

Economic Outlook

June 28, 2013

Recalibrating Growth and Return Expectations in China

BY JASON M. THOMAS

- China's economy is slowing from average growth of nearly 10% to a new trend in the 6% to 8% range.
- While downside scenarios require close attention, the deceleration in growth rates may be good news for investors over the long run.
- Some portion of annual GDP growth has been generated by investments that have reduced equity returns, on net, by contributing to overcapacity, which depresses margins and profits.
- Since 1970, GDP growth in China has exceeded equity market returns by about 15% per year. Less debt-funded investment could bring returns more in line with GDP growth.

The Chinese economy has slowed from its prior trend growth rate of close to 10% and the slowdown has a structural rather than cyclical character. Yet even at this slower rate the Chinese economy is growing two-to-three times as fast as the rest of the world. The size of the differential is remarkable given that the Chinese economy now contributes 16% of global GDP. On the margin, China's contribution is twice as big: if China achieves a 7% growth rate this year it will account for about 32% of global growth. At market exchange rates, *growth* in final sales in China would equal \$750 billion in 2013. The Chinese economy is so large that the year-to-year *growth* in economic activity is nearly as large as the entire Indonesian economy.¹

These basic facts about the Chinese economy help to contextualize both the slowdown in growth as well as the risks to financial stability that have emerged in recent years. Since at least 2004, China's leaders have emphasized the need to transition the economy from its dependence on exports and investment.² Instead of a well-managed and gradual transition from external to domestic demand, an unintended rebalancing occurred through a sudden 11% decline in global trade volumes in the wake of the global financial crisis.³ Chinese policymakers responded to the sharp decline in exports by relying even more heavily on investment through a massive stimulus and credit easing program. While the policy succeeded as a stop-gap measure, the weakness of the global economic recovery caused policymakers to extend its duration well beyond the original intent. The result was extremely rapid credit growth, fixed investment rates likely 10% to 20% above optimal levels, and the emergence of alternative channels for financial intermediation.

As Chinese authorities grapple with the excesses of the recent past and reorient the economy towards household consumption, growth may slow further. Surprisingly, this may be good news for long-term investors. Recent investment and credit growth have contributed to

¹ All data from International Monetary Fund, 2013 World Economic Outlook. The IMF forecast for 2013 GDP growth is 7.75%.

² "Central Economic Work Conference Convened in Beijing, December 3 to 5," People's Daily, December 6, 2004, <http://www.people.com.cn>

³ IMF, 2013 WEO.

overcapacity, which has depressed margins, profitability, and returns on equity. The incremental GDP growth has therefore served like a “tax” on investment returns and likely contributed to the relative underperformance of Chinese equities. Investors’ increased appreciation for financial fragility has also reduced valuation ratios and increased expected returns on stocks. While downside scenarios require very close attention, a more efficient, slower growing economy with larger risk premia could prove more attractive to investors over the long run.

Countercyclical Policy Response to the Global Financial Crisis

In the five years preceding the global financial crisis, Chinese exports grew at an average annual rate of 20.8% and real GDP increased by 11% per year.⁴ By 2007, net exports accounted for nearly 10% of Chinese GDP, or RMB 1 trillion. After the crisis in credit markets in the fall 2008, external demand collapsed, causing China’s exports to fall by 11% in 2009. Absent policy intervention, Chinese GDP growth would have halved relative to its prior trend. To avoid this outcome, policymakers responded with a RMB 4 trillion stimulus package (5.8% of GDP) focused on infrastructure investment (RMB 2.87 trillion), energy technology investment (RMB 580 billion), and social measures, including affordable housing construction (RMB 550 billion).⁵ Fixed investment – total spending on infrastructure, factories, technology, capital goods, etc. – increased by nearly 7% of GDP between 2007 and 2009, which more than compensated for the 5.2% of GDP decline in net exports. Real GDP in China grew by 9.1% in 2009 even as the world economy contracted by 2.1%.

