compares with ROAs of 3.1% for Chinese listed companies (excluding financial institutions) and 6.4% for US companies (excluding financial institutions).

Exhibit 34: Return on Assets of Nonfinancial State-Owned Enterprises

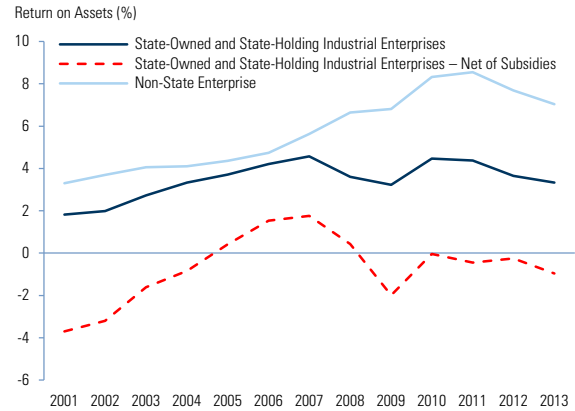
SOE profitability is very low, especially at the local level.



Data through 2014.
 Note: Based on all ~150,000 SOEs in China, regardless of size.
 Source: Investment Strategy Group, Ministry of Finance, Gavekal Dragonomics estimates.

Exhibit 35: Return on Assets of Industrial Enterprises

Excluding government subsidies, the profitability of China's SOEs is negative.



Data through 2013.
 Note: Based on 18,197 SOEs and 334,349 non-SOEs with revenue from principal business greater than RMB 20 million (\$3 million).
 Source: Investment Strategy Group, NBS, Unirule Institute of Economics.

Local SOEs, which account for half of these assets, have even lower ROAs, as shown in Exhibit 34.

According to the Unirule Institute of Economics in Beijing, SOE profits for the largest industrial enterprises between 2001 and 2013 totaled RMB 12.0 trillion (\$1.8 trillion).⁶⁴ These profits were garnered with the support of direct and indirect subsidies totaling RMB 12.9 trillion (\$2.0 trillion), implying a loss of RMB 900 billion (\$140 billion). As shown in Exhibit 35, post-subsidy profits have been positive for large nonfinancial SOEs in only 4 of the past 14 years. Importantly, the pre-subsidy returns have also been declining steadily since 2010.

Hence the urgency for SOE reform.

China observers who were optimistic about SOE reform as a main driver of improved efficiency in the economy after the Third Plenum are likely to be disappointed with the pace and direction of SOE reform. In September 2015, the CPC Central Committee and the State Council issued guidelines for SOE reform.⁶⁵ The main pillar of the reforms is changes to the management and supervision of SOEs, including a move

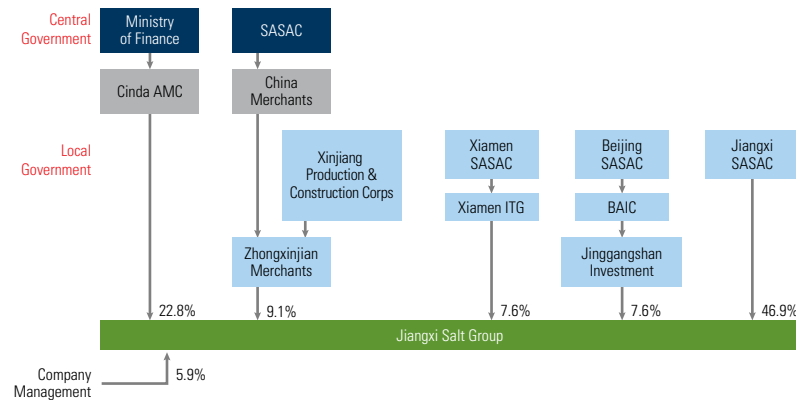
toward “mixed ownership,” with private investors expected to become shareholders in SOEs. New state asset management companies would own groups of SOEs in a structure somewhat based on the approach used by Temasek of Singapore, which manages Singaporean SOEs and other assets.

Gavekal Dragonomics, a research firm that specializes in China’s economy, contends that the involvement of four government agencies will hamper progress on reforms and result in contradictory objectives: the State-Owned Assets Supervision and Administration Commission’s (SASAC’s) focus is to consolidate SOEs and create national SOEs that can compete internationally; the NDRC’s focus is to drive “mixed ownership”; the Ministry of Finance’s goal is to increase dividend

While China’s SOEs control a significant number of assets, the return on those assets is unacceptably low given the magnitude of subsidies involved.

Exhibit 36: Shareholding of Jiangxi Salt After Mixed-Ownership Reform

Jiangxi's mixed ownership does not include any private capital – only more state entities.



Data as of December 2015.

Note: The percentages denote each entity's ownership stake in Jiangxi Salt Group.

Source: Investment Strategy Group, Gavekal Dragonomics.

payouts and rely on state asset management companies to own and run SOEs; and the Ministry of Human Resources and Social Security's function is to regulate compensation and limit pay for SOE executives who represent the State.⁶⁶ Some of these objectives appear inconsistent. For example, while mixed ownership is encouraged, the sale of shares to private investors must not entail "the loss of state assets." This may seem contradictory and forestall the sale of any assets, because surely some of the 150,000 SOEs are worth less than book value. Similarly, management of the SOEs will have two objectives that may be at odds. Company employees have to focus on maximizing profitability and increasing the value of state assets, and will be paid at market levels. However, senior managers such as an SOE chairman must represent the Communist Party and be compensated at levels consistent with government employment.

We provide three examples of SOEs implementing reforms to convey the range of measures undertaken to date.

In "The Mixed-Up Case of Mixed Ownership Reform," Gavekal Dragonomics uses the case of Jiangxi Salt Industry Group in the southeastern province of Jiangxi to illustrate the type of progress that has been made on SOE reform since the Third Plenum in 2013.⁶⁷ Jiangxi Salt is a midsize SOE that was owned by Jiangxi SASAC. In April 2015, Jiangxi SASAC announced that it would invite strategic investors and allow state

ownership to drop to as low as 45%. Jiangxi SASAC also said its transaction would provide a road map for future SOE reforms.

As shown in Exhibit 36, Jiangxi state ownership has been reduced to 46.9% and four new investors own part of Jiangxi Salt. Three of the new investors are administered by state or central SASACs and the fourth, with the largest stake, Cinda Asset Management Company, is 83% owned by the Ministry of Finance. Gavekal Dragonomics concludes that "ownership of Jiangxi Salt has been

'mixed' among different state entities but there is no mixing of private capital at all."⁶⁸ Yet the State Council guidelines issued in September 2015 emphasize that "mixed ownership reform appeared to be the most significant means to improve the efficiency of SOEs."⁶⁹ We believe that it is unlikely that Jiangxi Salt will be much more efficient with a new ownership structure that has replaced single-state owners with three additional SASAC administrators and the Ministry of Finance.

Another example of recent SOE reform is the merger of China's two largest railroad equipment manufacturers. In June 2015, China CSR Corp. Ltd. and CNR Corp. Ltd. merged to form China Railway Rolling Stock Corp. Ltd. (CRRC), the largest railroad manufacturer in the world. One of the stated objectives of this merger was to create a company that could compete globally with other railroad manufacturers and avoid what the government has called "malignant competition" between two Chinese companies.⁷⁰ The new company's chairman was CNR's chairman, and one of the two vice chairmen was CSR's chairman. Interestingly enough, both were deputy general managers of the former China National Railway Locomotive & Rolling Stock Industry Corp. from October 1999 to September 2000 before that company was split into CSR and CNR in 2000. It seems that the only change in this reform-driven merger is the consolidation of two entities into one

with the same management for the combined entity that existed 15 years ago.

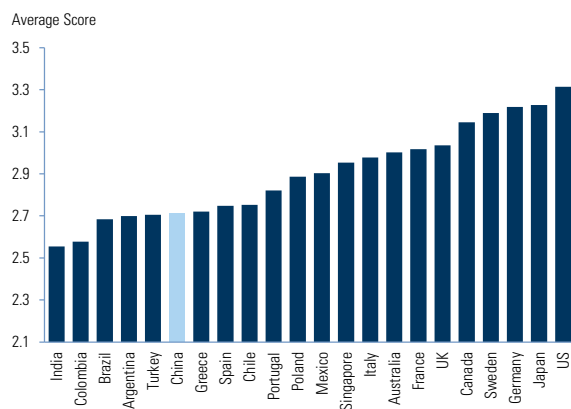
The Chinese leadership has indicated that further mergers of large SOEs are likely in nuclear energy, telecommunications, oil, shipping and airlines. In nuclear energy, State Nuclear Power Technology Corp. and China Power Investment Corp. have already merged to become State Power Investment Group; two of the largest nuclear energy companies are reported to be considering merging as well.⁷¹ Zhang Ming of the Chinese Academy of Social Sciences (CASS) contends that “combining state firms would ‘run counter to’ Beijing’s promise to broaden private participation in the economy.”⁷²

A third example is the transfer of SOE assets to social security funds. In May 2015, Shandong SASAC transferred 30% of 3 large and 15 smaller SOEs to a new council that manages Shandong’s social security fund, including pension, medical and unemployment benefits.⁷³ The council is responsible for nominating directors to the SOE’s board and is entitled to a share of the profits. Thus, there is an incentive for the council to select board members who maximize value for the social security fund and who ensure that dividend payouts are increased to the targeted 30% level by 2020. Moreover, enhancing the funding status of the province’s pension fund is expected to boost household consumption as workers and retirees have greater confidence in their social security benefits.

China is walled in with respect to increasing the role of the private sector through SOE reform. According to a circular issued in 1997 by the State Council, state-owned assets cannot be sold below book value.⁷⁴ Yet many SOEs that could most benefit from private investment and better corporate management are unlikely to find investors to buy assets at book value. It does not seem rational that private sector entrepreneurs with businesses yielding about 3% ROAs would buy state assets at book value that are yielding lower ROAs. Moreover, private investors are less likely to invest in SOEs when one of the stated goals of SOE reform is to “strengthen and improve” the Communist Party’s leadership of SOEs.⁷⁵

Moving SOEs to greater efficiency, higher profitability and increased contribution to growth over the next

Exhibit 37: Average Management Scores by Country
China ranks low in corporate management practices.



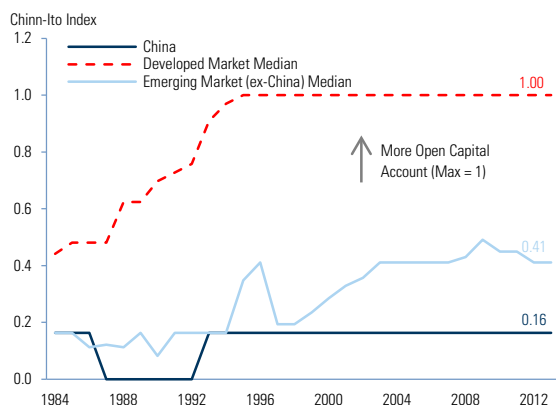
Data through 2014.
Source: Investment Strategy Group, World Management Survey.

several years is critical to China’s prosperity. China ranks low—below Greece, on par with Argentina and above India—in overall corporate management practices, according to a study by Nicholas Bloom of Stanford University (see Exhibit 37). The study also shows that government-owned companies have substantially worse management than companies with dispersed shareholders.⁷⁶ Any reform measures that move SOEs toward mixed ownership, greater management accountability and an increased role for the private sector away from government involvement should substantially improve China’s long-term prospects. However, progress since the Third Plenum in 2013 has been limited. Moreover, based on the measures implemented to date, we believe that the prospects are dimming for substantive SOE reforms at a pace that would meaningfully impact growth through 2020.

Moving SOEs to greater efficiency, higher profitability and increased contribution to growth over the next several years is critical to China’s prosperity.

Exhibit 38: Capital Account Openness Index

China has among the strictest capital controls in the world.



Data through 2013.

Source: Investment Strategy Group, Menzie D. Chinn and Hiro Ito, "What Matters for Financial Development? Capital Controls, Institutions, and Interactions," *Journal of Development Economics*, Vol. 81, Issue 1, October 2006.

Financial Market Liberalization

China has significantly lagged both developed and emerging markets in terms of the openness of its financial markets. Until the most recent reform measures, the PBOC fixed deposit and lending rates, pegged the exchange rate to the dollar and tightly controlled the capital account and capital markets with quotas and required approvals. The Chinn-Ito capital account openness index shows the extent of such tight controls relative to other regions of the world (see Exhibit 38).

Hence the urgency of financial market liberalization.

There has been considerable progress toward financial market liberalization—some of which predates the Third Plenum and is probably attributable to PBOC Governor Zhou Xiaochuan, whom the *Economist* has described as “thoughtful ... and reform-minded.”⁷⁷ This progress is evident across several dimensions.

Interest Rate Liberalization: The PBOC has taken several steps to liberalize interest rates. The floor on lending rates was eliminated in July 2013. With respect to deposit rates, the first liberalization measure was taken in June 2012, when the rate was allowed to deviate from the benchmark rate by 1.1 times. By October 2015, deposit rates were fully liberalized after multiple incremental increases to the deposit ceiling rate. The PBOC also

introduced deposit insurance for deposits up to RMB 500,000 (\$76,000), which represent half of total deposits but 99% of all accounts.

We should note that while both lending and deposit rates are officially liberalized, Yi Gang, Deputy Governor of the PBOC, clarified in late October 2015 that “market-based interest rate reform is not about leaving everything to the market.”⁷⁸ Such a statement runs counter to the IMF’s recommendation of complete interest rate liberalization, meaning “ending the over-reliance on window guidance and moral suasion.”⁷⁹

Exchange Rate Liberalization: Since 2004, when then-Premier Wen Jiabao first referred to moving toward a flexible exchange rate regime, China has incrementally liberalized its exchange rate, gradually widening the band around which the currency could trade relative to the fixing rate, which is set by the PBOC. The latest change was in March 2014, when the band was widened to +/- 2% around the fixing rate.

China had long aspired to have the renminbi included in the IMF’s Special Drawing Rights (SDR) basket, along with four key international currencies: the US dollar, the euro, the sterling and the yen. On August 3, 2015, the IMF published a report reviewing some of the operational issues concerning SDR membership. The report stated that the renminbi would need a market-based representative rate rather than a rate determined by the PBOC.⁸⁰ Shortly thereafter, on August 11, the PBOC depreciated the fixing rate by 1.9%, bringing it closer to market levels that were at the weak end of the 2% band. It announced that this was a “one-off” adjustment and that going forward, the exchange rate fixing mechanism would become more market-oriented.⁸¹ The next day, the PBOC depreciated the currency again, surprising the markets given the prior day’s announcement of a “one-off” move. In the offshore renminbi market in Hong Kong, the currency was 4.8% weaker by August 25 compared with levels before the first depreciation announcement.

The PBOC and Chinese banks reportedly intervened in the onshore market to close the gap between the spot price and the fixing rate, as well as the gap between onshore and offshore Hong Kong rates, and the renminbi stabilized.⁸² However, markets were surprised again on December 11, 2015, when one of the PBOC’s sub-institutions published an exchange rate index for the renminbi

against a basket of currencies and urged market participants to shift their focus away from the bilateral exchange rate relative to the US dollar and toward this trade-weighted index. The PBOC also accelerated the pace of depreciation of the fixing rate following the introduction of the index, raising uncertainty about the path and pace of exchange rate liberalization and triggering another round of capital outflows, depreciation pressure and government intervention.

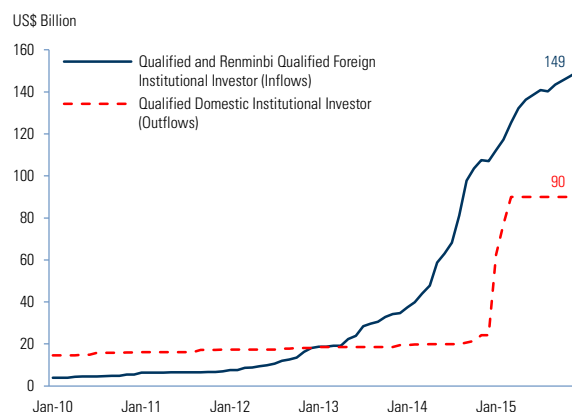
Again, progress on exchange rate liberalization has been mixed. On one hand, the PBOC has widened the trading band and has attempted to move to a more market-oriented exchange rate fixing mechanism. Its efforts succeeded in persuading the IMF's Executive Board in November 2015 to include the renminbi in the SDR basket effective October 2016.⁸³ On the other hand, it has intervened heavily since August 2015 to minimize volatility around the fixing rate. It has also imposed restrictions such as a 20% reserve requirement to reduce the ability to conduct forward currency transactions onshore.

Opening Up the Capital Account: China has among the strictest capital controls in the world. For example, inward and outward portfolio flows are controlled by quotas: Qualified Foreign Institutional Investors (QFII) and Renminbi Qualified Foreign Institutional Investors (RQFII) are subject to lock-in periods and ceilings, and Qualified Domestic Institutional Investors (QDII) investing overseas are subject to ceilings. All cross-border issuance of securities and foreign borrowing require approvals. As shown in Exhibit 38, China's capital account openness index is 0.16, compared with 0.41 for emerging markets (ex-China) and 1.00 for developed markets.

