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Putting China's Capital to Work: The Value of Financial System Reform

May 2006

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Putting China's Capital to Work: The Value of Financial System Reform

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Table of Contents

Preface	7
Executive Summary	9
1. Introduction	19
2. Benchmarking China's Financial System Performance	25
3. The Effect of Financial System Performance on China's Economy	57
4. The Value of Financial System Reform	81
5. Priorities for the Reform Agenda	93
6. Closing Remarks	105
Bibliography	107
Appendix: China's Financial Systems Reforms Since 1978	111
Technical Appendix	115

Preface

This report is the result of a six-month research project by the McKinsey Global Institute, in collaboration with our McKinsey offices in China and the Asia region. This research builds on MGI's previous work on global capital markets and on our proprietary database of the financial assets of more than 100 countries around the world, and it draws on the unique perspectives of our colleagues who have worked extensively with financial institutions in China and around the world.

Susan Lund, a senior fellow at the MGI based in Washington, DC, worked closely with me to provide leadership on this project. The project team also included Jaeson Rosenfeld, an MGI senior consultant and McKinsey alumnus, MGI fellows Ezra Greenberg and Fabrice Morin, and McKinsey consultant Niyati Gupta.

We have benefited enormously from input received from Dominic Barton, director of McKinsey's Asia-Pacific region; Andrew Grant, director of McKinsey's Greater China office; Gregory Gibb, leader of McKinsey's banking practice for Greater China; Jack Stephenson, a director in McKinsey's New York office with expertise in payments systems; and Stephan Binder, Christopher Ip, George Nast, and Yi Wang, all principals in the Greater China office, who have worked extensively with financial institutions. Glenn Leibowitz, a senior communications specialist in the Greater China office, also contributed to this effort.

We have also benefited from the extensive and thoughtful input received from our Academic Advisory Board members. Our board included Martin Baily, senior adviser to MGI, senior fellow at the Institute for International Economics, and

formerly chief economic adviser to President Clinton; Richard Cooper, professor of international economics at Harvard University; Nicholas Lardy, a senior fellow at the Institute for International Economics; and Kenneth Rogoff, professor of economics and public policy at Harvard University and former chief economist at the International Monetary Fund.

Essential research support was provided by Tim Beacom, a senior analyst at MGI, along with Rebecca Chen, Yuan Luo, Wendy Wong, Yang Yao, Vivian Yu, and Yanfen Zhao, all researchers in McKinsey's Greater China office. Gina Campbell, MGI's senior editor, provided thoughtful input and editorial support. Rebeca Robboy, MGI's external relations manager; Deadra Henderson, MGI's practice administrator; and Terry Gatto, our executive assistant, supported the effort throughout.

Our aspiration is to provide a fact base to policy makers and business leaders in China and around the world so they can make more informed and better decisions. As with all MGI projects, this work is independent and has not been commissioned or sponsored in any way by any business, government, or other institution.

Diana Farrell
Director, McKinsey Global Institute

May 2006
San Francisco

Executive summary

This report shows that further, more comprehensive reforms are required if China is to create the modern financial system it needs to support growth in its increasingly market-based economy. Drawing on our experience of working with financial institutions and regulators around the world, we have analyzed how China's financial system performs its job of channeling savings from households to the best available investment opportunities throughout the economy. Our research shows that the system has been highly successful in mobilizing savings, reflected in the doubling of China's stock of financial assets relative to GDP over the past ten years. But it has fallen short in its task of allocating capital to the most productive players in the economy.

Of course, there have been steady advances since the first moves toward economic liberalization in 1978. Recent foreign investments reflect this: in 2005, foreign banks invested $18 billion in strategic stakes in several of China's biggest banks, and China Construction Bank, the country's third largest, raised $9.2 billion in the world's biggest IPO that year. Progress among China's banks in cleaning up their nonperforming loans (NPLs) and strengthening corporate governance has impressed investors. Government plans to adopt international accounting standards in 2007 and preliminary sales of state-owned equity shares also encourage them.