Figure 1: The Contribution of External Demand to Chinese GDP⁶



China’s central government financed only 30% of the stimulus package (RMB 1.2 trillion) directly in order to keep its fiscal deficit to 3% of GDP.⁷ The rest was financed through bank lending to off-balance sheet entities sponsored by local governments. Due to restrictions on local governments’ tax and on-budget borrowing authority, sub-national governments rely on local government financing vehicles (LGFVs) that use government-owned land as collateral (or repayment) for loans from banks and other intermediaries. LGFV borrowing is generally believed to account for the entirety of the RMB 2.8 trillion local government portion of the stimulus package.⁸

⁴ IMF, 2013 WEO.

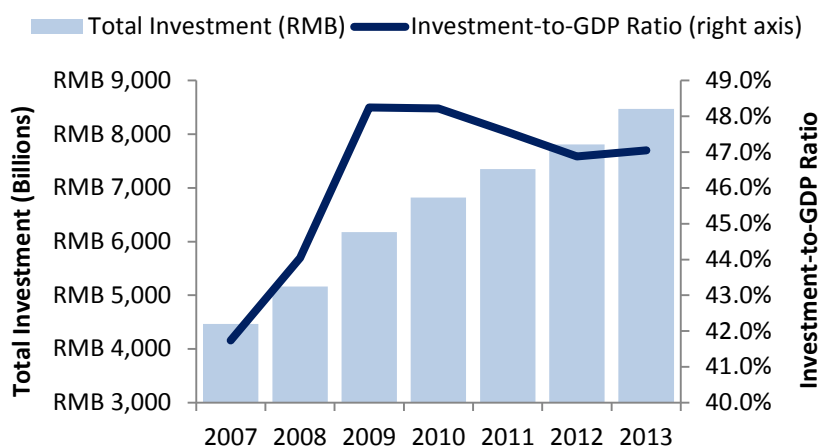
⁵ McKissack, A. and Xu, J. Y. (2011), “Chinese Macroeconomic Management through the Crisis and Beyond,” Asian-Pacific Economic Literature.

⁶ IMF 2013 WEO.

⁷ IMF, 2013 WEO.

⁸ McKissack and Xu.

Figure 2: Chinese Total Fixed Investment, 2007-2013⁹



The RMB 4 trillion stimulus was but one piece of total fiscal and credit easing. General government fiscal outlays increased by 4.5% of GDP cumulatively between 2007 and 2011; equal to an increase of RMB 5.4 trillion in government spending over the period. This massive increase in fiscal outlays was dwarfed by the contemporaneous credit easing. The People’s Bank of China (PBOC) increased total lending and monetary growth targets, reduced the lending interest rate from 7.47% to 5.31%, cut the deposit interest rate from 4.14% to 2.25%, and reduced banks’ required reserve ratio from 17.5% of deposits to 15.5%. Total credit exploded in response: RMB-denominated bank credit outstanding increased by RMB 14.3 trillion in 2009 alone, a 26% increase in outstanding balances equal to 46% of GDP.¹⁰ When accounting for credit provided by non-bank intermediaries, total credit growth accelerated by 88%, from an average net increase of RMB 540 billion per month in 2007-2008 to RMB 1 trillion per month in 2009-2010 (Figure 3).¹¹

An Overheating Economy and Financial Disintermediation

The stimulus created three immediate problems for policymakers that arose both because of its sheer size and because it was essentially a fiscal operation financed through the banking system. First, the emphasis on speed of execution guaranteed that some of the spending would be wasted. It was not possible to meaningfully scrutinize the merits of each project proposed by local governments in a time frame consistent with a countercyclical stimulus of the proposed size; thus resulting in a sizeable percentage of projects with insufficient revenues to meet obligations with no clarity regarding who will be forced to bear these losses. Second, the surge in liquidity led to traditional problems associated with monetary easing: consumer price inflation and signs of speculative excess in financial, real estate and commodity markets. Third, the reduction in deposit rates below the rate of inflation increased the rate of financial disintermediation, which accelerated the development of a “shadow banking” system.

The scale of the nonperforming loan problem generated by the stimulus was formally quantified by the National Audit Office of China (CNAO) in 2011. The CNAO found that at the end of 2010, local governments and their related entities had RMB 10.7 trillion in debt outstanding (26% of GDP), over RMB 5.1 trillion of which had been borrowed in 2009 and 2010.¹² The CNAO estimates China’s 6,576 LGFVs accounted for RMB 5.0 trillion (26%) of the accumulated debt load. As of May 2011, 16% of LGFV debt was nonperforming, but

⁹ IMF 2013 WEO.