Such tight controls have not prevented illegal outflows. The Ministry of Public Security announced in November 2015 that police had shut down an "underground bank" in Zhejiang province for conducting illegal transactions, including foreign exchange transactions, totaling RMB 410 billion (\$62 billion) over the prior year or so.⁸⁴ Another 10 "unapproved banks" in Guangdong province were shut down for RMB 51.6 billion (\$7.9 billion) of such transactions.

Exhibit 39: Approved Quotas for Offshore Investment Programs

China has loosened capital account controls since 2013.



Data through December 2015.
Source: Investment Strategy Group, Bloomberg, State Administration of Foreign Exchange.

China has loosened capital account controls since 2013. As shown in Exhibit 39, QFII and RQFII quotas for inbound flows have increased substantially. The SFTZ was formally launched in September 2013 as a pilot project to more readily allow foreign investment into China and grant Chinese companies access to foreign capital. For example, Chinese companies and banks can raise foreign capital up to two and five times their capital in the SFTZ, respectively. China has since launched three more free trade zones (Tianjin, Guangdong and Fujian), although activity seems quite limited. The Shanghai-Hong Kong Stock Connect was launched in late 2014 to allow two-way equity flows between China and Hong Kong. Finally, in the third quarter of 2015, China opened its interbank bond market and onshore foreign exchange market to foreign institutional investors such as central banks, sovereign wealth funds and

“Market-based interest rate reform is not about leaving everything to the market.”

— Yi Gang, PBOC Deputy Governor

“The capital account convertibility China is seeking to achieve is not based on the traditional concept of being full or freely convertible ... China will adopt a concept of managed convertibility.”

— *Zhou Xiaochuan, PBOC Governor*

international financial organizations such as the IMF and the World Bank.

While there has been considerable progress over the last two years, the recent volatility of the foreign exchange and equity markets has tempered the pace of reforms significantly. Following volatility in the foreign exchange market in August 2015 and the subsequent decrease in foreign exchange reserves, driven by about \$314 billion of outflows from the renminbi into the dollar (combining both spot and forward transactions), the PBOC decided to tighten controls that were already in place, as well as impose some additional controls. For example, it required stricter monitoring of foreign exchange transfers so that the sums could not exceed the \$50,000 limit per individual. It also prohibited companies from repaying loans borrowed overseas in advance of the contractual due date. An annual limit of RMB 100,000 (\$15,200) was placed on foreign ATM withdrawals. In addition, the planned Shenzhen-Hong Kong Stock Connect has been delayed until sometime this year.

Should growth continue to slow and confidence in the stability of the renminbi erode, it is unlikely that the capital account would be opened up meaningfully from current levels in the next year or two for fear of further capital outflows. Our colleagues in GIR estimate that if China’s capital account opens up to the median level of emerging markets, inward and outward portfolio flows will increase to about 4–5% of GDP each way from 0.5% as of the third quarter of 2015.⁸⁵

Furthermore, as pointed out by Governor Zhou Xiaochuan, China’s goal is not a fully open capital account with the ability to freely convert the renminbi into other currencies and invest abroad: “The capital account convertibility China is seeking to achieve is not based on the traditional

concept of being full or freely convertible ... China will adopt a concept of managed convertibility.”⁸⁶

Loosening Control of the Capital Markets:

In line with the opening up of the capital account, China has also loosened some control of the capital markets. For example, the Shanghai-Hong Kong Stock Connect mentioned above allows a two-way flow of equities between China and Hong Kong and increases investment options for Chinese investors.

Opening the interbank bond market to foreign institutional investors is a further step toward developing the bond market and broadening participation in capital markets. The China Financial Futures Exchange (CFFEX) launched two new futures products based on two indexes, the CSI 500 and the Shanghai Stock Exchange 50, which enable investors to focus on medium- and small-capitalization stocks. The CFFEX’s goal of introducing these futures contracts is to “enhance risk management.”⁸⁷

One of the more significant reforms is the anticipated change in the current initial public offering (IPO) approval system. Currently, a company has to apply for approval from the China Securities Regulatory Commission (CSRC). This system is expected to change to a registration system much like the process in developed equity markets. The goal is to allow the “market to play a decisive role in asset allocation” and eliminate the distortions created by the current system, including delayed listings, limited number of IPOs and regulator-determined pricing parameters.⁸⁸

To be sure, some of these reforms have been reversed or delayed as a result of the significant downdraft in Chinese equities between June and September 2015. The Shanghai A Shares Index, Shenzhen A Shares Index and Hang Seng China Enterprises Index had rallied 68%, 122% and 30%, respectively, earlier in the year, but then experienced peak-to-trough declines of 43%, 50% and 39%, respectively. During the rally, the government directly and indirectly boosted the equity market through public comments and specific measures such as allowing investors to open as many as 20 trading accounts. During the downdraft, the government also intervened with a number of measures. It

- Loosened margin requirements to reduce margin calls and forced selling of equities
- Cut fees on the Shanghai and Shenzhen stock exchanges by 30%
- Increased CFFEX margin requirements for short selling and limited the number of open contracts
- Suspended 28 IPOs and announced a temporary halt to IPOs
- Encouraged various market participants, such as brokerage firms and Central Huijin Investment Ltd., an investment company owned by the government, to invest in equities
- Allowed local government pension plans to invest in equities through the Ministry of Social Security
- Banned SOEs and investors with greater than 5% ownership from selling

We should note that many countries implemented emergency measures during the global financial crisis of 2008–09. But the scope of the steps taken by China in the summer of 2015 was much broader and more far-reaching than anything implemented during the global financial crisis. It was a clear step back from allowing the market to have a decisive role in capital allocation.

In summary, there has been notable progress in financial market liberalization over the last several years. However, as discussed above, the government has tempered some of the progress

since the summer of 2015: Deputy Governor Yi Gang’s comments about China’s long-term interest rate policy, the interventions in the equity and currency markets and the tightening of the capital account to reduce outflows stand out as significant setbacks. Financial market liberalization typically results in greater volatility in the financial markets and in the real economy. Inevitably, the Chinese government will adjust policy and intervene in markets to reduce the impact of financial market volatility on economic and political stability.

Rural Land Reform and Hukou Reform

Rural land reform and *hukou* reform are intertwined. Effective rural land reform results in better allocation of land resources throughout the economy, provides more wealth to farmers whose land has been expropriated at below-market values for the last 20 years and enables more farmers to migrate to urban areas. At the same time, *hukou* reform provides migrant workers and their families access to social services, including housing, education and medical care; it also allows migrant workers to settle in urban areas on a more permanent basis. The two reforms combined will yield significant benefits to China: more rural workers can migrate to bigger cities for better jobs, offsetting the negative impact of a declining working-age population; richer migrant workers can boost overall consumption; and children

who are left behind in villages as their parents migrate to cities for work will be better educated and contribute to higher long-term productivity growth.

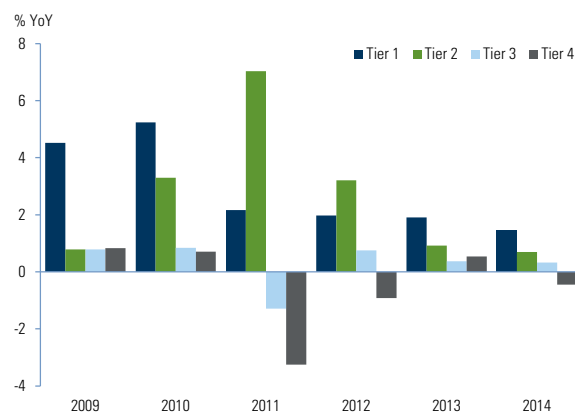
Rural land reform also matters for China’s food security and for social stability in rural areas. Land expropriation has been the “top cause of unrest in the Chinese countryside,”⁸⁹ since the government takes land from approximately 4 million people in rural areas every year.⁹⁰ Sometimes, the social unrest results in human casualties. Less than a year after the Third Plenum Decision, a land dispute between a property developer and farmers from Fuyou village in Yunnan province turned deadly when the villagers burned



Farmers protest in Fuyou village in Yunnan province.

Exhibit 40: Chinese Urban Population Growth

China's biggest cities continue to have the fastest-growing populations, driven largely by migrant workers.



Data through 2014.
Source: Investment Strategy Group, CEIC, NBS.

four members of the developer's security forces that had attacked them; four other people were found dead in nearby fields.⁹¹

However, land reform and *hukou* reform are extremely complex. Many vested interests benefit from the status quo. Industries and property developers benefit from acquiring cheap land; recall the impact of subsidies on SOE returns discussed above. Rural officials benefit from land sales as the major source of fiscal revenue. City officials benefit by avoiding the immediate incremental costs of providing social services for migrant workers, even if it comes at the expense of long-term benefits such as a better-educated and healthier labor force that spends more money and pays more taxes. As the long-term interests of the central government are not readily aligned with those of local officials, progress inevitably will be slow.

Land reform has been a component of China's economic development policy since the late 1970s. In 2015, for the 12th year in a row, the "No. 1 Central Document" released jointly by the CPC Central Committee and the State Council focused on agricultural issues, including expanded land reform.⁹²

China embarked upon a series of pilot programs to test various rural land reform and urbanization strategies in the late 2000s. Chengdu in Sichuan province and Chongqing in Chongqing municipality were two cities selected by the central government as "rural-urban integration reform experiment" zones.⁹³ Both cities have had some success in

this regard. In a policy research working paper published in August 2015, the Agriculture and Rural Development Team of the World Bank studied Chengdu and concluded that the reforms were successful in "facilitating more efficient land use" and increasing "new enterprise startups."⁹⁴ Similarly, in Chongqing, land reform and *hukou* reform have been partially credited for producing growth rates that are four percentage points higher than the national average.⁹⁵ The city was also the first in the country to adopt "land tickets," whereby farmers can sell the usage rights to their farmland as long as the authorities give them permission. This provides some income to migrant workers and allows idle land to be allocated to some productive use. The city also extended *hukou* benefits to migrant workers. According to the mayor of Chongqing, 4 million migrant workers have received urban *hukou*, creating more consumption and supporting the development of business and industry.⁹⁶

The pilot programs' success has prompted the central government to roll out more pilot projects. In February 2015, the National People's Congress Standing Committee selected 33 areas for land use reforms.⁹⁷ However, the programs do not appear to be as extensive or expansive as those of Chengdu and Chongqing.

Despite such importance having been placed on land reform for over 35 years, the pace has been very gradual, partly due to the resistance of vested interests. A joint study by the World Bank and China's Development Research Center of the State Council estimated that between 1990 and 2010, local governments "expropriated rural land at an estimated RMB 2 trillion [\$300 billion] below market value. Assuming ... returns similar to overall growth, farmers today would have more than RMB 5 trillion [\$760 billion] in household wealth."⁹⁸ Clearly, rural land reform will improve household wealth, which in turn would support an increase in consumption. And just as clearly, those who have benefited from access to cheap expropriated land will lose.

Not everyone believes that China has embarked on the right policies toward rural land and *hukou* reform. In "Myths and Realities of China's Urbanization," a Paulson Institute Policy memorandum published in August 2015, Lu Ming argues that China's policies are misguided.⁹⁹ For example, he correctly points out that *hukou* reform should not focus on third- and fourth-tier cities,

because these cities are far from regional economic centers and are of little interest to migrant workers. Instead, *hukou* reform should focus on large cities and “megacities,” which attract the majority of migrant workers (see Exhibit 40). Yet those are the exact cities on which the Third Plenum Decision imposes the strictest control.

On December 12, 2015, the State Council approved a provisional regulation requiring every city in China to offer basic public services for “migrant workers that have lived in the city for at least six months and ... have a stable job, a place to live or are studying.”¹⁰⁰ Despite its national scope, the policy allows each city to determine the benefits on offer, as well as the requirements for obtaining permanent residency status. Beijing, for instance, is considering a score-based system that gives precedence to applicants who have paid an average of RMB 100,000 (\$15,200) per year in taxes for the previous three years and to those with graduate degrees.¹⁰¹ Given that China’s migrant workers have an average annual income of only around RMB 34,000 (\$5,200) and just 7% of them have higher education, it is clear that only a few would qualify.

Lu Ming also points out that local governments have resisted *hukou* reform based on incorrect estimates of the expected costs of providing social services to migrant workers. As with any data in China, the cost estimates vary widely, ranging from RMB 100,000 (\$15,200) to as much as RMB 140,000 (\$21,300) per person over the lifetime of a migrant worker. The CASS estimates the costs at RMB 130,000 (\$19,800).¹⁰² The joint World Bank and Development Research Center study estimates expenses of 1.22% to 4.53% of GDP per year, depending on whether children left behind in the rural areas join their parents in urban areas.¹⁰³ Irrespective of the actual estimates, Lu Ming contends that local governments do not factor in the benefits of unlocking the consumption potential of 274 million migrant workers and their contribution to urban economic development, and, as a result, local governments will resist *hukou* reform.¹⁰⁴

In summary, successful implementation of rural land reform and *hukou* reform is critical to China’s goal of rebalancing the economy toward consumption, increasing productivity and maintaining economic growth at a

level that can meaningfully increase GDP per capita by 2020. Nevertheless, progress since the Third Plenum Decision of 2013 has been inconsequential. Such lack of progress is not surprising given the scale of the undertaking, the complexities of the issues, the misalignment of interests between central and local governments and the immediate costs of implementation relative to the less tangible long-term benefits of these reforms.

China is walled in between the urgent need for rural land and *hukou* reforms and the entrenched vested interests that benefit so long as the status quo is maintained.

One-Child Policy

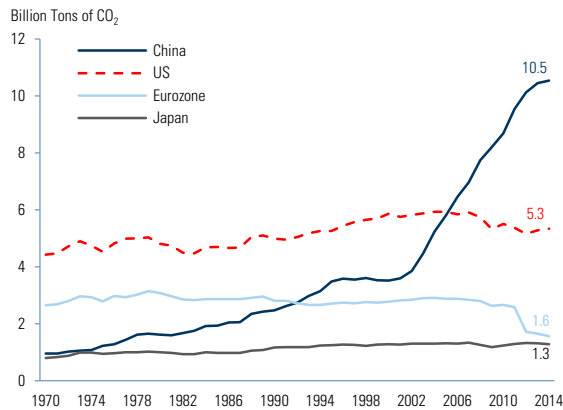
One area of reform where China has made the greatest progress is in the removal of the one-child policy that was introduced in 1979. Ethnic minorities and some rural residents were already exempt from this restriction, but the Third Plenum Decision went a step further by allowing couples to have two children if one parent was a single child. In late October 2015, the National Health and Family Planning Commission announced that the eighth session of the Fifth Plenum had decided to change the policy so that all families could have two children.

While this is the area of greatest progress, it may well have the least economic impact over the next two decades. First, it is unclear whether the decline in China’s fertility rate is entirely attributable to the one-child policy. China’s fertility rate had already dropped from 5.5 in 1970 to 2.7 by 1979, when the policy was officially adopted. The decline was the result of restrictions on minimum age before marriage, spacing of births and improving economic prosperity. While the fertility rate has fallen further since the introduction of the one-child policy—it stood at

China is walled in between the urgent need for rural land and *hukou* reforms and the entrenched vested interests that benefit so long as the status quo is maintained.

Exhibit 41: Carbon Dioxide Emissions

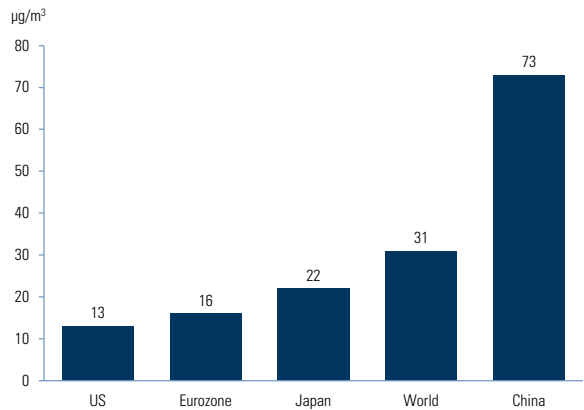
China's carbon dioxide emissions are double those of the US.



Data through 2014.
Source: Investment Strategy Group, Emission Database for Global Atmospheric Research.

Exhibit 42: Mean Annual Exposure to PM_{2.5} Pollution

China's air quality is among the worst in the world.



Data as of 2015.
Note: PM_{2.5} are fine particles that pose health risks as they can accumulate in the respiratory system.
Source: Investment Strategy Group, World Bank.

1.55 as of 2015—other Asian countries without such stringent policies, such as Japan, South Korea and Singapore, have even lower fertility rates.