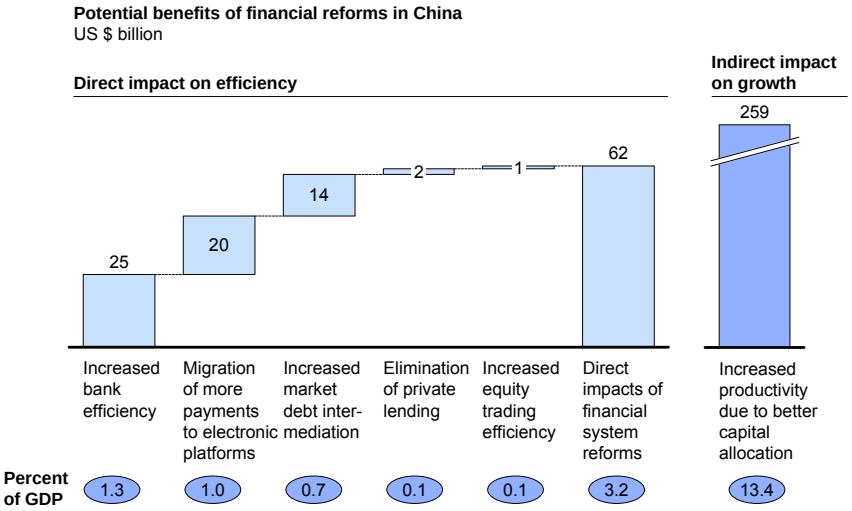
Underlying these reforms, however, is capital misallocation by the system. Nonperforming loans are the most conspicuous outcome of this misallocation, but our research shows that the much larger volume of loans to underperforming ventures that don't go bad but yield only negligible returns are potentially more costly to China's economy. The benefits of reform, therefore, would be substantial. We calculate that increasing the operating efficiency of China's

financial institutions and improving the mix of financing vehicles would boost GDP by $62 billion a year (Exhibit 1). In addition, reforms that enabled a larger share of funding to go to more productive enterprises would increase investment efficiency, raise GDP by up to $259 billion, or 13 percent a year, and bring higher returns for Chinese savers, thus enabling them to raise their living standards and consumption.

China's financial system's remaining problems are intricately linked across its component markets. Reform will therefore require a more integrated approach among regulators than is being employed today.

Exhibit 1

REFORMING CHINA'S FINANCIAL SYSTEM COULD BOOST GDP BY UP TO $321 BILLION ANNUALLY



Source: McKinsey Global Institute analysis

BETTER FUNDING FOR THE MOST PRODUCTIVE ENTERPRISES

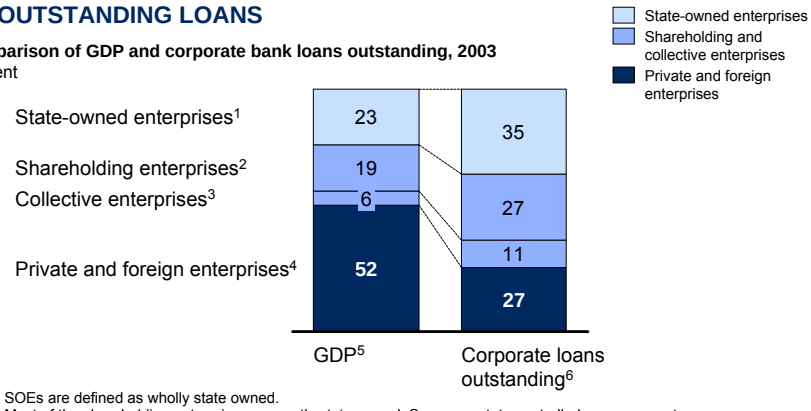
Over the past ten years, private companies in China—whether they are Chinese owned, foreign owned, or joint ventures—have grown faster than GDP. These companies now account for half of all output and much of net new job creation. The share of production from wholly state-owned enterprises (SOEs), meanwhile, has shrunk to barely one-quarter of GDP.