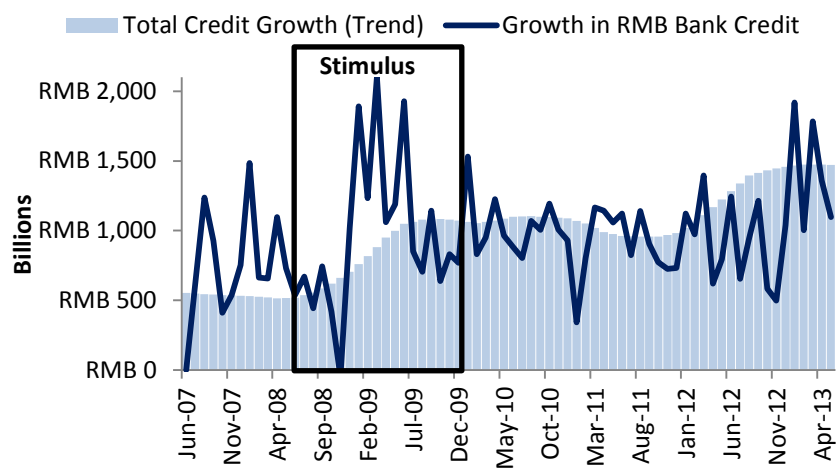
¹⁰ People’s Bank of China, Financial Statistics, Sources and Uses of RMB Credit Funds of Financial Institutions.

¹¹ People’s Bank of China, Total Social Financing.

¹² Audit Findings on China’s Local Governmental Debts, No.35 of 2011 (General Serial No. 104) Audit Findings on China’s Local Government Debts.

this was but a fraction of the bad loans because 26% of LGFVs were loss-making companies operating in areas with weak profit potential (hospitals, roads, affordable housing, etc.) and many LGFVs actively borrowed new money to retire old debts, including 50% of hospitals and universities. While technically off-balance sheet, the CNAO includes only that portion of LGFV debt that local governments explicitly guarantee or directly subsidize. When including LGFVs considered by the CNAO to be stand-alone entities, total local government-related debt would be 40% greater, or 36% of 2010 GDP.¹³ Both the scale of ultimate losses and their relative apportionment across banks, local governments, and the Ministry of Finance, remain unclear.

Figure 3: Net Credit Growth in China, 2007-2013¹⁴



Excess liquidity quickly manifested itself in price indexes for consumer goods and real estate. Consumer price inflation easily surpassed the 3% target in 2010 before peaking at 6.5% in mid-2011 (Figure 4). Price pressures were evident in real estate markets almost immediately after the stimulus took effect. Land prices in 35 major Chinese cities increased at a 31% real annualized rate in 2009 and 2010,¹⁵ reigniting concerns about a property bubble given the sharp rise in prices relative to rents and median incomes.¹⁶ Real estate investment accounts for a quarter of total fixed asset investment in China (roughly 12% of GDP) and generally accelerates quickly when interest rates decline given urbanization trends, the lack of investment alternatives, and restrictions on foreign investment.¹⁷ In 2010, speculative investment moved beyond real estate to esoteric items like tea and garlic as investors used cheap credit to stockpile inventories in the hopes of capital gains.¹⁸ The PBOC responded by increasing interest rates in late-2010 and withdrew liquidity from the system by raising banks' reserves requirements 6 percentage points to 21.5% of deposits.

Perhaps the most significant outgrowth of the stimulus was the proliferation of alternative channels of financial intermediation. By reducing deposit rates to well below the rate of inflation, the PBOC created strong incentives for households – whose savings equal 30% of disposable income – to seek alternatives to the negative real returns of bank deposits.¹⁹ A shadow banking system of trust companies, bank-sponsored wealth management products (WMPs), and brokers emerged to provide savers with higher-yielding alternatives. The PBOC later accelerated the growth of shadow banking when it established hard caps on bank lending to tamp down inflation. Businesses denied credit from banks naturally turned to alternative

¹³ Dorrucchi, E., Pula, G., and Santabárbara, D. (2013), "China's Economic Growth and Rebalancing," European Central Bank.