Second, the shift in policy will be rolled out over time. As pointed out by political economist and demographer Nicholas Eberstadt, there is a “vast army of population-control bureaucrats” who would be without a job if the one-child policy were completely eliminated.¹⁰⁵ Mei Fong, author of *One Child: The Story of China's Most Radical Experiment*, also believes that dropping all regulations would “erase this cash cow” since the policy generates significant revenues for local governments through fines.¹⁰⁶

Here again, China is walled in. The shift in policy will likely be resisted by an entrenched population-control bureaucracy, while young couples may not be willing to incur the costs of raising a second child. In fact, Feng Wang, a demographer at Fudan University in Shanghai, believes “a million or two additional births in the next couple of years is the most one can anticipate.”¹⁰⁷ Even with an increase in fertility rates, the earliest babies born as a result of this shift in policy will reach the working-age population only 16 years from now, so this measure will not reverse the trend of a declining working-age population.

Environmental Regulation

In our 2013 *Insight* report, *Emerging Markets: As the Tide Goes Out*, we highlighted pollution as one of China's major structural fault lines. The Third Plenum Decision of 2013 specifically mentioned



Protester in Beijing asks “where have the blue skies gone?”

drawing a “red line” for ecological protection,¹⁰⁸ and yet statistics show that pollution continues to exact a toll on Chinese society, affecting air, water and soil. According to CASS, environmental pollution has been the major factor behind large-scale protests in China, accounting for 50% of “mass disturbances” in 2013.¹⁰⁹

China’s resource- and energy-intensive growth model has created the world’s “worst polluter,” as the country now generates more pollution relative to its contribution to global output than any other nation.¹¹⁰ As shown in Exhibit 41, China’s carbon dioxide emissions are double those of the US. Air quality has deteriorated to the point that China’s rural and urban population have one of the highest levels of exposures to PM_{2.5} pollution (see Exhibit 42), resulting in severe health damage as these particles settle deep into the respiratory tract. According to Richard Muller, scientific director of Berkeley Earth, breathing Beijing’s air is the equivalent of smoking almost 40 cigarettes a day; he estimates that air pollution causes 1.6 million deaths a year.¹¹¹

Water pollution is also a major issue. Water is extremely polluted due to industrial waste, household sewage and agricultural runoff. In 2014,

61.5% of the 4,896 groundwater sites monitored by the Ministry of Environmental Protection (MEP) were unfit for human consumption, compared with 55% in 2011.¹¹² Nearly 30% of China’s major river systems and 40% of its lakes are also polluted.

Soil pollution is an even greater concern. Polluted water used for irrigation and industrial waste are the primary sources of soil pollution. In April 2014, China conducted its first survey of soil pollution, which found that 16% of China’s soil was polluted beyond acceptable standards and 19.4% of China’s total arable land was badly contaminated by heavy metals.¹¹³ The MEP estimates that heavy metal contamination affects 12 million tons of grain in China every year.¹¹⁴ Recall the panic buying of foreign rice when cadmium was discovered in rice in Guangdong and Hunan in 2013.

China’s pollution comes at great cost. The World Bank estimates that the annual cost of pollution is 9.7% of GDP, stemming from destroyed human capital and natural resources and damaged structures.¹¹⁵ Reducing pollution is also costly. The PBOC estimates that reaching the air and water quality targets set by the MEP will



Man takes water from a polluted pond in Xiangyang, Hubei province.



Polluted corn farm near a power plant in Shanxi province.

require RMB 2 trillion (\$305 billion) over the next five years, equivalent to about 2% of GDP a year.¹¹⁶ Lan Hong of the School of Environment and Natural Resources of Renmin University in Beijing estimates that cleaning up soil pollution will require an investment of RMB 7 trillion (\$1 trillion), a cost that China simply “cannot afford.”¹¹⁷

China has responded to the growing pollution problem through a series of measures such as broad policy directives in the Third Plenum Decision. They include:

1. An action plan for air pollution and control to reduce PM₁₀ and PM_{2.5} density in specific cities with specific dates
2. A revised Environmental Protection Law that was first introduced in 1989 to strengthen environmental governance, including tougher financial penalties, greater and stricter enforcement and greater public participation through nongovernmental organizations
3. A national climate change plan to reduce carbon dioxide emissions
4. An energy action plan to promote the use of renewable energy, natural gas and nuclear energy
5. An action plan for water pollution control to improve water quality by imposing higher standards, requiring wastewater and sewage treatment, increasing water tariffs and using taxes

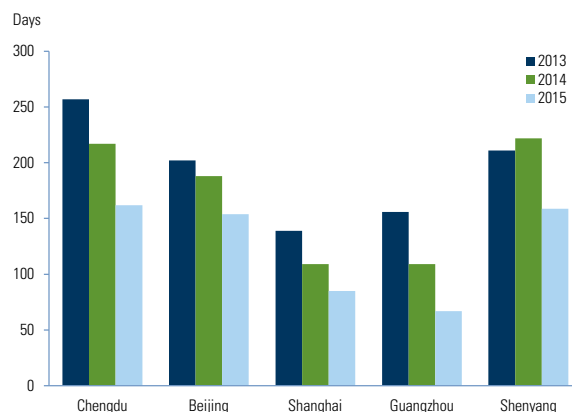
The Chinese leadership is likely to announce further initiatives over the next year, and it has included environmental metrics in the performance assessment of local government officials.

Some progress has been made. For example, the number of days with unhealthy levels of PM_{2.5} emissions has been decreasing in major Chinese cities since 2013, as shown in Exhibit 43. Similarly, in 2011, the government reported that 43% of state-monitored rivers were unsuitable for human contact, but by 2014, that number had dropped to 29%.¹¹⁸

However, real environmental reform will take years of government regulation, strict enforcement and significant allocation of resources. It is too early to know whether China will succeed in this endeavor in the foreseeable future.

Exhibit 43: Number of Bad Air Days in Key Chinese Cities

Unhealthy levels of emissions are becoming less frequent.



Data through December 31, 2015.

Note: Bad air days defined as those with PM_{2.5} concentration above 55.4 µg/m³.

Source: Investment Strategy Group, Bloomberg, StateAir, Mission China.

Fiscal Reform

Fiscal policy reform is not only one of the goals of the Third Plenum Decision, but it is an area that the IMF has highlighted as a key vulnerability for China. We have already discussed the concerns surrounding China’s rising debt-to-GDP ratio in this *Insight*. However, one area of reform that warrants a brief review is what the IMF has called “fiscal management,” by which it means that the central government needs to develop a “framework for local government borrowing, improve transparency and strengthen medium-term fiscal planning.”¹¹⁹ According to the IMF, all spending that is fiscal should be brought on to the budget, separating central government projects from commercial investment projects of local governments that do not have an explicit or implicit government guarantee.

Here, again, progress has been slow. In February 2014, the State Council issued Document Number 43, providing guidelines for local governments to use in managing their budgets.¹²⁰ Provincial-level governments were allowed to issue bonds on behalf of lower-level local governments to eliminate the use of local government financing vehicles that borrowed money primarily from banks. Local governments were required to publish comprehensive balance sheets that included all local government debt, and policies to address the risks of existing local government debt had



to be developed. In October 2014, further details of such policies were published.¹²¹ In May 2015, however, as the economy began to slow down, the Ministry of Finance, the PBOC and the China Banking Regulatory Commission issued some new guidelines that loosened the restrictions of Document Number 43.¹²² Once again, the economic slowdown prompted the central government to reverse course, and reform took a back seat to maintaining economic growth.

In Summary

Third Plenum reforms are critical to China's goal of achieving high and sustainable growth, and China's leadership clearly understands the breadth and depth of much-needed reforms. However, identifying the reforms and issuing policy guidelines is not the same as successfully implementing the reforms. The sheer scale of this undertaking in such a vast and populous country with vested interests at every level of local government and the private sector makes the task nearly impossible. The costs of implementing such reforms are also very high at a time when the country is already grappling with a rising debt-to-GDP ratio. At the same time, China is facing a less friendly global backdrop from an economic and geopolitical perspective.

To date, China's record on reform has been mixed, and it is emblematic of the challenges it faces going forward. As we discuss next, without greater progress, China's intermediate- and long-term economic prospects do not look bright.

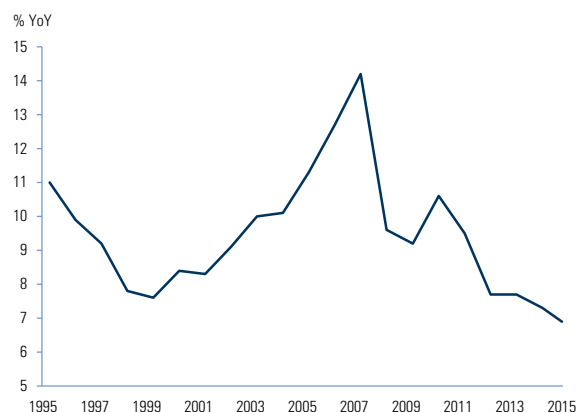
The Economic Outlook: Short, Intermediate and Long Term

China's growth over the last 35 years has been remarkable. Since 1980, GDP growth has averaged about 10% a year, real per capita income has quadrupled, and, according to the IMF, "some 600 million people" have been lifted out of poverty.¹²³ On a nominal basis, China is the second-largest economy in the world after the US, and on a purchasing power parity (PPP) basis, it is the largest economy in the world.

Despite such growth, China remains a poor country. Its GDP per capita is about \$8,300 on

Exhibit 44: Real GDP Growth

Chinese growth has been on a downward trend since 2007.



Data through 2015.

Source: Investment Strategy Group, Datastream, NBS.

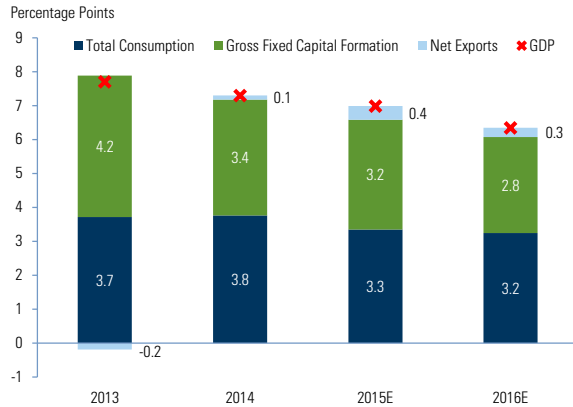
a nominal basis and \$14,200 on a PPP basis. On a nominal basis, China's GDP per capita is 30% lower than the US poverty guideline; on a PPP basis, it is only 20% above the poverty guideline.

China's stated economic goal is to double the 2010 GDP and GDP per capita by 2020, which requires an average annual real GDP growth rate of 6.5% in 2016–20. In fact, when the Fifth Plenum of the 18th CPC Central Committee convened in October 2015, President Xi Jinping said the economy must grow at that rate at a minimum. China aims to achieve such strong growth while rebalancing the economy toward consumption and services, successfully implementing a herculean list of reforms and avoiding a major financial crisis or economic downdraft. We now turn to the key question of whether this goal is achievable given the current economic landscape in China and the rest of the world.

We provide the Investment Strategy Group's outlook for three periods. We begin with our outlook for 2016, in which we expect China to grow between 5.8% and 6.8% and avoid a hard landing. We then provide our outlook for 2016–20, which spans China's 13th Five-Year Plan. We present two scenarios that illustrate why China faces a low probability of achieving 6.5% growth rates while rebalancing the economy and growing on a more sustainable trajectory. Finally, we review China's longer-term prospects and make the case that China will not challenge US preeminence over

Exhibit 45: Contributions to Annual Real GDP Growth

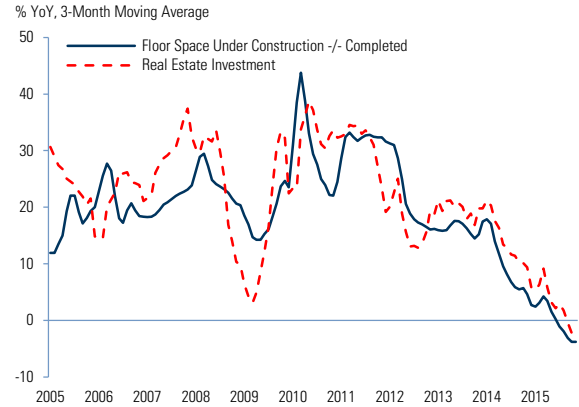
Investment has been the main driver of the slowdown in China.



Note: ISG forecasts for 2015 and 2016.
Source: Investment Strategy Group, Datastream, NBS.

Exhibit 46: Chinese Real Estate Indicators

A greater slowdown in real estate is the main downside risk to our growth view.



Data through November 2015.
Source: Investment Strategy Group, CEIC, NBS.

the next several decades; in fact, it is more likely to follow the path of Japan, where unfavorable demographics and excessive debt have led to slower growth and bouts of deflation.

2016 Outlook

China's growth is on a decelerating trend. As shown in Exhibit 44, GDP growth has been declining since 2007, from a peak of 14.2% to 6.9% in 2015. We expect this slowdown to continue in 2016. We see China's economy growing between 5.8% and 6.8%, which reflects a slowdown of 0.6 percentage point from 2015. Given our earlier discussion regarding the quality of Chinese data, we should note that our 2016 target range implies the same degree of slowing in the GIR's and Emerging Advisors Group's economic activity indicators.

The slower growth rate we expect is driven by a deceleration in fixed asset investments, a more modest contribution from net exports relative to 2015 and a slight deceleration in the pace of consumption growth. As shown in Exhibit 45, the deceleration in investment has been the primary driver of the slowdown since 2013, a result of the efforts to rebalance the economy away from investment and toward consumption. Investment as a

share of GDP has declined from a peak of 47.3% in 2011 to an estimated 45.3% in 2015.

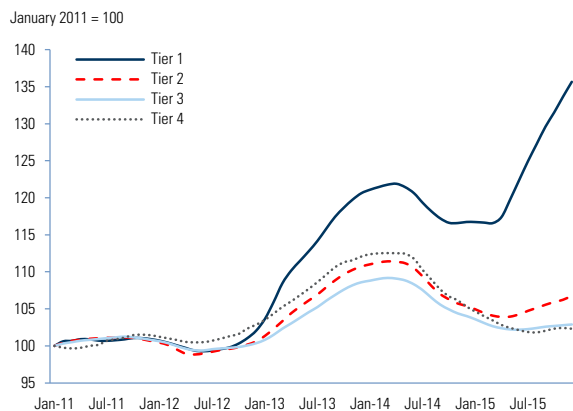
Investment in China is primarily composed of manufacturing (including mining) at 33%, infrastructure at 24% and real estate investment at 22%. The growth rates in manufacturing and real estate have declined, and we expect this trend to continue. Infrastructure investment has been relatively stable and should hold steady as the government boosts growth by supporting infrastructure projects in public transport, energy, environment, water and waste management.



Nearly 100 villas built in 2008 lie abandoned in Taiyuan, Shanxi Province.

Exhibit 47: Housing Prices in China

Prices have moderated lately.

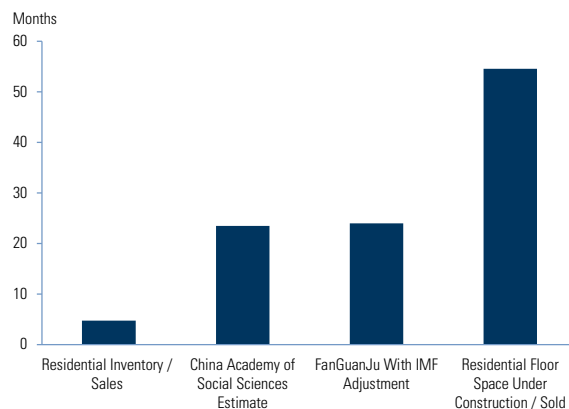


Data through December 2015.

Source: Investment Strategy Group, China Index Academy, Datastream, NBS.

Exhibit 48: Measures of Real Estate Inventory in China

There is a wide range of estimates for residential inventories.



Data as of Q4 2015.

Source: Investment Strategy Group, CEIC, IMF, NBS.

The biggest downside risk to our view is a greater-than-expected slowdown in real estate investment. It has already slowed significantly over the last five years, declining from annualized growth rates of 30–40% in 2010 and 2011 to a 4% contraction in the September to November 2015 period, as shown in Exhibit 46 on page 41. And even though home prices are rising rapidly in Tier 1 cities, they have moderated in medium-size and particularly smaller cities, as shown in Exhibit 47. While regulators have eased home purchase restrictions and mortgage financing requirements, we expect the slowdown to continue through 2017.

The key unknown in real estate is the size of the inventory overhang. As we have discussed earlier, Chinese data is relatively unreliable, and real estate data is no exception. There is a wide range of estimates for the level of inventory in the residential sector. According to the NBS, the inventory-to-sales ratio is 4.7 months, up from a low of 3.1 months in late 2011. The IMF believes that NBS data understates the true level of inventories because it relies on reports by developers, who probably underreport the number of unsold units and overreport the number of sales.¹²⁴ After making its own adjustments, the IMF estimates the inventory-to-sales ratio to be about 24 months, as shown in Exhibit 48. Some other measures show an even greater inventory overhang. For example, the ratio of housing under construction to sales stands at 4.5 years. This ratio probably includes projects

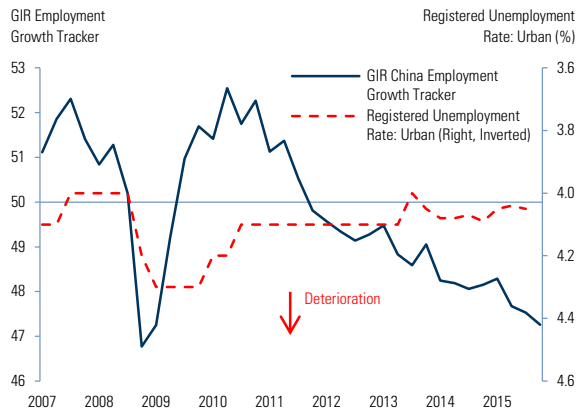
that may have been abandoned or barely started, none of which will be completed in the next several years—if ever. We expect real estate investment to continue to decelerate as property developers slow the pace of starts to address the large and uncertain inventory overhang.