Nevertheless, wholly and partially state-owned companies continue to absorb most of the funding from the financial system. Wholly state-owned companies receive 35 percent of bank credit and account for all equity and bond issues. The many shareholding enterprises that are partially state-owned and the collective enterprises take up another 38 percent of credit, although producing only 25 percent of output. Private enterprise, the engine of China's growth, account for only 27 percent of loan balances (Exhibit 2).

Exhibit 2

PRIVATE COMPANIES PRODUCE 52% OF GDP BUT ACCOUNT FOR 27% OF OUTSTANDING LOANS

Comparison of GDP and corporate bank loans outstanding, 2003
Percent



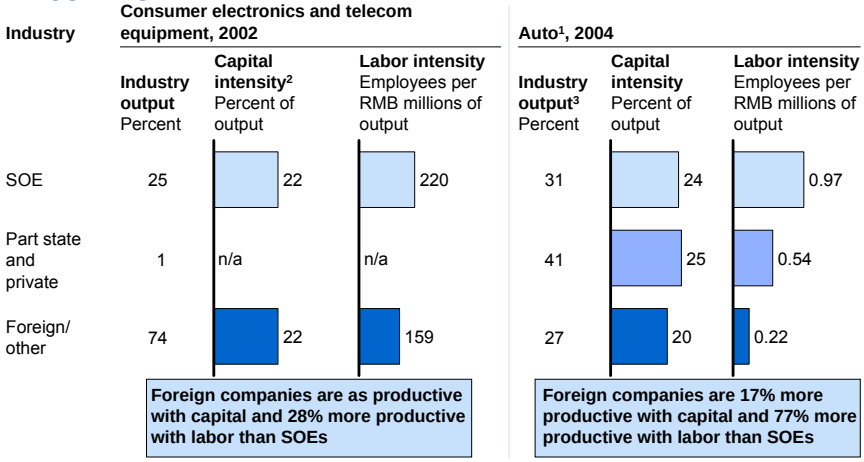
[1] SOEs are defined as wholly state owned.
[2] Most of the shareholding enterprises are partly state owned. Some are state controlled, some are not.
[3] Collective enterprises are owned by the population. Many are run like private enterprises, but some are effectively controlled by local political interests.
[4] Fully private enterprises include local privately owned enterprises, foreign joint ventures, and wholly owned foreign enterprises.
[5] Breakdown of industrial value added by ownership type, 2003, as determined by the Organisation for Economic Co-operation and Development.
[6] Total corporate and government bank lending, based on a survey on commercial bank new loans conducted in 2002 by the People's Bank of China. This is the most recent publicly available data on lending by company type. In the absence of more recent data, we are making the assumption that new lending in 2002 reflects the stock of outstanding credit in 2004. A higher portion of new lending today may go to private companies, but we have no evidence of this.

Source: OECD; PBOC; McKinsey Global Institute analysis

This pattern of lending has lowered overall productivity in the economy. Although many SOEs have been restructured and some are highly profitable, their productivity level as a group is still half that of private companies. This is true both in aggregate, and within specific industries (Exhibit 3). As a result, China is seeing its investment efficiency decline. Whereas it required $3.30 of investment to produce $1.00 of GDP growth in the first half of the 1990s, each $1.00 of growth since 2001 has required $4.90 of new investment—40 percent more than the amount required by other Asian Tigers in their high-growth periods.