¹⁴ IMF, 2013 WEO.

¹⁵ Deng, Y., Gyourko, J., and Wu, Jing. (2012), "Land and House Price Measurement in China," NBER Working Paper 18403.

¹⁶ Deng, Y., Gyourko, J., and Wu, Jing. (2010), "Evaluating Conditions in Major Chinese Housing Markets," NBER Working Paper 16189.

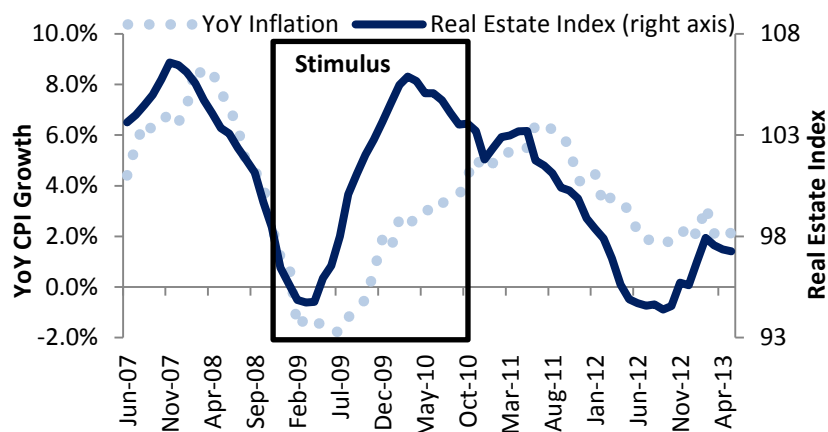
¹⁷ Ahuja, A. and Myrvoda, A. (2012), "The Spillover Effects of a Downturn in China's Real Estate Investment," IMF Working Paper.

¹⁸ McKissack and Xu.

¹⁹ Nabar, M. (2011), "Targets, Interest Rates, and Household Saving in Urban China," IMF Working Paper.

sources of funding such as trust companies. Between 2007 and 2012, the assets of trusts increased nearly eight-fold, from RMB 850 billion to RMB 7.6 trillion.²⁰ The total value of bank-sponsored WMPs was estimated to be of a similar magnitude, but WMP investments in trusts makes some double-counting unavoidable.

Figure 4: Indexes of Consumer Prices and Real Estate²¹



While PBOC policy succeeded in slowing total credit growth from a RMB 1.1 trillion monthly pace in 2010 to a RMB 900 billion pace in 2011, by mid-2012 credit growth was already running well above the previous highs. By March 2013, net credit was expanding at an RMB 1.5 trillion trend monthly rate (RMB 18 trillion per year), or 50% faster than during the stimulus. The increase in credit growth was due entirely to the shadow banking system: the IMF estimates that non-bank lending accounted for 40% of intermediation in 2012 and more than 50% of all credit extended in 2013.²²

Shadow Banking Growth Linked to Unsustainable Investment Pace

The original wave of bank-financed stimulus was designed to serve as a temporary stopgap until external demand rebounded. With domestic consumption only contributing 4 percentage points of GDP growth per year, the global economy’s tepid recovery deprived China of the anticipated export growth necessary to scale back on fixed investment while still meeting 8% growth targets.²³ Policymakers likely tolerated the surge in shadow credit because it financed a continuation of the investment boom that sustained GDP growth at high rates. This strategy now seems to have run its course as evidence mounts that the current pace of investment results in significant excess capacity, falling returns on capital, and an unsustainable pace of debt accumulation.

Based on historic relationships between investment and GDP growth rates in cross-country data, China’s investment-to-GDP ratio should have peaked in 2005 and declined thereafter.²⁴ Instead, the stimulus-related spending caused investment to rise between 12% and 20% above the “optimal” level. Excess investment has pushed potential output about 5% higher than actual output, which translates to nearly RMB 3 trillion in economy-wide spare capacity.²⁵ Evidence of overinvestment is also evident from measures of the pre-tax return on capital, which has fallen by about 6 percentage points since 2007 (Figure 5). Part of the decline

²⁰ Tao, D. and Deng, W. (2013), “China: Shadow Banking – Road to Heightened Risks,” Credit Suisse.