Infrastructure investment, on the other hand, should be relatively stable given that it is one of the central government’s policy tools to support growth. There is even greater focus on such investments following Premier Li Keqiang’s late September 2015 State Council meeting, where he reportedly admonished local government officials for “dereliction of duty” for not implementing infrastructure investment projects,¹²⁵ especially in agriculture, water conservation and electric vehicle charging infrastructure.¹²⁶ According to Xinhua, “China has punished 249 officials for laziness, exemplified by failure to spend development budgets, delays to projects and sitting on land earmarked for development ... Spooked by the country’s biggest-ever crackdown on corruption, many officials have preferred to dither over approvals for major projects, so as to avoid drawing the scrutiny of anti-graft officials.”¹²⁷ An example that Xinhua cited was the delayed construction of a food recycling project in north China’s Shanxi province.

Another risk to our growth outlook is consumption. If unemployment increases or wage growth decreases, consumption growth

Exhibit 49: Measures of Unemployment in China

Alternative estimates show a weakening in Chinese labor markets, in contrast to official data.



Data through Q4 2015.

Note: The GIR China Employment Growth Tracker is based on a series of high-frequency labor market indicators in China. It is presented as a diffusion index, where lower readings point to deteriorating labor market dynamics.

Source: Investment Strategy Group, Goldman Sachs Global Investment Research, NBS.

may be lower than our forecast of 6.4%. The Goldman Sachs GIR China Employment Growth Tracker, which includes employment survey data from Purchasing Managers Indexes and ManpowerGroup, shows employment growth steadily declining since the second quarter of 2010 (see Exhibit 49). This deterioration is in contrast to the NBS data, which shows the unemployment rate declining from 4.20% to 4.05% over that same period. A newly released data series from the NBS based on a 31-city survey also shows a relatively flat unemployment rate since 2014.

We believe the GIR Employment Growth Tracker is a better indicator of the state of the labor market in China. According to a recent NBER working paper, “the official unemployment rate series for China is implausible” and “there is strong evidence that this is the result of the mismeasurement of the official rate.”¹²⁸ The authors of the study contend that this underestimation is due to a number of factors: migrant workers are not part of the unemployment data because they lack *hukou* registration; unemployment benefits are very low, so workers are not incentivized to register; and data gathering in China is generally of poor quality and subject to manipulation. The authors have proposed

an alternative measure which, historically, has been five to six percentage points higher than the official unemployment rate.

While employment is weakening, we do not expect any significant deterioration. First, the service sector is more labor intensive than the manufacturing sector, so more jobs would be created by the higher growth rate in services. Second, according to the IMF, it seems that most SOEs keep workers employed. The IMF has estimated that if SOE reforms are implemented, the unemployment rate would rise by 0.5–0.75 percentage point.¹²⁹ Since we are not expecting the type of SOE reforms that would result in job cuts in 2016, we do not expect any meaningful deterioration in employment that would slow the pace of consumption growth even further.

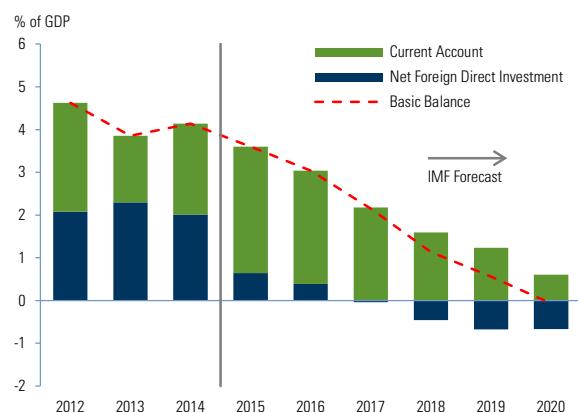
We also expect the government to provide additional monetary and fiscal stimulus measures to maintain growth close to 6.5%, such as additional cuts to the benchmark interest rates, lower reserve requirement ratios and further public-private partnerships to boost investments. As Premier Li Keqiang and other leading economic officials confirmed at the annual National Party Congress in March 2015, China will use “policy tools to keep economic growth to acceptable levels and maintain employment”¹³⁰—not quite European Central Bank President Mario Draghi’s promise “to do whatever it takes,”¹³¹ but certainly a strong commitment to reach the 6.5% real GDP growth target. This target has taken on even greater significance since it is now referred to as President Xi Jinping’s “bottom line.”¹³²

Even though the midpoint of our central case scenario in 2016 is below the 6.5% minimum target, we are relatively confident that China’s GDP will grow between 5.8% and 6.8%. We assign a

Even though the midpoint of our central case scenario in 2016 is below the 6.5% minimum target, we are relatively confident that China’s GDP will grow between 5.8% and 6.8%.

Exhibit 50: China's Basic Balance of Payments

China's current account surplus is expected to persist over the next several years.



Data as of October 2015.
Source: Investment Strategy Group, IMF.

75% probability to our central case, with an equal probability that growth will exceed or fall short of our range. In 2016, the probability is extremely low of a hard landing—defined as a headline GDP growth rate lower than 5% and declining, which probably equates to activity indicators growing less than 3.5% or so.

While no one doubts that China's leadership has the will to avert a hard landing, some have questioned whether it has the means to do so. We believe the answer is an unequivocal yes for the next few years. China has a very high savings rate—the highest of any major country in the world, as discussed earlier. The public and private sectors do not have sizable external borrowings that would make them vulnerable to withdrawal of foreign capital. The country has tight capital controls and, for now, has tightened them even further. And, most importantly, China has vast foreign exchange (FX) reserves. Official FX reserves stood at \$3.33 trillion as of the end of December 2015, and additional reserve assets including holdings of SDR and gold bring the total to about \$3.40 trillion.

Our colleagues in GIR estimate that of the total official reserves, a minimum of \$2.0 trillion is held in high-quality, relatively liquid assets.¹³³ Tao Wang of UBS also estimates \$2.0 trillion of such assets.¹³⁴ In addition to these assets, China has long-term foreign assets held by the China Investment Corporation (the sovereign wealth

fund) and by corporate subsidiaries of the State Administration of Foreign Exchange (the reserve manager). Furthermore, the IMF has estimated that China's FX reserves are 2.4 times as great as the "appropriate" amount taking into account China's tight capital controls.¹³⁵

These extensive resources will be used by China's leadership as needed. We should also note that we expect China to have a current account surplus and continued foreign direct investment that should allow it to replenish its high-quality foreign assets through 2019, as shown in Exhibit 50. China's 2015 current account surplus, for example, is estimated at \$337 billion and its net foreign direct investments at \$74 billion, equivalent to 3.6% of GDP. In 2016, the projected numbers are slightly lower, at \$324 billion, \$48 billion and 3% of GDP, respectively.

Clearly, China is highly unlikely to run out of resources to avert a hard landing in 2016.

Although most investors are focused on the downside, there are some upside risks to our outlook, the most significant being an unexpected pickup in the growth rates of China's export partners. The US, the Eurozone and Japan account for about 40% of China's direct and indirect merchandise exports. We think it is unlikely that any of these three economies will provide a significant growth boost to China in 2016, though.

2016–20 Outlook

While we have reasonable confidence in our base case for 2016, we believe that China's 2016–20 outlook is fraught with uncertainty and risks. President Xi Jinping's remarks requiring that the GDP growth rate "should be no less than 6.5% in the next five years"¹³⁶ notwithstanding, achieving such relatively high growth rates while rebalancing the economy, implementing some reforms and capping debt-to-GDP to a sustainable level is highly unlikely.

China has a great dilemma: either it can choose to maintain growth through fiscal and monetary stimulus and risk a credit crisis as a result of debt-to-GDP reaching unsustainable levels, or it can implement important reforms over the next five years and accept slower growth in exchange for better long-term prospects. More specifically, China can pursue one of two paths:

The Likely Path: China’s 6.5% minimum growth target is achieved for a few years—maybe two to three years—through rapid investment and increased debt. Thereafter, GDP growth rates decline steadily. We call this a base case scenario because we believe this is the path most likely to be selected by policymakers. We assign a higher probability to this scenario because of five factors:

- Statements made by China’s leadership about 6.5% being the “bottom line.”
- The strong policy response to volatility in Chinese equity and currency markets.
- The reversal of some of the already limited reform measures.
- The fact that 2020 is the 100th anniversary of the Communist Party of China, so the goal of doubling GDP per capita by that date takes on even greater significance.
- China’s track record of implementing difficult reforms only in response to a crisis. For example, in the late 1970s, China instituted significant “market-oriented reforms” in the agricultural sector in response to concerns that agricultural output was not keeping pace with population growth.¹³⁷ After the reforms, average annual agricultural growth increased to 7.7% from a sluggish 2.9% between 1952 and 1978. Similarly, China only began serious SOE reform in the mid-1990s after it became clear that “the SOE sector was in crisis ... the sector as a whole was on the verge of loss making.”¹³⁸ Tens of millions of workers were eventually laid off.

An Alternative Path: China’s leadership forgoes the 6.5% target and, instead, focuses on implementing reforms and slowing the pace of credit growth.

“In the end, China’s senior leadership is prepared to sacrifice almost anything in order to ensure that the CPC remains in power, including immediate economic reform.”

*—Roderick MacFarquhar,
Professor at Harvard University*

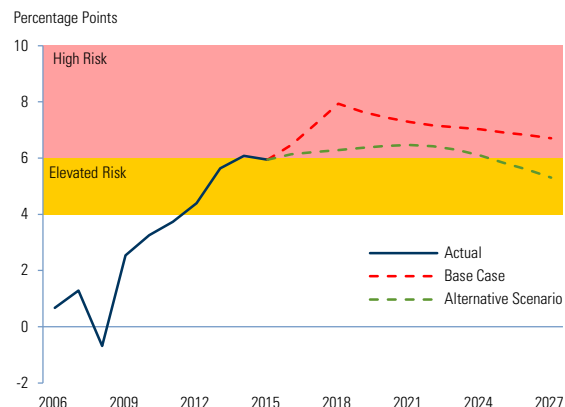
While this is the better long-term path in our view, it implies slower GDP growth, higher market volatility and greater risk of capital outflows. Of course, slower growth may risk causing some social and political instability. Because of this threat, we believe it is less likely that China’s leadership will select this path. As Professor Roderick MacFarquhar of Harvard University shared with our colleagues in GIR in their report “Top of Mind: What Is Going on in China?”: “In the end, China’s senior leadership is prepared to sacrifice almost anything in order to ensure that the CPC remains in power, including immediate economic reform.”¹³⁹ The sentiment was echoed in the same report by David Daokui Li, professor at Tsinghua University in Beijing and former member of the PBOC’s Monetary Policy Committee, when he said that “the sustainability of the Chinese Communist Party Rule [is] the top priority.”¹⁴⁰

This trade-off between economic reform and political stability is nothing new. Dong Zhang and Owen Freestone of Australia’s Treasury Department pointed out this inherent conflict in their 2013 report “China’s Unfinished State-Owned Enterprise Reforms”: “China’s economic reform policies since the late 1970s have balanced the dual objectives of enhancing economic efficiency and strengthening the position of the ruling Communist Party. SOE reforms, which began thirty years ago, are case in point. While these reforms were designed to tackle the obvious inefficiencies inherent in state enterprises, they needed to be done slowly in order to preserve China’s political and social stability.”¹⁴¹

As we present the two scenarios below, it is very important to note that such analysis requires many assumptions, none of which can be made using purely scientific methods. For example, even with the benefit of hindsight, there are different estimates of China’s TFP. The McKinsey Global Institute estimates TFP growth at 2.4% between 2010 and 2014, the IMF estimates 2.3%, and the Conference Board data indicates an average trend of 2.0%. Similarly, there is a range of estimates for the impact of structural reforms on TFP growth going forward. The McKinsey Global Institute estimates that TFP growth will range between 2% and 3%, while the IMF has estimated an average of 1.9%.

Exhibit 51: Deviation of Debt Service Ratio from Its Long-Run Average

We expect China to breach the high-risk threshold this year.



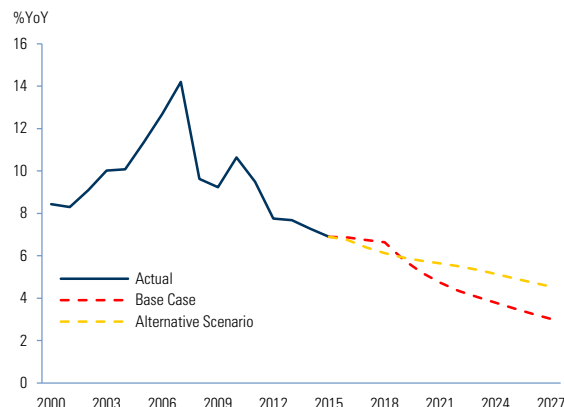
Data as of 2015.

Note: ISG forecast through 2027.

Source: Investment Strategy Group, Bank for International Settlements, IMF.

Exhibit 52: ISG Scenarios for Real GDP Growth

Implementing reforms would allow for a smoother slowdown in Chinese growth.



Data as of 2015.

Note: ISG forecast through 2027.

Source: Investment Strategy Group, CEIC.

In the absence of reforms, everyone agrees that TFP growth will decline, though no one knows by how much with any great certainty. This measure is very important since the higher the number, the higher the potential growth rate for the same level of labor and capital in China; an incremental boost to GDP of three percentage points (the high end of the McKinsey Global Institute's range) from reforms is quite significant.

Another assumption is the pace at which China will reduce investment as a share of GDP. As discussed earlier in the rebalancing section in this *Insight*, we believe that reducing investment to 40% of GDP by 2022 from its current level of 45.3% is a reasonable assumption. However, if history is a guide, when China last reduced investment as a share of GDP, by nearly 10 percentage points between 1993 and 2000 (from 43.6% to 33.9%), real GDP growth fell from 13.9% to 8.4%—a 5.5 percentage

point drop. Since 2011, investment as a share of GDP has declined by 2.0 percentage points, while growth has slowed by 2.5 percentage points. So China may decide to proceed even more slowly and reach the 40% level at a much later date.

Thus, the purpose of our scenarios is not to present an exact forecast of China's economy over the next five years, but instead to provide our clients with an understanding of possible outcomes in China, the factors that drive those outcomes and their associated risks. Such an understanding will better enable our clients to withstand the volatility that will inevitably emanate from China over the next several years and to make informed decisions with respect to their strategic asset allocation to Chinese and other emerging market assets.

Let us examine the two scenarios.

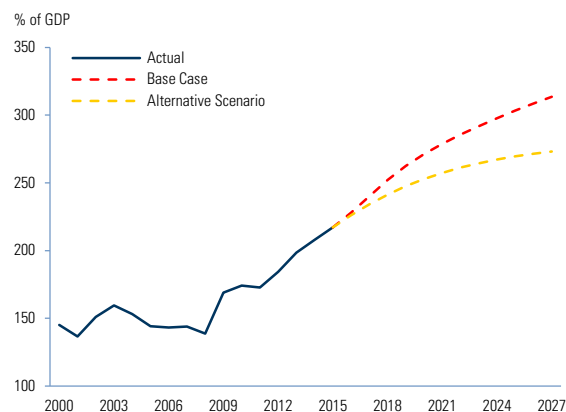
Base Case Scenario

In our base case scenario, we assume that China maintains growth above 6.5% in the first three years and delays significant reforms. As a result, TFP growth declines from its current level of about 1.6% to 1.0%. To boost growth, China embarks on further monetary and fiscal policy stimulus, including increasing investment as a share of GDP—the investment-to-GDP ratio rises to

On a longer-term basis, we believe that China does not have enough resources to achieve all the required reforms without risking a financial crisis.

Exhibit 53: ISG Scenarios for Debt-to-GDP

We expect debt to continue to rise faster than GDP under both scenarios.



Data as of 2015.

Note: ISG forecast through 2027.

Source: Investment Strategy Group, Bank for International Settlements, IMF.

nearly 50% by 2018 and debt reaches 250% of GDP to fund increased investments. As mentioned earlier in this *Insight*, China will need increasing amounts of investment capital to generate incremental units of GDP—in other words, every incremental renminbi invested, be it in manufacturing, real estate or infrastructure, will be less efficient in generating GDP growth than the prior renminbi.