Exhibit 3

PRIVATE ENTERPRISE IS MORE PRODUCTIVE THAN SOE, EVEN WITHIN INDUSTRIES



[1] Auto is considered as a comparable sector even if SOEs are not active in the same segment as foreign firms (trucks and cars, respectively). The two industry segments are relatively similar, and a significant difference is observable in productivity growth as well. See China auto case in McKinsey Global Institute's "New Horizons" report for more details.
[2] Gross fixed assets/2x output; net fixed assets not available.
[3] Numbers do not add to 100% due to rounding.
Source: NBS, McKinsey Global Institute analysis

Further reforms that enabled banks to channel a larger share of funding to more productive private enterprise could greatly increase in the average productivity in the economy, and hence standards of living. It could raise GDP by as much as 13 percent, or $259 billion annually.

China's regulators have so far taken a cautious approach for fear of accelerating unemployment in state-owned companies. But these reforms would boost GDP, thereby increasing the tax revenue available to fund job retraining and social programs for displaced workers. Over time, this will help to raise living standards and provide jobs for China's vast pool of underemployed rural labor.

IMPROVE BANK OPERATIONS

China is allocating capital ineffectively for two related reasons. First, China's operationally weak banking sector plays an unusually large role in its financial system. In market economies, the share of bank deposits in the financial system typically ranges from under 20 percent in developed economies to about half in emerging markets. But in China, banks intermediate nearly 75 percent of the capital in the economy—nearly twice as high as other developing Asian

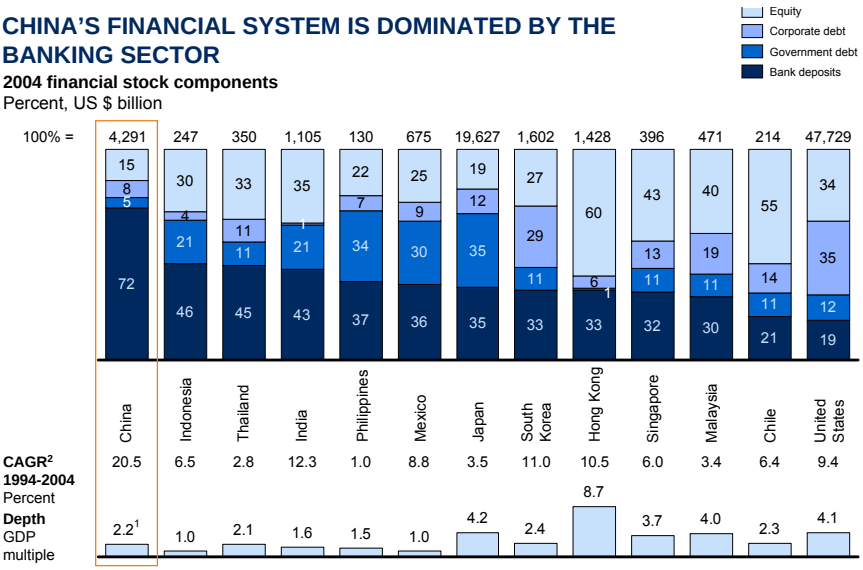
economies (Exhibit 4). Bank deposits and savings accounts, roughly half of them from households, now total $2.6 trillion, even though they yield negligible real returns.

Exhibit 4

CHINA'S FINANCIAL SYSTEM IS DOMINATED BY THE BANKING SECTOR

2004 financial stock components

Percent, US $ billion



1 Reflects China's recently restated GDP.
2 CAGR = compound annual growth rate.
Note: Numbers may not add to 100 percent due to rounding.
Source: McKinsey Global Institute Global Financial Stock Database

China's bank have difficulty lending to private companies because it is difficult to get good-quality information on borrowers' credit histories and financial performance. Banks themselves have not rigorously collected such information in the past, nor is there extensive coverage by private rating agencies. The first national credit bureau was launched in early 2006. Moreover, loan pricing and credit-assessment skills of loan officers remain poor in many bank branches despite recent efforts to improve, and risk-management skills are deficient. It is no wonder, then, that so many banks continue to lend heavily to large SOEs: their scale and apparent government backing makes them seem a low-risk option. Inadequate governance and incentives compound banks' difficulty in making good lending decisions. And although they are huge (some have thousands of branches), their decentralized structures prevent them from reaping the benefits of scale and make branch staff vulnerable to local political influence over lending decisions.