²¹ National Bureau of Statistics.

²² IMF, 2013 Asia Regional Economic Outlook.

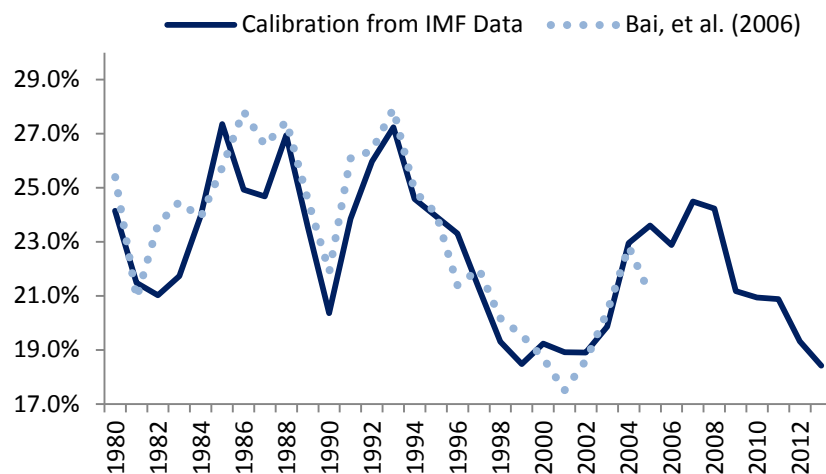
²³ Ahuja, A. and Myrvoda, A. (2012), “Investment-led Growth in China: Global Spillovers,” IMF Working Paper.

²⁴ Houg Lee, Syed, M. and Xueyan, L. (2012), “Is China Over-Investing and Does it Matter?” IMF Working Paper

²⁵ IMF, Asia Pacific Regional Economic Outlook, April 2013

may be due to an emphasis on infrastructure spending with a lower GDP impact – sewage systems, environmental projects, public housing – than prior transportation projects.²⁶ But much of the decline stems from redundant investments that do not contribute to the productive capital stock.²⁷ Fixed investment generally increases GDP both at the time of implementation and in the future as a result of the increased flow of goods and services the investment produces or facilitates. A vacant building or redundant factory, by contrast, contributes to GDP only at the time of construction since it does nothing to boost output over its useful life.

Figure 5: Pre-Tax Return on Capital in China²⁸



The declining efficiency of investment is also reflected in the precipitous decline in the elasticity of GDP to credit growth. In 2008, it took only 1.45 RMB of credit to generate 1 RMB of incremental GDP. In 2012, the ratio increased to 3.4 and rose further in Q1-2013.²⁹ Such inefficiency is obviously unsustainable now that outstanding credit has grown to between 180% and 220% of GDP, with government obligations accounting for between 50% and 73% of GDP, depending on how one classifies LGFV borrowing.³⁰ The increase in the ratio of credit-to-GDP growth also suggests that some portion of the net increase in liabilities reflects borrowing to cover promised interest payments instead of financing new economic activity.

Recent Stresses in Interbank Funding Markets

Policymakers are clearly aware of the unsustainability of recent trends and have worked actively to slow credit growth through regulation and, more recently, by raising banks' funding costs in the interbank loan market. The CBRC has issued rules to bring some transparency to the holdings of WMPs, improve disclosure practices, and limit LGFV borrowing on numerous occasions.³¹ The effectiveness of these regulations has been limited, however, as new financing channels have quickly emerged; with bank lending closed, LGFVs and other state-affiliated entities have increasingly turned to the corporate bond market, for example. This experience has likely convinced authorities that the only effective restraint on credit growth in an overleveraged system is the withdrawal of funding liquidity.

²⁶ Kuijs, L. (2011), "China's local government debt—what is the problem?" World Bank.

²⁷ Houg Lee, Syed, M. and Xueyan, L. "China's Path to Consumer-Based Growth: Reorienting Investment and Enhancing Efficiency," IMF Working Paper.