At this point, we believe that policymakers will change course either because they will realize that maintaining GDP growth above 6.5% is unsustainable, or because market participants will lose confidence and the capital markets will force the hand of China's leadership. Furthermore, by 2020 President Xi Jinping will be in his second term, and five retiring members of the CPC Standing Committee will have been replaced, in all likelihood, with more reform-oriented decision-makers.

As policymakers change course, the pace of investments will slow and GDP growth will drop to 5.2% by 2020—the end of the 13th Five-Year Plan. Meanwhile, debt-to-GDP will rise as ever-increasing amounts of credit are needed to fund investments. By 2020, debt will reach 270% of GDP on its way to 300% by 2024. Such lofty debt levels would undoubtedly result in a credit crisis in China, as we discuss below. The Bank for International Settlements' early warning indicators show debt is already at excessive levels: China's credit-to-GDP gap

breached the high-risk threshold in 2013 and its debt service ratio is likely to breach the threshold this year, as shown in Exhibit 51. Typically, when a country passes the threshold, a banking crisis is likely within three years.¹⁴²

Alternative Scenario

In our alternative scenario, China heeds the IMF's warnings that "staying with the current growth model is not an option" and that China should address its vulnerabilities by slowing the pace of GDP growth and, most importantly, reining in the pace of credit growth.¹⁴³ In this scenario, China implements some reforms in a slow and measured pace and TFP growth rises from 1.6% today to 2.0% over a decade. Investment growth slows and investment as a share of GDP declines to 40%. Real GDP growth starts to slow down immediately and reaches 5.8% by 2020. At this point, GDP growth is higher than the base case scenario and stays above its glide path through the next Five-Year Plan ending in 2025. Debt as a share of GDP is growing but at a slower pace, reaching just over 250% by 2020. Despite this slower pace, debt levels remain excessive.

The paths of real GDP growth rates and of debt as a share of GDP for both scenarios are shown in Exhibit 52 and Exhibit 53.

Longer-Term Prospects

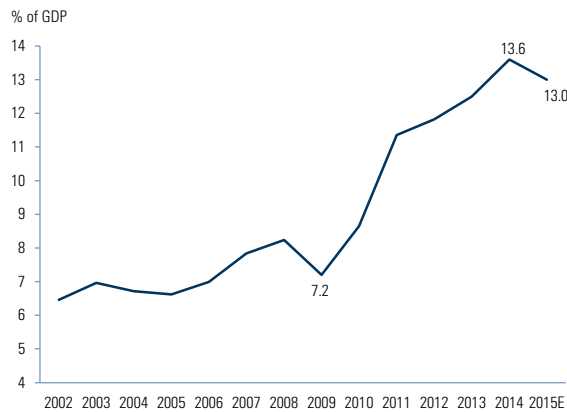
In our 2016 outlook discussed earlier, we posited that China has both the will and the resources to avert a hard landing. However, on a longer-term basis, we believe that China does not have enough resources to achieve all the required reforms without risking a financial crisis; since it will attempt to manage the economy to minimize the risk of any crises, China is more likely to face a prolonged period of slow growth and possibly deflation, similar to Japan's experience since 1990. As a result, China is unlikely to become a high-income country over the investment horizon of our clients. And it will certainly not challenge US preeminence, in our view. Our seven-year investment theme of US preeminence remains intact.

Four factors are likely to dim China's longer-term prospects:

- A large and growing debt burden
- Diminishing export competitiveness
- The weight of history
- Persistent structural fault lines

Exhibit 54: Implied Interest Burden

Interest payments as a share of GDP have jumped in China.



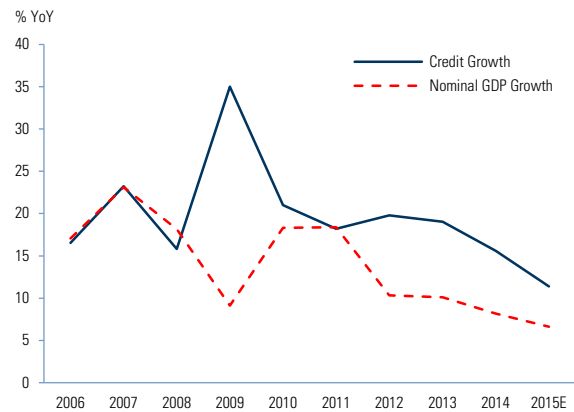
Data through 2015.

Note: ISG estimate for 2015. Includes financing costs of bank loans, medium-term notes, short-term financing bills, corporate bonds, trust assets and commercial bills.

Source: Investment Strategy Group, CEIC, Datastream, UBS.

Exhibit 55: Credit Growth vs. Nominal GDP

Debt is growing twice as fast as GDP in China.



Data through 2015.

Note: ISG estimate for 2015.

Source: Investment Strategy Group, Bank for International Settlements, Datastream.

We briefly examine these factors.

Implications of a Large and Growing Debt Burden

We have already discussed China's high and growing level of debt and the associated risks of passing the tipping point earlier in this *Insight*. While the IMF has raised such vulnerabilities with the Chinese "authorities," the authorities are much more sanguine about the implications of the growing debt burden, as these excerpts from the IMF report indicate:

- "The authorities are confident that the fiscal risk was being resolved gradually."
- "On credit, they acknowledge the rapid rise, but noted that part of the increase represented financial market deepening and a welcome shift toward more market-based financial intermediation."
- "[The authorities] did not regard [the plan to ensure financing of ongoing local government projects] as overburdening banks, as many local government projects were commercially viable and did not pose significant credit risk."¹⁴⁴

We are far less sanguine. First, a growing share of GDP has to be allocated to interest payments. As shown in Exhibit 54, that share has jumped from 7.2% in 2009 to an estimated 13.0% in 2015. Without a significant decrease in interest rates and a slowdown in the pace of credit growth, this trend will continue.

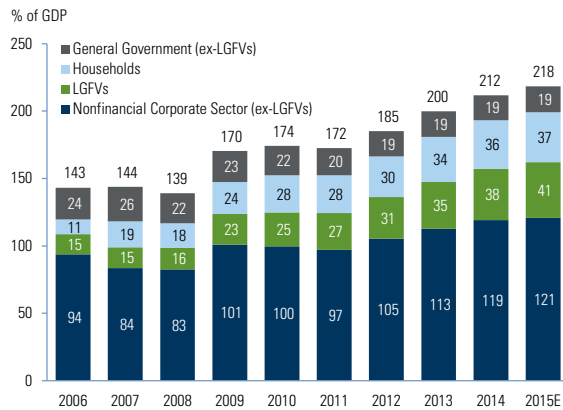
Similarly, as shown in Exhibit 55, debt is growing at a faster rate than GDP. The stock of debt is not only twice the size of GDP, but it is also growing at twice the pace. Obviously, these trends cannot continue forever since the burden of interest



Abandoned construction site of a bridge in Caofeidian eco-city.

Exhibit 56: Breakdown of Total Chinese Debt

Most of the debt is owed by the corporate sector and LGFVs.



Data through 2015.

Note: ISG estimate for 2015.

Source: Investment Strategy Group, Bank for International Settlements, IMF.

and principal payments will crowd out other productive activities.

There is also considerable uncertainty regarding the extent to which LGFVs and the debt of large SOEs will be assumed by the central government. At first glance, it would seem that central government debt is quite low, as shown in Exhibit 56. The sources of risks appear to be LGFVs and the nonfinancial corporate sector, which has the largest share at 121% of GDP and accounts for more than half of the total stock of outstanding debt. It is highly unlikely that all of this debt will be serviced and repaid by the original issuers, so some debt will, in all likelihood, be assumed by the central government. We should note that the overall debt of 218% of GDP does not include all off-balance sheet debt, such as certain types of credit extended through trust companies.

Most LGFVs have been used to finance infrastructure investment, real estate development, new cities and industrial park projects. Many of these projects will not provide sufficiently high returns to pay interest and principal. As many of our readers know, we think a picture is worth a thousand words—or two pictures in this case. The first

picture is of the abandoned construction of a bridge for development in Caofeidian International Eco-city, about 140 miles from Beijing. The exact level of outstanding debt for the entire development is uncertain: estimates range from RMB 50 billion to RMB 60 billion (\$8 billion to \$9 billion). The construction site for the bridge was abandoned in 2012. Most investors would agree that, while this bridge may eventually be built, for now this particular investment will not be generating any returns and the asset should be depreciated to zero—making the entire investment worthless.

The second picture is of Daxiong Huadong Food and Farm Product Market in Chuzhou City. Again, the project, launched in 2009, has been abandoned and is certainly not generating any returns. Lu Ming, in the Paulson Institute report cited earlier, estimates that the overbuilding of new cities and urban districts has exceeded population growth by as much as three times.¹⁴⁵ The credit used to fund such projects is certainly at risk—the borrowers will lose their equity and/or the lenders will lose their capital.

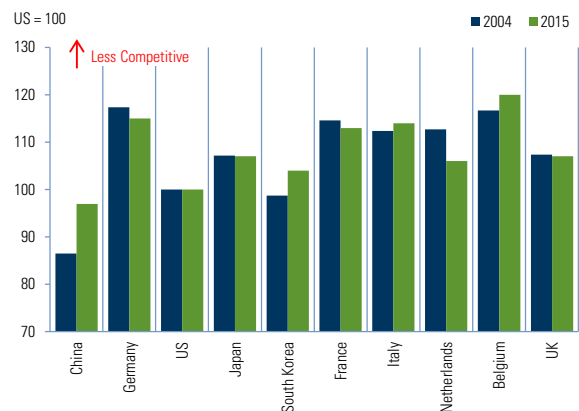
The central government has attempted to address the financial burden of unproductive LGFV assets by allowing local governments to issue debt that can be used to pay off more costly bank loans. This bond swap program was introduced through a directive formally referred to as Document Number 43. While this measure supports local governments, the banks are, in essence, swapping higher-interest but riskier loans for lower-interest bonds that have more of an implicit central government guarantee. In effect, China is reducing the debt burden of local



The 133-hectare Daxiong Huadong Food and Farm Product Market was launched in 2009, but now lies abandoned in Chuzhou City.

Exhibit 57: Manufacturing Cost-Competitiveness Index

Higher costs are causing China to lose competitiveness among major exporters.



Data as of 2015.

Note: The BCG Manufacturing Cost-Competitiveness Index measures changes in direct manufacturing costs based on manufacturing wages, productivity, energy costs and exchange rates.

Source: Investment Strategy Group, BCG.

governments at the expense of the profitability of the banking sector.

China can also cut interest rates significantly to reduce the debt burden of all constituents, including the corporate sector. The PBOC has already lowered the lending rate by 1.65 percentage points and the deposit rate by 1.50 percentage points since November 2014. We expect further cuts. Charlene Chu of Autonomous Research, a global financial-sector research firm, has estimated that Chinese corporations can reach debt sustainability only if rates dropped by four percentage points by the end of 2016.¹⁴⁶ She estimates that the interest on all of China's debt, including corporate bonds, is about 6.4%.

But China is walled in. If it lowers rates much further, China risks putting significant pressure on the renminbi and the resumption of capital outflows, especially if it liberalizes the exchange rate and the capital account following the IMF's decision in November 2015 to include the renminbi in the SDR basket. Lower rates will also pressure the net interest margins of banks and squeeze their declining profit growth rates.

And finally, lowering rates goes against the goal of increasing consumption. Cutting interest rates to alleviate the debt burden of the corporate sector reduces the income Chinese households earn on

their savings—a policy that the IMF considers an effective transfer of resources from households to the corporate sector, and one that has historically amounted to 4% of GDP per year, thereby hampering Chinese consumption.¹⁴⁷

Another way to reduce China's debt burden is equally unpalatable: the government could encourage banks to write off debt that cannot be realistically serviced. Charlene Chu has estimated that China has RMB 73 trillion (\$11 trillion) of "excess credit that has been economically unproductive."¹⁴⁸ She contends that such unproductive investments will result in a nonperforming loan (NPL) ratio of 20% in a best-case scenario, compared with the current official NPL ratio of 1.59% on current bank assets of RMB 192 trillion (\$30 trillion). She also estimates that profitability could contract as much as 35% for a number of the largest banks in China as a result of the increase in NPLs.

To put these numbers in context, the NPL ratio in the US peaked at 5.64% after the 2008–09 financial crisis and at 6.45% in the Eurozone after the 2010–13 sovereign debt crisis. The \$30 trillion compares to peak bank assets in the US of \$12.4 trillion.

Here again, China is walled in: it cannot encourage an immediate recognition of losses without risking a banking crisis.

China can also enable companies to default on their corporate debt and restructure through a bankruptcy process. However, there is limited transparency so far with respect to what transpires following missed payments, defaults or bankruptcies. Some creditors receive all interest and principal while others receive only a portion. We assume that most bankruptcies will be handled on a case-by-case basis in the next few years.

In 2014, about RMB 6.7 billion (\$1.0 billion) of onshore and offshore Chinese corporate bonds went into default. Shanghai Chaori Solar is considered to be the first onshore corporate bond to default and accounts for RMB 1 billion (\$150 million) of total defaults in 2014. One of the company's creditors submitted a letter in April 2014 requesting Chaori's bankruptcy and the petition was accepted in June 2014, but by December of that year all creditors were repaid in full by the new buyers of the company. In this case, bankruptcy was not a means by which China was able to reduce its debt burden.

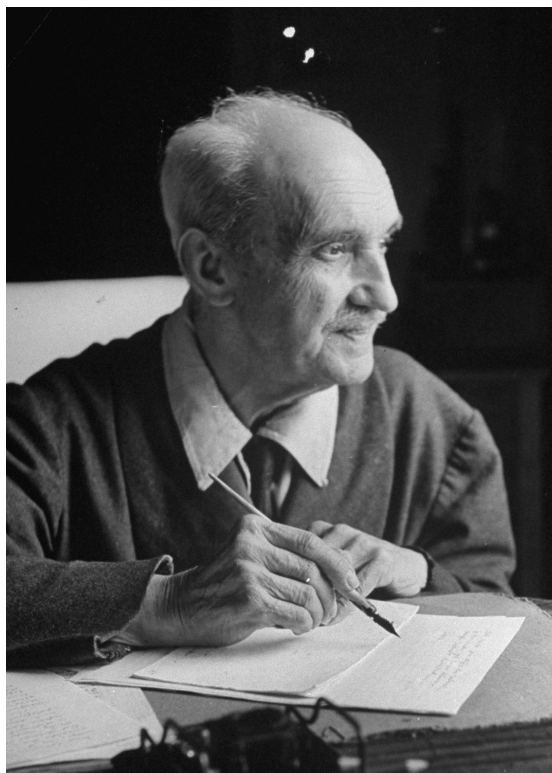
The pace of corporate defaults is rising. In 2015, the amount of defaults reached RMB 28 billion (\$4 billion). We believe that at some point in the near future China's leadership will recognize that many creditors of the private sector cannot be repaid in full and some of China's debt burden will be reduced by default.

Diminishing Export Competitiveness

China's global competitiveness has decreased over the last decade as its manufacturing costs have increased. In an August 2014 study, "The Shifting Economics of Global Manufacturing: How Cost Competitiveness Is Changing Worldwide," the Boston Consulting Group (BCG) wrote that "skyrocketing labor and energy costs have eroded the competitiveness of China."¹⁴⁹ As shown in Exhibit 57, the average cost of manufacturing in China was 13.5% lower than that of the US in 2004, but by 2015, that advantage had narrowed to about 3%. While China is still the most competitive among the world's top 10 exporters, its competitiveness has eroded more than any of the other top 10 global exporters.

According to BCG, China is now a more expensive place to manufacture than Indonesia, Thailand, Mexico and India.¹⁵⁰ Mexico has the advantage of sharing a border with the US, which implies not only lower transportation costs, but also shorter delivery times so companies can adjust orders in a more timely fashion. Proximity to the end consumer is becoming much more important. An example of such considerations is Levi Strauss & Co., which was one of the early movers in terms of shifting manufacturing to China; it began production in Hong Kong in 1966 and then moved to mainland China in 1986. According to Liz O'Neill, senior vice president of product development at Levi Strauss & Co., "we are moving toward agility. The real money is having the right product in front of the customer at the right time."¹⁵¹

Gary Hufbauer, a trade expert at the Peterson Institute for International Economics, has also raised the issues surrounding China's decreasing competitiveness. "Logistics, taxes and marketing may become more expensive compared to labor costs. All that would make China less attractive."¹⁵² China's competitiveness has also been eroded by



Spanish philosopher George Santayana in 1944.

the 53% real appreciation of the renminbi against the currencies of China's main trading partners since 2005.

Diminishing export competitiveness is therefore another hindrance to China's longer-term economic prospects.

The Weight of History

As Spanish philosopher George Santayana once said: "Those who cannot remember the past are condemned to repeat it." History alone tells us that China is unlikely to avoid a steady slowdown in its growth rates.

"Those who cannot remember the past are condemned to repeat it."