All this indicates that China's nonperforming loan problem is likely to persist. It is true that officially reported nonperforming loans for large commercial banks fell from 31 percent of total balances in 2001 to 10 percent in 2005. Almost 60 percent of this decline, however, is explained by transfers of bad loans from banks into state-owned asset-management companies. The remainder is due to a rapid expansion in bank lending in 2003 and 2004 and to the success of a few banks in reducing their NPLs. These factors have lowered the nonperforming loan ratio for the moment, but more defaults may be in store for those banks that have seen little change in the underlying factors that lead to poor lending decisions.

Aside from the cost of nonperforming loans and misallocation of capital, inefficiencies in China's banking system raise its operating costs, in turn lowering the returns banks can pay to savers and increasing the cost of capital for borrowers. Reforms in the financial system that prompt Chinese banks to move to international standards of operating efficiency would result in $25 billion of savings annually for China's savers and borrowers.

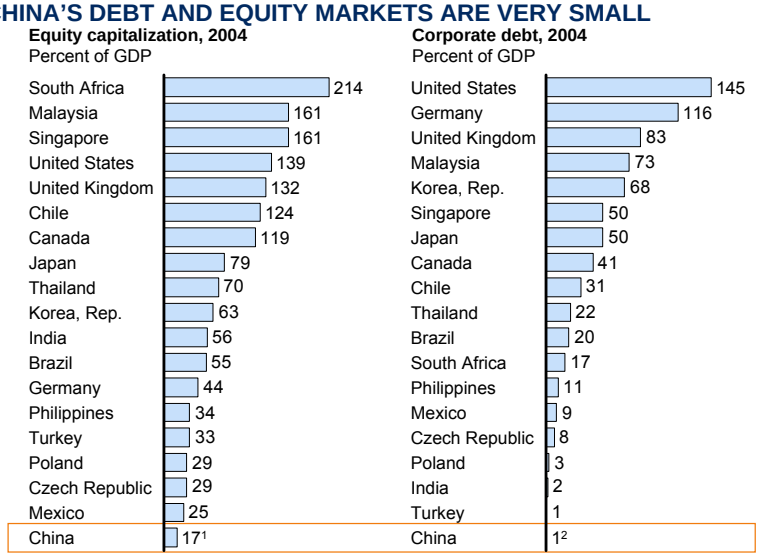
Small local banks have hindered the spread of China's new wholesale payments system (CNAPS), as many resist making the considerable capital investment necessary to connect to the system. Along with the predominance of cash transactions, inefficiencies in the payments system cost China's economy 1 percent to 1.5 percent of GDP annually, or at least $20 billion.

STRENGTHEN THE EQUITY AND DEBT MARKETS

The second reason China's financial system misallocates capital is that it offers large companies few alternatives to banks as sources of funds. China's equity and bond markets are among the smallest in the world (Exhibit 5). Equity market capitalization, excluding nontradable state-owned shares, is equivalent to just 17 percent of GDP, compared with 60 percent or more in other emerging markets. Corporate bond issues by non-financial companies amount to just 1 percent of GDP, compared with an average of 50 percent in other emerging markets.

Exhibit 5

CHINA'S DEBT AND EQUITY MARKETS ARE VERY SMALL



[1] Adjusted for nontradable equity, depth would otherwise be 33% of GDP.
[2] Excludes bonds issued by policy banks, which can be bought only by commercial banks and represent more than 90% of the nongovernment bond volume in China.

Source: McKinseyGlobal Institute Global Financial Stock Database; McKinsey Global Institute analysis

China's capital markets, to the extent that they do raise capital, are used almost exclusively by state-owned companies. Until a few years ago, state regulators selected companies for equity offerings in line with industrial policy concerns, and the same remains true for bond issues. Although equity listing criteria have since become more independent, government regulators still maintain a high degree of discretion over market entry. So far, almost no companies have had a majority of private ownership at the time they initially listed shares, although some were privatized after listing. From June 2005 to May 2006, regulators have essentially canceled all initial public offerings while they grapple with the nontradable share problem.