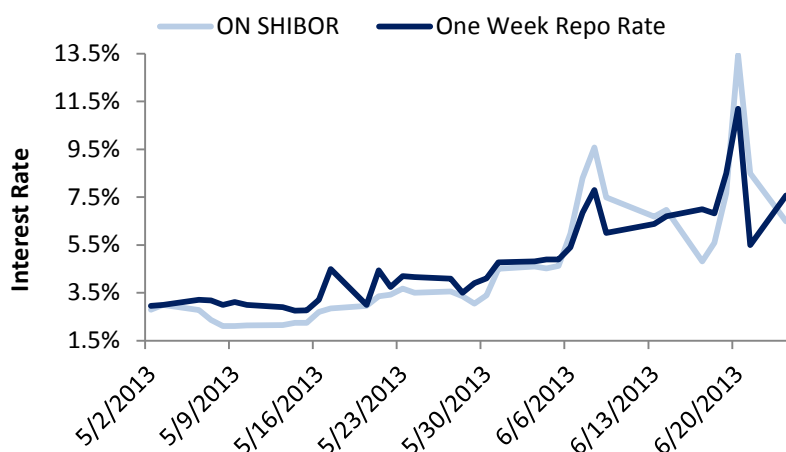
²⁸ Return estimates calculated using recent IMF data based on model contained in Bai, C., Hsieh, C., and Qian, Y. (2006), "The Return to Capital in China," NBER Working Paper 12755.

²⁹ People's Bank of China Total Social Financing relative to IMF nominal GDP in local currency terms.

³⁰ Dorrucchi and Santabárbara (2013).

³¹ Asia Securities Industry & Financial Markets Association, Asia Regulatory Review, 2013.

Figure 6: Interbank Lending Rates³²



Between late April and mid-June 2013, interest rates in interbank lending markets rose six-fold. The PBOC temporarily refused to meet the increase in banks' liquidity needs arising from the decline in foreign exchange inflows (due to dollar appreciation and the end to quantitative easing), the June 30 required reserves posting, the need to meet maturing WMPs, and 2012 cash dividend payments to shareholders. The PBOC could easily relieve the stress in the interbank market by lowering required reserve ratios, creating new bank reserves by buying RMB-denominated assets, or injecting liquidity through reverse repurchase agreements in whatever quantity was necessary to hit a desired interest rate target. The PBOC apparently refused to do so because it judges the problem not to be insufficient liquidity but rather too many short-funded institutions with excessively risky liability structures.³³ If institutions recognize that interbank borrowing at quarters' end will be prohibitively expensive – i.e. several hundred basis points in excess of lending rates – credit extended by structures dependent on an infinitely elastic supply of money market liquidity will be severely curtailed.

Since such a large volume of past borrowing depends on the ability to rollover existing financing, a liquidity squeeze could potentially trigger defaults of some of the weakest borrowers, including shadow banks that depend on loans from affiliated banks as a liquidity backstop. At the very least, greater pressure on highly leveraged borrowers will sharply limit their ability to fund new investments, slowing growth in the near term. More consequentially, a default or series of defaults at a LGFV, trust or WMP would likely result in a full-blown credit crunch, as investors reassess their exposure to borrowers they believed to be backed by state-owned banks or the government itself.

Sowing Seeds of Reform?

Empirical evidence suggests that rapid credit growth often triggers financial crises.³⁴ This is not because debt accumulation is bad *per se*, but rather because episodes of especially rapid credit growth tend to be associated with some structural defect in the credit market that permits borrowers to accumulate more debt than they can realistically repay. Credit growth in China has been facilitated by loan pricing that does not

³² Bloomberg: Overnight Shibor Rate survey and one-week general collateral repo rate.

³³ This interpretation stems from People's Daily story on money market conditions, See: China's Official Mouthpiece Eases Cash Crunch Concerns, ChinaScope, June 24, 2013.