—George Santayana, Spanish philosopher

In a *Foreign Affairs* article titled “The Myth of Asia’s Miracle: A Cautionary Fable,” Nobel Laureate Paul Krugman wrote:

*Once upon a time, Western opinion leaders found themselves both impressed and frightened by the extraordinary growth rates achieved by a set of Eastern economies. Although those economies were still substantially poorer and smaller than those of the West, the speed with which they had transformed themselves from peasant societies into industrial powerhouses, their continuing ability to achieve growth rates several times higher than the advanced nations, and their increasing ability to challenge or even surpass American and European technology in certain areas seemed to call into question the dominance not only of Western power but of Western ideology. The leaders of those nations did not share our faith in free markets or unlimited civil liberties. They asserted with increasing self-confidence that their system was superior: societies that accepted strong, even authoritarian governments and were willing to limit individual liberties in the interest of the common good, take charge of their economies, and sacrifice short-run consumer interests for the sake of long-run growth would eventually outperform the increasingly chaotic societies of the West.*¹⁵³

A cursory reading might make one think Krugman was writing about China today or perhaps even Japan. He wrote this paragraph in 1994 about the early 1960s Soviet Union. Krugman believed that the rapid growth in output in the Soviet era was achieved by “rapid growth in inputs: expansion of employment, increases in education levels, and, above all, massive investment in physical capital.” He then concluded that the rapid growth that was being witnessed in the “newly industrializing countries of Asia” was driven by the same extraordinary growth in inputs and not much more. “If there is

a secret to Asian growth, it is simply deferred gratification, the willingness to sacrifice current satisfaction for future gain.” He specifically warned that observers should not extrapolate Japan’s higher growth rates into the future.

Krugman’s words about Japan apply to China as well. Between 1990 and 2014, China mobilized 223 million urban workers, added an unprecedented RMB 212 trillion (\$32 trillion) of fixed assets and saw TFP grow by 86%. And, to Krugman’s point, China deferred consumption into the future. This mobilization of inputs will not be repeated. China’s working-age population is decreasing, the country has an excess of fixed capital in several sectors and TFP will not increase by the same amount—in fact, in the absence of reforms, its growth may well decrease. Thus, China’s growth will inevitably slow much further in the coming decade.

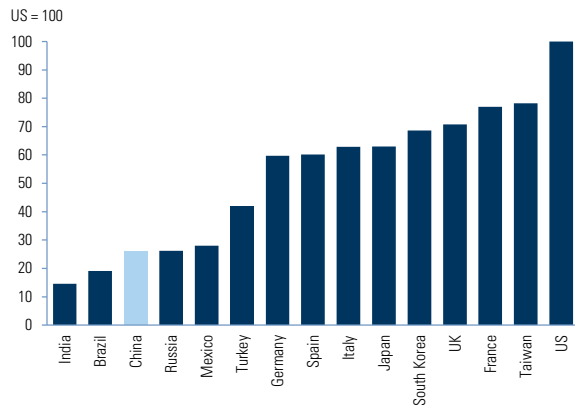
Harvard University Professors Lant Pritchett and Lawrence Summers also argue that history will bear down on China’s growth rates. In “Asiaphoria Meets Regression to the Mean,” a 2014 NBER working paper, they argue that “regression to the mean is perhaps the single most robust and empirical relevant fact about cross-national growth rates.”¹⁵⁴ The cross-country historical average has been 2% with a standard deviation of 2%. Their regressions predict that



Henry Kissinger greets Premier Zhou Enlai during a trip to China in 1971.

Exhibit 58: Labor Productivity

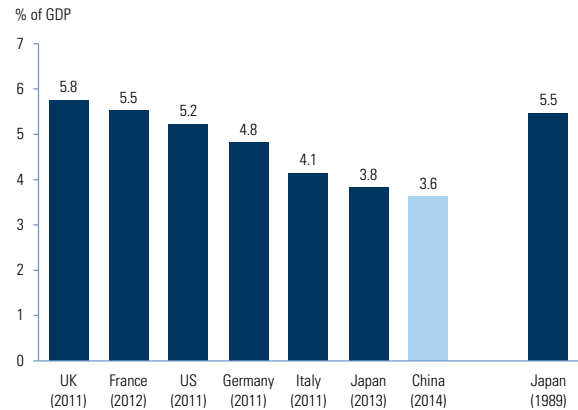
Low productivity will hamper China's longer-term prospects.



Data as of 2015.
Note: Based on 2015 GDP per person employed (using Geary-Khamis PPPs).
Source: Investment Strategy Group, Conference Board.

Exhibit 59: Government Spending on Education

China spends relatively little on education.



Data as of 2014.
Source: Investment Strategy Group, IMF, World Bank.

Chinese growth over the next two decades will be 3.9% with a standard error of 1.6%.

Pritchett and Summers' analysis also points out that after periods of "super-rapid growth," the rate of expansion typically decelerates quite rapidly. Moreover, "growth declines are more likely to be sudden and large than gradual and small." So achieving China's "bottom line" of 6.5% would be highly unlikely.

We believe not only that history will bear down on China's growth rates, but that China's leadership is too dismissive of the growth experiences of other Asian nations. As Henry Kissinger once said: "It is not often that nations learn from the past, even rarer that they draw the correct conclusions from it."¹⁵⁵

Persistent Structural Fault Lines

Many of our clients know that US preeminence has been an investment theme permeating our tactical and strategic asset allocation recommendations for the last seven years. Over that time, we have contrasted the structural advantages of the US with the structural fault lines of key developed and emerging market countries, including Brazil, Russia, India and China. We have focused on human capital and economic metrics, across which China has persistently ranked low.

We will briefly review China's rankings since we believe that its continued weak performance across these measures will hamper the country's longer-term prospects.

We begin with the most important of human capital metrics: labor productivity and education. As shown in Exhibit 58, China's labor has relatively low productivity levels, ranking in line with Russia, below Mexico and Turkey, and well below key developed countries. While such low productivity rankings are inevitable in emerging market countries, China is not spending enough on education to increase its productivity to levels needed to meet its growth targets. As shown in Exhibit 59, China spends 3.6% of its GDP on education, relatively low compared with developed economies. While it has made significant strides in enrollment in secondary education, China has low enrollment in

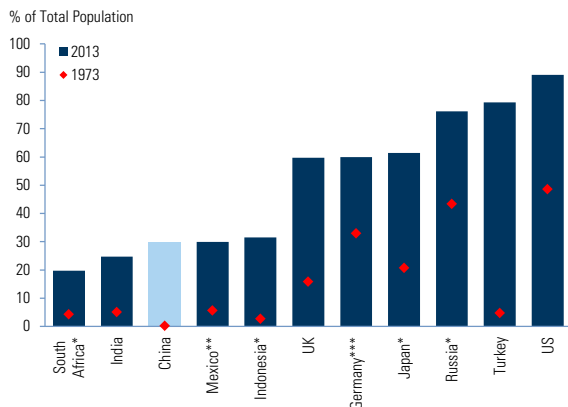
"It is not often that nations learn from the past, even rarer that they draw the correct conclusions from it."

—Henry Kissinger

tertiary education (see Exhibit 60); at 7.5 years, the average number of years of schooling of its population age 15 and older stands well below that of the US at 13.1 years.

Exhibit 60: Enrollment in Tertiary Education

Relatively few Chinese pursue higher education.



Data as of 2013.

Note: The total enrollment in tertiary education, regardless of age, is expressed as a percentage of the total population of the 5-year age group following the end of secondary school.

Source: Investment Strategy Group, World Bank.

* Data as of 2012.

** Data as of 1972.

*** Data as of 1991 instead of 1973.

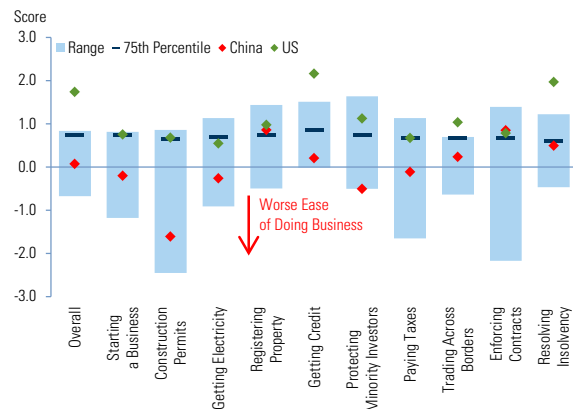
China also ranks poorly across what we have called business environment indicators. These are a series of indicators that measure the ability of private sector entrepreneurs to build businesses that can prosper in a country, contribute to productivity and GDP growth, and drive equity market performance through real and transparent profitability. Specifically, we look at three indicators: the World Bank's Ease of Doing Business Index, the World Bank's Worldwide Governance Index, and the Heritage Foundation's Economic Freedom Index.

In Exhibit 61 and Exhibit 62, we have compared China with the US and with the key emerging market countries of Brazil, India, Russia, Indonesia, Turkey, South Africa and Mexico. For context, we have provided the range covered by these key emerging market countries, a 75th percentile ranking among all countries measured by the indicators, and the US ranking.

As shown in Exhibit 61, China ranks just above average on the Ease of Doing Business Index among 189 countries. It scores very poorly among the 215 countries on the Worldwide Governance Index and ranks last among the key emerging markets with respect to the "voice and accountability" category (see Exhibit 62). Turning to the Heritage Foundation index, China also

Exhibit 61: Ease of Doing Business Indicators

China ranks just above average among 189 countries.



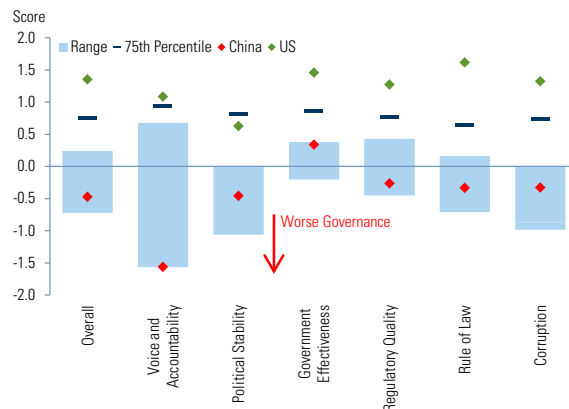
Data as of 2015.

Note: Range includes Brazil, China, India, Indonesia, Mexico, Russia, South Africa and Turkey. The 75th percentile includes all the data (189 countries).

Source: Investment Strategy Group, World Bank.

Exhibit 62: Worldwide Governance Indicators

China scores very poorly in terms of governance.



Data as of 2014.

Note: The range includes Brazil, China, India, Indonesia, Mexico, Russia, South Africa and Turkey. The 75th percentile includes all the data (215 countries).

Source: Investment Strategy Group, World Bank.

scores very poorly on overall economic freedom among 186 countries, ranking just above Russia. Among key emerging market countries, it ranks last in investment freedom and financial freedom.

Such low rankings will hinder China’s ability to harness the power of the private sector—domestic and foreign—that can help drive a more optimal allocation of resources. As higher rankings in these measures have historically correlated with higher GDP per capita, any improvement would help China achieve its goal of doubling GDP per capita by 2020. Still, we believe the ground China must make up in these meaningful measures is too great to cover in the foreseeable future.

A Japan-Style Slowdown

A large and growing debt burden, diminishing export competitiveness, the weight of history and persistent structural fault lines are most likely to lead China down a path of slower growth akin to Japan’s trajectory since 1990. The key difference is that China would be entering the slowdown from a much weaker starting point than Japan when it entered its lost decades. China is poorer, has less favorable demographics, suffers from weaker human capital factors, is more dependent on investments and ranks lower on business environment indicators.

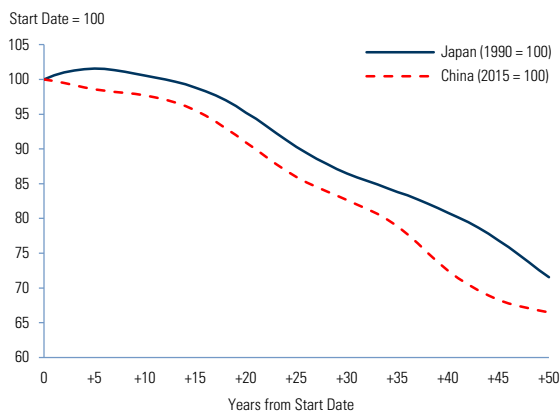
First and foremost, China’s GDP per capita today is substantially lower than Japan’s in 1990. Japan’s GDP per capita then was 105% that of the US on a nominal basis and 80% on a PPP basis. China’s GDP per capita now is 15% that of the US on a nominal basis and 25% on a PPP basis.

Second, China’s demographics are less favorable today than Japan’s in 1990. As shown in Exhibit 63, China’s working-age population is expected to decline by 0.47% per annum over the next 25 years, while Japan’s decreased by 0.41% per annum between 1990 and 2015. China’s population would be aging at a rate similar to that of Japan since 1990 (see Exhibit 64), providing no offset to the declining working-age population. As our colleagues in GIR wrote as early as 2006, “many observers are thus concerned that ‘China may get old before it gets rich.’”¹⁵⁶

These projections by the United Nations Population Division do not incorporate the changes to the one-child policy announced in late October 2015. However, we do not believe China’s demographics will materially change over the next 20 years as it adjusts to the new two-child policy. Demographer and political economist Nicholas Eberstadt also believes that China’s demographics are most like Japan’s: “The only close comparator

Exhibit 63: Working-Age Population Projections

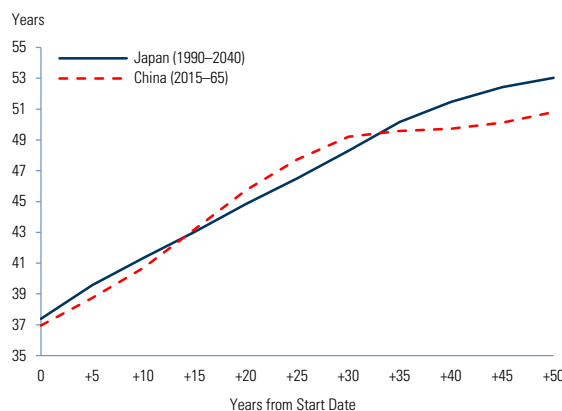
China’s demographics today are even less favorable than Japan’s in 1990.



Data as of 2015.
Source: Investment Strategy Group, United Nations Population Division.

Exhibit 64: Median Age of the Population

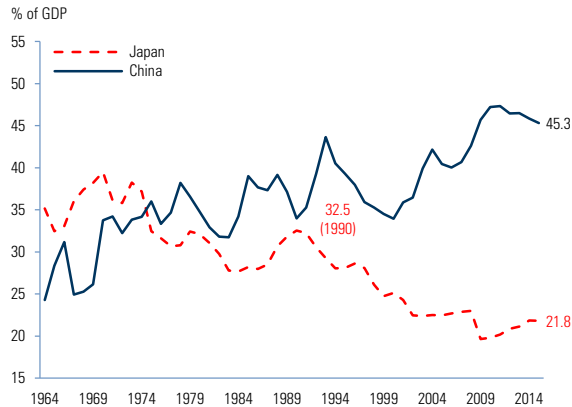
The Chinese population is expected to age at a rate similar to that of Japan since 1990.



Data as of 2015.
Source: Investment Strategy Group, United Nations Population Division.

Exhibit 65: Investment as a Share of GDP

China has a big rebalancing task ahead.



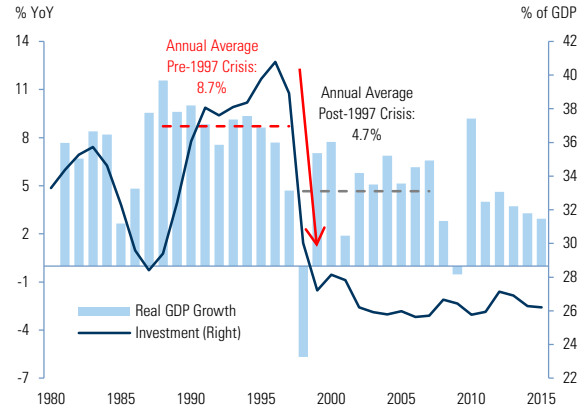
Data through 2015.

Note: ISG estimate for China in 2015, IMF estimate for Japan.

Source: Investment Strategy Group, Datastream, IMF.

Exhibit 66: GDP Growth vs. Investment in Key Asian Countries

Growth slowed markedly after a sharp decline in investment relative to GDP.



Data through 2015.

Note: Based on data for Malaysia, Singapore, South Korea and Thailand.

Source: Investment Strategy Group, Datastream, IMF.

is post-bubble Japan: not a cheering vision for what remains a relatively poor society.”¹⁵⁷

Third, China’s labor pool is not as educated as that of Japan and this will likely limit productivity gains. China’s population age 15 and older averages 7.5 years of schooling, while Japan’s average was 9.8 years in 1990. Japan reached 7.5 years of education in 1960—30 years before the beginning of the slowdown. China will have a difficult time catching up given its current spend rate on education. The Chinese government currently spends 3.6% of GDP on education, compared with 5.5% in Japan in 1989 (the closest year for which data is available). An educated labor force goes hand in hand with higher labor productivity. China’s labor productivity is currently about 26% that of the US, compared with Japan’s productivity at 76% that of the US in 1990.

We believe China’s debt burden, the inevitable rebalancing of the economy, unfavorable demographics, structural fault lines and the weight of history will bear down on its growth rates.