More fully developed equity and bond markets would provide competition to banks, underpin the growth of retail savings products such as mutual funds, pensions, and life insurance, and give companies more varied funding options. If China were to develop a vibrant corporate bond market and move to the mix of bonds and bank loans seen in other economies such as South Korea and Singapore, Chinese companies would lower their funding costs by $14 billion annually.

The immaturity of China's capital markets further skews the distribution of capital because companies that would normally seek funding from them turn to banks instead. This crowds out lending to banking's natural customers, which are smaller companies and consumers. These, in turn, are forced to either borrow from family and friends or turn to China's informal finance market, estimated to be $100 billion, where interest rates are high. Reducing informal lending by expanding formal bank lending to small businesses would save borrowers $2 billion a year.

IMPROVE RETURNS ON HOUSEHOLD SAVINGS

The misallocation of capital and comparatively high cost of financial intermediation limit the returns that Chinese households earn on their financial assets. Chinese households hold 86 percent of their financial assets in low-yielding bank deposits and in cash. Given the low average returns earned over the past ten years on equity and bonds and their high volatility, their choice is rational.

But reforms to develop the country's capital markets further, and to improve capital allocation and operational efficiency in the banking system, would raise overall productivity in the economy. This would boost the financial performance of business and, if regulators allowed it, increase the returns households earn on financial assets. Over the past ten years, returns on Chinese households' financial assets increased just 0.5 percent a year after inflation. In contrast, South Korean ones earned 1.8 percent. If real returns in China doubled to 1 percent, Chinese households would gain $10 billion annually. If real returns were closer to South Korean returns, Chinese households would earn $20 billion more annually. In the long term, this might allow Chinese households to consume more and save less—a shift that would improve living standards and allow China to achieve more balanced and sustainable growth.

INTEGRATE THE REFORMS

Interlinkages across China's financial system mean that integrated reforms will be the most effective. To illustrate, China needs a healthy corporate bond market to provide funding to large companies and infrastructure projects, enabling banks to focus more on lending to smaller companies and consumers. The bond market, however, is unlikely to flourish until banks develop more accurate risk-

based loan pricing and, as a result, charge higher rates to borrowers than the government-set floor rate that prevails today. An expanding bond market will also depend on a growing number of domestic institutional investors from mutual funds, pension funds, and insurance companies, because few retail investors in any country buy corporate bonds direct. Yet all these relationships work both ways. Financial intermediaries, debt markets, equity markets, and banking have to evolve in tandem.

A comprehensive and integrated approach to reforming the financial system requires close coordination among China's four financial regulatory bodies, so that each focuses on broader development of the financial system, in addition to the performance and problems in their domain. Increasing the size and liquidity of equity and debt markets is also required, thereby reducing the outsized role that the banking system currently plays in financial intermediation, as well as improving the operations and capital allocation of each market. These reforms may cause some job losses as the least efficient companies shut down. But they will also create the wealth that will provide the means to compensate displaced workers and create new jobs in more productive companies.

The attached report includes a detailed discussion of the analyses and conclusions highlighted here. It is organized in six chapters: 1. Introduction; 2. Benchmarking China's financial system performance; 3. Effect of financial system perfromance on China's economy; 4. The value of financial system reform; 5. Priorities for the reform agenda; 6. Closing remarks.

Introduction

Since economic liberalization began in 1978, China has made remarkable progress in transforming from a planned economy to a market-based one. Growth has averaged 9 percent per year, boosting GDP per capita by more than six times. Private enterprise, almost nonexistent before 1978, now accounts for more than half of industrial output.