³⁴ Schularick, M. and Taylor, A. (2009), "Credit Booms Gone Bust: Monetary Policy, Leverage Cycles and Financial Crises, 1870–2008," NBER Working Paper No. 15512.

vary across borrowers in a manner consistent with an informationally efficient market. Despite the absence of a robust credit rating system to evaluate LGFVs' asset quality or creditworthiness, average coupon rates on LGFVs' enterprise bonds are generally the same as the PBOC's benchmark bank lending rate for similar maturities.³⁵ The problem is not necessarily that these funding vehicles for infrastructure are off-balance sheet, something quite common in the U.S. where more than 50,000 separate legal entities tap the \$3.7 trillion municipal bond market;³⁶ but rather the explicit and implicit guarantees of local governments, state-owned banks, and the central government that have blurred the boundaries between the borrower and the state and suppressed risk premia.³⁷

Part of the reason shadow banking was allowed to flourish was because it offered the promise of a market-based alternative to bank-centric finance. The subsidized credit state-owned banks provide to larger corporations in favored industries comes at an annual cost of 4% of GDP in the form of less interest income for depositors and higher capital costs for small-and-medium-sized enterprises (SMEs).³⁸ To the extent that shadow banks relieve financial constraints on SME growth and provide households with yields that more closely match market conditions, they inject market discipline into lending decisions and result in more efficient capital allocation.³⁹ Yet, in the absence of broader reforms to define the boundaries of the firm more clearly, these new institutions simply fell into the traps of the old system of implicit guarantees and cross-collateralization. The introduction of default risk, while painful in the short-run, is likely to pay huge dividends in the long-run by incenting market participants to delineate between good credits and bad credits and price loans accordingly.

The most obvious beneficiaries of the associated increase in risk premia would be long-term investors. Since 1970, stock market returns in China have trailed GDP growth rates by nearly 15% per year.⁴⁰ Robust GDP growth has not translated into high equity returns because capital has been channeled towards state-supported firms or industries that overinvest.⁴¹ While investors tend to focus on headline GDP growth rates when assessing relative returns across economies, it is quite possible that 2 percentage points of annual GDP growth has been generated by investments that have reduced profitability, on net, by contributing to overcapacity. If the introduction of a market-based credit regime were to reduce such investment, the result could be slower GDP growth but greater eventual increases in earnings and higher returns.

Conclusion

Recent convulsions in interbank credit markets in China reflect a growing awareness among authorities that credit growth must be restrained. While a liquidity shortage creates significant risks in the near-term, the likely decline in debt-fueled fixed investment spending should be the least of investors' concerns. The associated incremental GDP growth has contributed to overcapacity, which has depressed margins, profitability, and returns on equity. Should Chinese authorities use the current experience to more formally delineate the boundaries of the firm, expected returns (risk premia) on corporate assets would likely increase substantially. While downside scenarios require very close attention, a more efficient, slower growing economy with larger risk premia could prove more attractive to investors over the long run.

³⁵ Chan, V. and Chan, P. (2013), "Assessing the 'Shadow Banking' Risks," Credit Suisse.

³⁶ Federal Reserve, Z.1

³⁷ As Coase (1937) explained: "Outside the firm, price movements direct production, which is coordinated through a series of exchange transactions on the market. Within a firm, these markets transactions are eliminated and in place of the complicated market structure with exchange transactions is substituted the entrepreneur/coordinator, who directs production."

³⁸ Houg Lee, et al. (2012).

³⁹ C.f. the discussion of nonbank intermediation in the IMF's 2012 Article IV consultation.

⁴⁰ Estrada, J. (2012), "Blinded by Growth," *Journal of Applied Corporate Finance*.

⁴¹ Chen, D. et al. (2013), "Five-Year Plans, China Finance and Their Consequences," World Finance Conference.

Economic and market views and forecasts reflect our judgment as of the date of this presentation and are subject to change without notice. In particular, forecasts are estimated based on assumptions, and may change materially as economic and market conditions change. The Carlyle Group has no obligation to provide updates or changes to these forecasts.

Certain information contained herein has been obtained from sources prepared by other parties, which in certain cases have not been updated through the date hereof. While such information is believed to be reliable for the purpose used herein, The Carlyle Group and its affiliates assume no responsibility for the accuracy, completeness or fairness of such information.

This material should not be construed as an offer to sell or the solicitation of an offer to buy any security in any jurisdiction where such an offer or solicitation would be illegal. We are not soliciting any action based on this material. It is for the general information of clients of The Carlyle Group. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual investors.

Contact Information:

Jason Thomas

Director of Research

Jason.Thomas@carlyle.com

(202) 729-5420