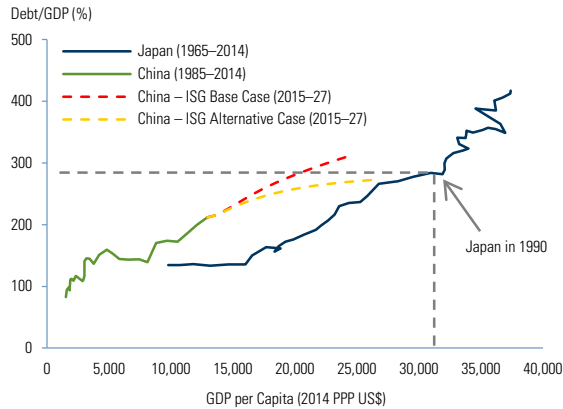
Fourth, China has a bigger rebalancing task ahead of it. Investment as a share of GDP is at 45.3% in China, while in Japan it stood at 32.5% in 1990, as shown in Exhibit 65. As discussed earlier, when investment-to-GDP is lowered, growth inevitably slows—none of the Asian economies have averted slower growth, as shown in Exhibit 66. Of course, China has a much higher savings rate, estimated at 47.4% of GDP in 2015; Japan’s savings rate stood at 33.8% in 1990. China may be able to use its higher savings to slow the pace at which it lowers investment-to-GDP, but the fact that it has to be lowered substantially is immutable.

Fifth, China today ranks substantially lower than Japan in 1990 on the business environment factors mentioned above. China ranks at the 22nd percentile on economic freedom, 55th percentile on freedom from corruption and 39th percentile on governance. In the mid-1990s, the earliest data available, Japan ranked in the 95th percentile, 90th percentile and 84th percentile, respectively, across those indicators. The Ease of Doing Business Index does not go back to the mid-1990s.

China has three factors that may alleviate the extent to which it follows Japan’s trajectory. While its debt-to-

Exhibit 67: GDP per Capita and Debt-to-GDP

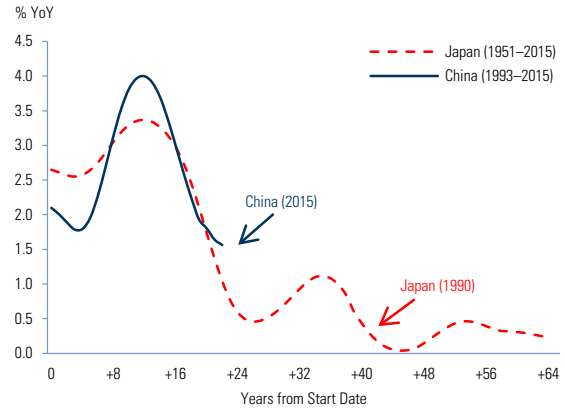
In our base case scenario, China would reach Japan's 1990 debt-to-GDP level in 2021.



Data through 2015.
Source: Investment Strategy Group, Bank for International Settlements, Datastream, European Commission, IMF.

Exhibit 68: Total Factor Productivity Growth

One positive for China is that its current TFP growth rate is higher than Japan's in 1990.



Data through 2015.
Note: Smoothed using an HP filter.
Source: Investment Strategy Group, Conference Board, Penn World Tables.

GDP is very high, it is still lower than Japan's in 1990. As shown in Exhibit 67, in our base case scenario China would reach Japan's 1990 debt-to-GDP level of 284% in 2021. Of course, as mentioned earlier, Japan's GDP per capita was much higher in 1990 than that of China today (1.8 times as high). We should note that Charlene Chu has estimated that off-balance sheet debt may be as much as 25 percentage points higher than the generally accepted 218% of GDP; in such a case, China would reach Japan's 1990 debt levels as early as 2018.

China also has a higher TFP growth rate at this time relative to Japan in 1990, as shown in Exhibit 68. Japan's TFP growth had been declining for nearly half a century. While China's TFP growth rate has also dropped from its recent peak of 4%, it is more than double that of Japan in 1990. China may well experience an increase in TFP growth with the implementation of reforms: the IMF has estimated China's TFP growth rate can be 1.0–1.5 percentage points higher, as discussed earlier.

China will have to rely more on domestic innovation, especially as the US becomes more vigilant with respect to economic cybersecurity and intellectual property protection. According to the McKinsey Global Institute, China has less than a 1% share of global revenues in branded pharmaceuticals and a 3% share each in biotech,

semiconductor design and specialty chemicals. Those marks compare with, for example, a 51% share of global revenue in solar panels.¹⁵⁸

Finally, China has a record of implementing significant reforms in the face of an unfolding crisis. As discussed earlier, China implemented agricultural reforms in the late 1970s and SOE reforms in the mid-1990s. Both sets of reforms boosted growth. Japan implemented minimal reforms, and even Prime Minister Shinzo Abe's "Third Arrow" has yet to have meaningful impact.

In summary, while our short-term outlook for China is relatively benign, our longer-term outlook is far from sanguine. We believe China's debt burden, the inevitable rebalancing of the economy, unfavorable demographics, structural fault lines and the weight of history will bear down on its growth rates. As a result, China may follow Japan's trajectory of slower growth.

Of course, there are many variations on this scenario, both on the upside and on the downside. On the upside, China could implement reforms more aggressively over the next several years and accept the risks associated with higher short-term economic and financial market volatility in return for more sustainable and balanced growth in the long run. China can also transfer state wealth to the household sector to boost consumption; one example would be to rapidly expand the social

safety net (education, health care and social security) to reduce precautionary savings and increase consumption.

On the downside, China may face an external shock from a recession in the US or the Eurozone, its main export destinations. Such a negative growth shock could slow China's economy further than our projections suggest. Debt as a share of GDP would rise even faster, and China could face a credit crisis, which would inevitably lead to an economic slowdown. We think the US and the Eurozone are more likely to provide a negative shock than a positive shock over the next several years.

Minimal Impact from New Initiatives

Several new initiatives have been introduced over the last two and a half years that have garnered significant attention for their potential to improve China's longer-term prospects. These include:

- The Silk Road Economic Belt and the 21st-Century Maritime Silk Road strategy: The stated goal of this strategy (summarily referred to as the “One Belt, One Road” plan) is to “promote economic prosperity of the countries along the Belt and Road and regional economic cooperation.”¹⁵⁹
- The Asian Infrastructure Investment Bank (AIIB): The bank is meant to “focus on the development of infrastructure and other productive sectors in Asia.”¹⁶⁰
- The New Development Bank BRICS (NDB BRICS): This bank (formerly called the BRICS Development Bank) is “designed to foster greater financial and development cooperation among the five emerging markets” of Brazil, Russia, India, China and South Africa.¹⁶¹
- The Silk Road Fund: The fund's purpose is to invest in infrastructure projects of the One Belt, One Road plan.

- Inclusion in the Special Drawing Rights basket: The IMF's Executive Board decided to include the renminbi in the SDR basket effective October 1, 2016.

If successful, these initiatives can create new markets for Chinese construction firms and capital goods manufacturers; support industries with excess capacity such as cement, steel and aluminum; promote the wider use of the renminbi; and increase China's political influence, specifically in Asia. These initiatives could also result in better infrastructure in poorer emerging markets along the One Belt, One Road corridors.

We believe that these initiatives will not materially alter China's longer-term prospects, however. Most importantly, the actual capital allocated to the three banks is less than the headline numbers suggest. The three new funds—AIIB, NDB BRICS and Silk Road Fund—will have a combined authorized capital commitment of \$240 billion, but their initial working capital will be only \$40 billion paid over five years.¹⁶² As a result, the initial scope of supported projects will be limited. Furthermore, Gavekal Dragonomics believes that factors such as governance, access to funding in the public bond markets, the capacity of the three new banks to manage their portfolio of projects and the capacity of target countries to absorb such loans could “slow the takeoff of the new banks.”¹⁶³

Others are even more pessimistic. Peking University Professor Michael Pettis contends that the AIIB can only become an important institution under “highly implausible conditions” and “will not play a role in China's rise.”¹⁶⁴ David Dollar of the Brookings Institution argues that “the idea that AIIB projects would help absorb China's over-capacity problem does not make sense ... the bank is just way too small to make any dent in the excess capacity problem.”¹⁶⁵

While these initiatives will have limited economic benefits, they do have symbolic benefits. Pettis believes that the AIIB's “main effect ... will be largely symbolic.”¹⁶⁶ Dollar points out that “the initial success of AIIB is a diplomatic victory for China.”¹⁶⁷ Former Federal Reserve Chairman Ben Bernanke believes that the inclusion of the renminbi in the SDR basket is “almost entirely symbolic”

China probably provides one of the best examples of the lack of correlation between economic growth and equity returns.

and “confers no meaningful additional powers or privileges on China.”¹⁶⁸ We should point out that, whereas inclusion in the SDR does not confer additional powers or privileges on China, the IMF does expect more reserve transparency, continued financial market liberalization and greater reliance on market-determined exchange rates from China.¹⁶⁹ If the mere inclusion in the SDR basket achieves some of the IMF’s goals, China’s longer-term prospects should marginally improve.

As mentioned earlier, there is tremendous uncertainty with respect to the range of longer-term economic outcomes in China. As Morris Goldstein and Nicholas Lardy stated back in November 2004, “rarely has the outlook for the Chinese economy been so contested.”¹⁷⁰ We believe a slowdown is inevitable and the path is unlikely to be smooth. We also believe that as the leadership navigates choppy waters, China’s financial markets and currency markets will become highly volatile. This volatility may be magnified by likely policy mistakes and will spread to other markets—with the greatest impact on emerging markets.

We now turn to the investment implications of our views for our clients’ portfolios.

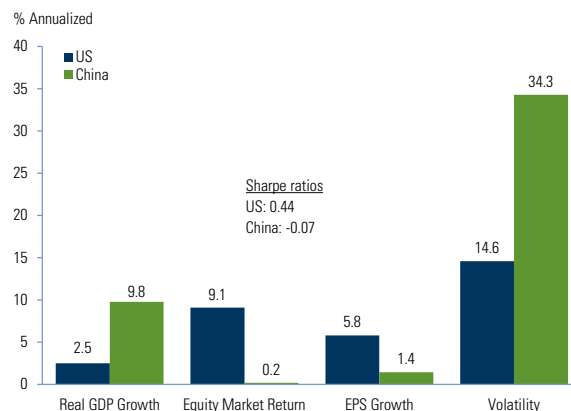
Investment Implications

Before concluding this *Insight* with the investment implications of our views, two points are worth mentioning. First, we should note that our views are not driven by an exact forecast of China’s growth for 2016 or the next five years. In fact, as first discussed in our 2010 *Outlook*, there is no stable relationship between economic growth and equity returns; the data actually points to a *negative* correlation. Elroy Dimson, Paul Marsh and Mike Staunton from the London Business School have examined data since 1900 to illustrate this point.¹⁷¹ Jay Ritter from the University of Florida not only provides compelling empirical evidence that economic growth and equity returns are not related, but he also presents theoretical arguments about why faster economic growth does not necessarily benefit stockholders.¹⁷²

China probably provides one of the best examples of the lack of correlation between economic growth and equity returns. This

Exhibit 69: Real GDP Growth and Equity Market Characteristics

China’s faster GDP growth hasn’t produced higher returns than the US.



Data through Q4 2015.

Note: Based on MSCI China and S&P 500 total returns and using data since the inception of the MSCI China Index on December 31, 1992.

Source: Investment Strategy Group, Datastream, MSCI.

disconnect is particularly stark when we compare China to the US. In Exhibit 69, we contrast Chinese data to US data since the inception of the MSCI China Index in 1993. Over this period, China’s economy has grown at an annualized rate of 9.8%, nearly four times as fast as that of the US, yet Chinese earnings have grown at a quarter of the US pace and China’s equity market has returned virtually zero. In addition, Chinese equity volatility has been more than double that of the US over this period.

This is the longest period for Chinese equity data, and we in the Investment Strategy Group generally prefer using the longest data available. However, we also realize that return data is very path dependent: the beginning and ending point of the period covered can have a material impact on the conclusion that is reached.

For example, the data is only slightly different if we start in September 1996, when China was added to the MSCI Emerging Markets Index. Since then, Chinese growth has been about four times as fast as that of the US, but equity returns have been about one-third those of US equities. The data is completely different, however, if we start in February 2002, shortly after China joined the World Trade Organization. Since then, China’s GDP has grown five times as fast as that of the US,

Exhibit 70: Overview of Key Chinese Equity Indexes

Index	Description	Start Date	Stock Exchange	Trading Currency	Number of Stocks	Market Cap (US\$ Billion)	PE Ratio
Shanghai A Shares Index	Composed primarily of stocks from the financial (33%) and industrial (20%) sectors. Includes several SOEs and government-linked companies.	12/19/1990	Shanghai	RMB	1,061	3,670	15.2
Shenzhen A Shares Index	Includes stocks with typically lower government ownership than the Shanghai A Shares Index. It also offers greater exposure to "New China" sectors such as consumer discretionary (17%) and IT (21%).	4/3/1991	Shenzhen	RMB	1,717	2,808	42.0
ChiNext Index	Commonly known as "China's NASDAQ," it is primarily composed of growth and technology stocks that trade on the ChiNext Board of the Shenzhen Stock Exchange.	6/1/2010	Shenzhen	RMB	100	293	61.4
Hang Seng China Enterprises Index (HSCEI)	Includes the 40 largest and most liquid H shares, primarily from the financial (73%) and energy sectors (11%).	8/8/1994	Hong Kong	HKD	40	463	6.1
MSCI China	Composed primarily of mid- and large-cap H shares. In December 2015, 14 Chinese American Depository Receipts (ADRs) from the IT and consumer discretionary sectors were added to the index.	12/31/1992	Hong Kong and New York (ADRs)	HKD and USD	157	1,712	9.3

Data as of January 15, 2016.

Source: Investment Strategy Group, Bloomberg.

its equity market has outperformed US equities by about 7% a year and volatility has been nearly double that of the US. It is important to note that the latter analysis gives greater weight to the 2003–07 period, which we call the "Goldilocks era" of emerging markets (as discussed in our 2013 *Insight* report, *Emerging Markets: As the Tide Goes Out*).

Therefore, the long-term investment implications of our China view are not driven by whether China grows by 6.5% or 5.5% in 2016, or whether growth averages 6.5%, 6.0% or even lower in the 2016–20 time frame. The investment implications are instead driven by our view that:

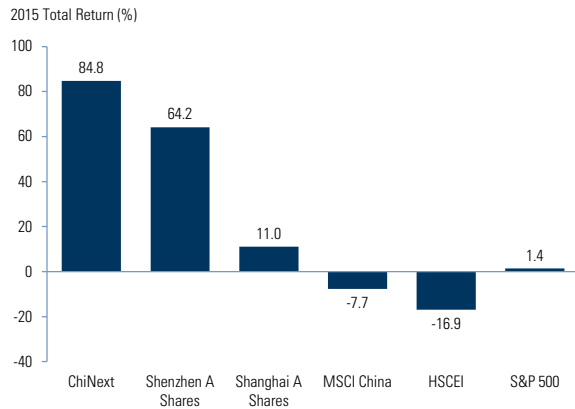
1. China's growth will inevitably slow to substantially lower rates over the next decade.
2. The path China will follow is highly uncertain as growth slows.
3. China will incur greater risks as it attempts to implement reforms while maintaining control of the financial markets and the economy.
4. China's debt will continue to grow, making any eventual deleveraging process as painful as it has been in the US and the peripheral countries in the Eurozone.

5. China's financial markets will be much more volatile without any increase in expected returns.
6. China's profile today has many parallels to Japan in 1990.

The second point worth highlighting is our focus on the MSCI China Index when discussing equity returns. We rely on this broad-based index because it is readily accessible to non-Chinese investors and less likely to be subject to government involvement through restrictive measures to control market volatility. Exhibit 70 provides a summary of other indexes. The Shanghai A Shares, Shenzhen A Shares and ChiNext indexes are not readily available to non-Chinese investors, and the HSCEI is a subset of the MSCI China Index. These indexes also have very different historical returns. As shown in Exhibit 71, the MSCI China Index fell 7.7% in 2015, while the broad Shenzhen A Shares Index gained 64.2% and the growth- and technology-oriented ChiNext Index returned 84.8%. The indexes have also deviated significantly over the longer term. Looking at the three indexes since 2005, when local retail investors began to participate in the A-share market in a more meaningful way, MSCI China has had an average annual price

Exhibit 71: Equity Returns in 2015

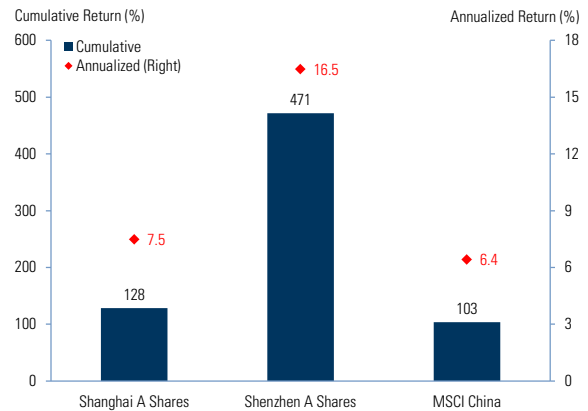
There was wide dispersion of returns among key Chinese indexes.



Data as of December 31, 2015.
Source: Investment Strategy Group, Bloomberg.

Exhibit 72: Price Returns Since 2005

Shenzhen A Shares have significantly outperformed their counterparts.



Data as of January 15, 2016.
Source: Investment Strategy Group, Bloomberg.

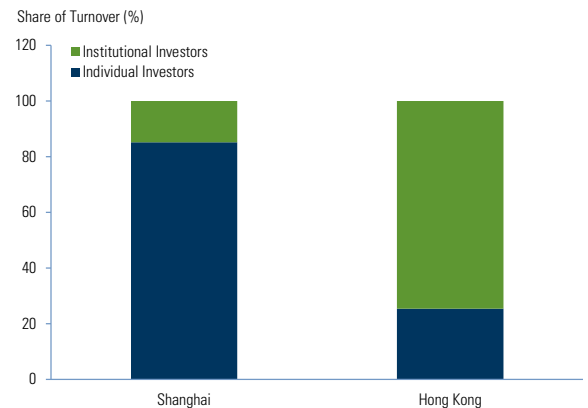
return of 7.5%, compared with 16.5% for the Shenzhen A Shares and 6.4% for the Shanghai A Shares indexes, as shown in Exhibit 72. Over this 11-year period, the Shenzhen A Shares Index has outperformed the MSCI China Index by a whopping 368 percentage points.

As shown in Exhibit 73, professional investment managers account for most of the trading on the H-share market, which is composed of Chinese stocks traded in Hong Kong. Chinese domestic markets, on the other hand, are dominated by retail investors, who tend to be less sophisticated investors and have fewer capital market investment opportunities. Retail investors also tend to be more trading-oriented, prefer companies with lower market capitalization and follow local news regarding those companies.¹⁷³ Both A-share markets trade at much more expensive valuations than the H shares in the MSCI China Index.

Finally, we note that the characteristics of the MSCI China Index have changed recently, following the inclusion of 14 US-listed Chinese companies on December 1, 2015. Information technology stocks, including Alibaba, account for 80% of these companies' market cap, with consumer discretionary companies accounting for the remainder. By the time the second tranche of the inclusion of these 14 stocks occurs on June 1, 2016, the weight of SOEs in the MSCI China Index will have declined to 60% from 74%, and

Exhibit 73: Chinese Equity Turnover by Type of Investor

Retail investors account for the bulk of domestic equity trading.



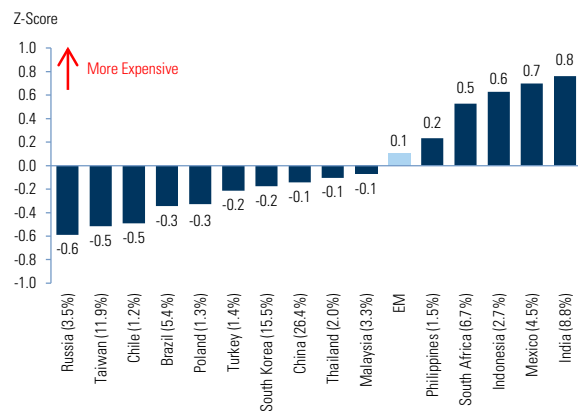
Data as of 2014.
Source: Investment Strategy Group, Hong Kong Stock Exchange, Shanghai Stock Exchange.

the weight of what our colleagues in GIR call “New China” stocks (e.g., consumer- and services-oriented companies and information technology stocks) will have increased to 40% from 26%.¹⁷⁴

With that context in mind, let us first review our return expectations for Chinese equities and the renminbi. We will then review the investment implications for our clients' portfolios.

Exhibit 74: Normalized Emerging Market (EM) Equity Valuations

EM equities are still not cheap enough.



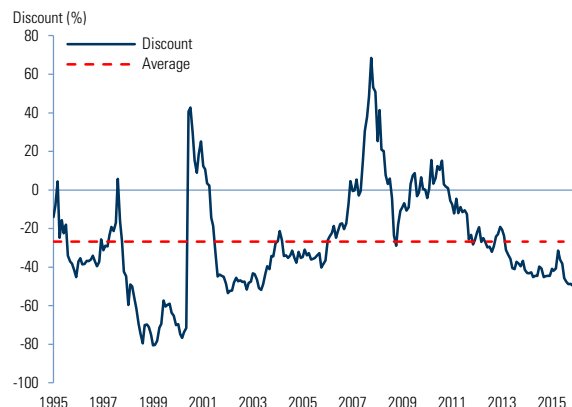
Data as of January 15, 2016.

Note: Based on data since 1994 for price/forward earnings, price/book value, price/cash flow, price/earnings-growth ratio, dividend yield and return on equity. Numbers in parentheses denote the country's weight in MSCI EM.

Source: Investment Strategy Group, Datastream, I/B/E/S, MSCI.

Exhibit 75: Discount of Chinese Equities to US Equities

Chinese valuations could deteriorate further relative to the US.



Data through January 15, 2016.

Note: Based on MSCI indexes and price/earnings, price/book value and price/cash flow data.

Source: Investment Strategy Group, Datastream, MSCI.

2016 Return Expectations

In line with our sanguine view of China's economy in 2016, we expect a total return of 5.6% for Chinese equities this year, driven by earnings-per-share growth of 2.6%, a dividend yield in line with the current level at 3% and relatively unchanged valuations. We expect volatility of about 30%, which implies a wide range of outcomes, with a greater probability of lower returns. As shown in Exhibit 74, Chinese equities, as measured by the MSCI China Index, are not sufficiently cheap relative to their own history to warrant a tactical overweight at this time. Similarly, as shown in Exhibit 75, they are not sufficiently cheap relative to US equities either. If we face the type of SOE reforms China undertook in the mid-1990s, or slower growth prompts an increase in defaults and corporate restructurings, we may see further deterioration in the valuations of Chinese equities relative to US equities.

With respect to the currency, our expectation of further interest rate cuts by the PBOC in 2016 should put downward pressure on the renminbi. Moreover, as shown in Exhibit 76, the renminbi is no longer undervalued as it was in 2006; in October 2015 the US Treasury changed its designation of the renminbi as a "substantially" undervalued currency, signaling the end of a period of political pressure and significant bilateral tension

that dates back to the development of large macro imbalances in the mid-2000s. In fact, given that the US dollar (as measured by the US Dollar Index) has appreciated by 38% since its trough in May 2011, the Chinese peg to the dollar has also meant significant appreciation of the renminbi relative to the currencies of many of China's trading partners.

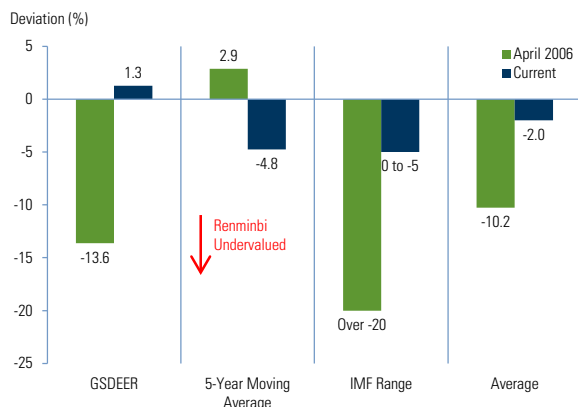
Hence, we believe the PBOC will attempt to depreciate the renminbi in an orderly manner, by somewhere between 5% and 10% relative to the US dollar this year. However, whether it can achieve a gradual drift downward is highly uncertain, as the unexpectedly rapid pace of depreciation since December 11, 2015, and significant capital outflows since May 2015 have tilted the risks in favor of even greater depreciation.

2016–20 Return Expectations

In line with our view of China's various possible paths between 2016 and 2020, we believe that Chinese equity returns will be more muted over the next five years, for reasons already enumerated above: there will be greater economic uncertainty, debt servicing costs will hamper companies' growth opportunities given higher levels of leverage (see Exhibit 77), and rising corporate defaults will erase shareholder equity. Investors will focus on declining ROAs, which have dropped from their

Exhibit 76: Renminbi Deviation from Fair Value

The renminbi is no longer undervalued.



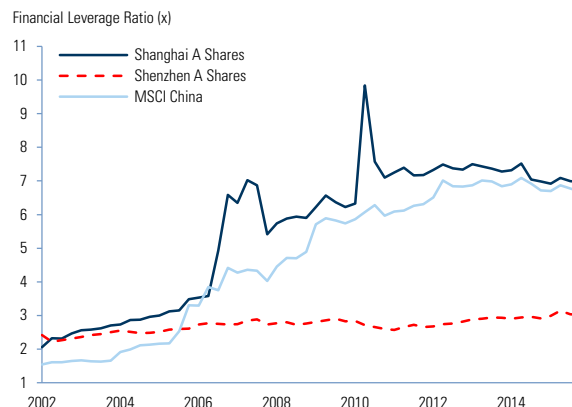
Data as of January 15, 2016.

Note: Based on the onshore renminbi exchange rate.

Source: Investment Strategy Group, Bloomberg, Goldman Sachs Global Investment Research, IMF.

Exhibit 77: Financial Leverage Ratio of Chinese Equity Indexes

The ratio of debt to equity has risen across all indexes.



Data through Q4 2015.

Source: Investment Strategy Group, Bloomberg.

peak of about 8% during the Goldilocks era of emerging markets to 2% now (see Exhibit 78 on page 64).

In our base case, we expect an annualized return of about 4% for Chinese equities. Should confidence dissipate and/or a banking crisis appear imminent, we believe that Chinese equities might well experience the type of downdraft that we saw in Japan post-1990. In such a case, equities could decline about 7–8% a year over this period.

We are also concerned that, as the economy slows over the next several years, we will see more examples like Hanergy Thin Film Power Group and Kaisa Group Holdings Ltd. The two companies have suffered from questionable corporate governance and limited accounting transparency, and trading in their stocks has been suspended by regulators. Both were well-known, high-profile companies: Hanergy Thin Film Power Group was in the MSCI China Index, and its founder was one of the richest people in China until the selloff in the stock market in May 2015. Similarly, the founding family of Kaisa Group Holdings Ltd. was considered the third-richest family in the Greater China region. Such cases are completely unpredictable, and result in what Professor Aswath Damodaran of Stern School of Business at New York University refers to as “truncation risk,” where future cash flows are simply truncated.¹⁷⁵ The hurdle rate to invest in

a market where truncation risk is high should be adjusted to reflect such risks.

We also believe that China will try to depreciate the currency steadily for several years. We estimate that the depreciation will total 10% to 20% over the next two years. Of course, the renminbi could weaken further by 2020, especially if the depreciation were to become disorderly, or if the capital account is opened up and China witnesses significant capital outflows.

Longer-Term Implications

The greater impact of the renminbi depreciation will be on the currencies of other emerging market countries. We are less concerned about emerging market currencies in the next 12 months, given the fact that they have already weakened 43% from their peak levels in 2011. However, we think that a steady depreciation of the renminbi by China will drag down emerging market currencies and offset the incremental yield in emerging market local debt. We are therefore removing emerging market local debt from our strategic model portfolios. We note that we had already reduced our allocation to emerging market local debt in 2013.

We also recommend a one percentage point reduction in our strategic asset allocation to emerging market equities in a well-diversified, moderate-risk portfolio. Note that we also reduced our emerging market equity allocation by one

Exhibit 78: Return on Assets

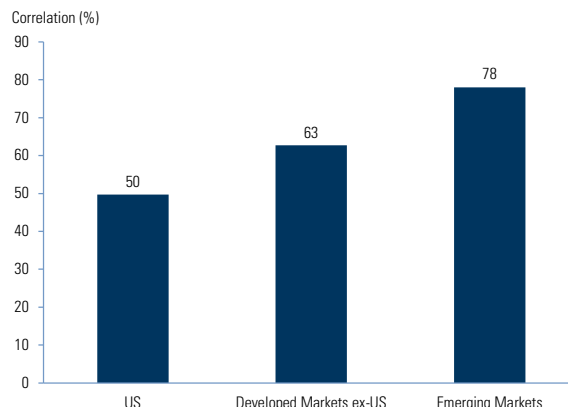
China's ROA has declined dramatically since the Goldilocks era of emerging markets.



Data through Q4 2015.
Note: Based on MSCI indexes.
Source: Investment Strategy Group, Bloomberg.

Exhibit 79: Correlation With Chinese Equities

Emerging markets' high correlation makes them vulnerable to elevated volatility in China.



Data through January 15, 2016.
Note: Based on MSCI indexes since 2001.
Source: Investment Strategy Group, Datastream.

percentage point in 2013. The current reduction reflects the influence China has among emerging market stocks, with the MSCI China accounting for 26% of the MSCI Emerging Markets Index. Furthermore, the MSCI Emerging Markets Index has the highest correlation with MSCI China, as shown in Exhibit 79. Hence, higher Chinese equity volatility and downdrafts will have the greatest impact on the emerging market assets in our clients' portfolios. Emerging market countries are also more dependent on Chinese demand for commodities related to manufacturing and real estate investments, and since we expect the pace of growth to continue slowing in both areas, we

expect lower returns in those countries as well.

We reallocate the reduction in emerging market assets to investment grade and high yield fixed income and developed market equities.

We are not changing our allocation to emerging market private equity. We believe that private equity managers will be able to benefit from China's rebalancing toward consumption and services on a more focused basis. In our view, the opportunities in health care and waste management services, for example, can be quite significant for companies, especially for those with expertise and capital.

Conclusion

China is undergoing a significant transition under President Xi Jinping's leadership. The country is trying to shift its economy away from an export-driven and investment-led one to a more balanced, consumption-oriented economy. It aspires to double its GDP and GDP per capita by 2020 relative to 2010 levels. To achieve these goals, the Chinese leadership has set out an extensive reform agenda, including further financial market liberalization, SOE reform, fiscal reform, rural land reform and hukou reform. President Xi Jinping has specified that the “markets” should play a more “decisive role” in order to achieve these goals.¹⁷⁶

Such significant transition entails equally significant risks and introduces equally significant uncertainties. A complex and interconnected reform agenda has never been achieved on this scale. The transition, if accomplished, is unlikely to be smooth. Additionally, China is undertaking this transition at a time when US policy toward the country may be shifting. US policy has been one that “values China's economic and political integration in the liberal international order,” according to geopolitical experts.¹⁷⁷ Yet many of those same experts recommend that the US now shift its strategy toward “more muscular balancing and smarter engagement.”¹⁷⁸

As a result, we believe China will be a source of market volatility not only for 2016, but also for the next five years, with the highest impact on emerging market economies. We therefore recommend clients adjust their exposures to emerging market assets. Developed economies will not be immune from any volatility emanating from China, but the direct and indirect economic impacts will be lower for them; still, we expect that financial markets in developed countries will overreact as they did in August 2015 and again in early 2016.

Abbreviations Glossary

ADR: American Depositary Receipt

AIIB: Asian Infrastructure Investment Bank

ARRA: American Recovery and Reinvestment Act

BCG: Boston Consulting Group

BEA: Bureau of Economic Analysis

BIS: Bank for International Settlements

bps: basis points

BRICS: Brazil, Russia, India, China and South Africa

CASS: Chinese Academy of Social Sciences

CFEEX: China Financial Futures Exchange

CPC: Communist Party of China

CSRC: China Securities Regulatory Commission

DM: developed market

EAG: Emerging Advisors Group

EM: emerging market

EPS: earnings per share

FX: foreign exchange

GDP: gross domestic product

GIR: [Goldman Sachs] Global Investment Research

GSDEER: Goldman Sachs Dynamic Equilibrium Exchange Rate

HKD: Hong Kong dollar

HSCEI: Hang Seng China Enterprises Index

ICOR: incremental capital-output ratio

IEA: International Energy Agency

IMF: International Monetary Fund

IPO: initial public offering

LGFV: local government financing vehicle(s)

MEP: Ministry of Environmental Protection

MSCI EAFE: MSCI Europe, Australasia and the Far East [Index]

MSCI EM: MSCI Emerging Markets [Index]

NBER: National Bureau of Economic Research

NBS: National Bureau of Statistics of China

NDRC: National Development and Reform Commission

NPL: nonperforming loan

OECD: Organisation for Economic Co-operation and Development

PBOC: People's Bank of China

PM: particulate matter

pp: percentage points

PPP: purchasing power parity

QDII: Qualified Domestic Institutional Investors

QFII: Qualified Foreign Institutional Investors

RMB: renminbi

ROA: return on assets

RQFII: Renminbi Qualified Foreign Institutional Investors

RRR: reserve requirement ratio

SAAR: seasonally adjusted annualized rate

SASAC: State-Owned Assets Supervision and Administration Commission

SDR: Special Drawing Rights

SFTZ: Shanghai Free Trade Zone

SOE: state-owned enterprise

TARP: Troubled Asset Relief Program

TFP: total factor productivity

USCC: US-China Economic and Security Review Commission

WTI: West Texas Intermediate

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