At the same time, the government has been gradually reforming its financial system, with the aim of establishing the complementary set of financial institutions that a modern, market-based economy requires. Key reforms have included establishing the People's Bank of China as the central bank while spinning off four big state-owned commercial banks and three policy banks; creating stock market exchanges in Shanghai and Shenzhen; establishing a government bond market and a corporate debt market; partially opening the capital account to allow foreign direct investment and portfolio investments; and creating regulatory bodies to oversee the different components of the system.[1] As a result, China's financial depth—or its stock of financial assets relative to GDP—has more than doubled. In terms of size, China is emerging as a significant player in the global financial system.

There are signs, however, that China's financial system may not be evolving far or fast enough. Chinese banks are contending with a large volume of nonperforming loans, which some observers say may threaten the solvency of the banking system. China's corporate debt market is tiny, and scandals have erupted in the brokerage and equity markets. Questions on how and when the government will sell the two-thirds of nontradable equity shares it owns have dampened

1 See Appendix, China's Financial Reforms Since 1978

stock market performance. But there is conflicting information about the root causes and significance of these problems, as well as uncertainty over whether the currently proposed reforms will resolve them. Is China's financial system developing sufficiently to support its burgeoning market economy? Or is it already dampening the future prospects for China's growth miracle? This research aims to shed light on those questions.

They are of particular interest today because of China's World Trade Organization (WTO) commitment to open its financial sector more fully to foreign investment at the end of 2006. Foreign banks paid $18 billion for stakes in China's largest state-owned banks in 2005, in anticipation of selling products such as auto loans and credit cards through the banks' vast branch networks. The world has an increasingly large stake in the success of China's financial system, given the country's growing importance in the global economy and global financial markets.

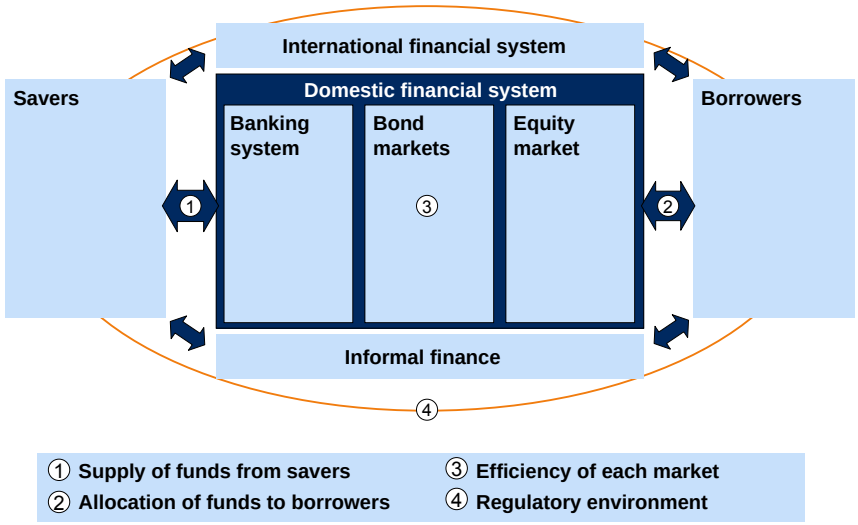
OUR APPROACH

Drawing on McKinsey's unique experience in working with financial institutions and regulators in China and around the world, we conducted a detailed analysis of the performance of China's financial system. It differs from other research on China's financial system in several ways.

First, we take a systemic view of the financial system, assessing the performance of its components—banking system, bond markets, equity market, financial intermediaries, and payments system—and how well the system as a whole channels funds from savers to borrowers (Exhibit 1.1). This allows us to identify the root causes of performance gaps, which nearly always involve understanding the interactions among different markets and intermediaries in the system. A systemic view is also in line with our understanding that different markets and intermediaries can sometimes perform the same roles with equal efficiency. Lack of a corporate bond market, for instance, might not be a drawback for the system if there were an efficient private placement market. What matters is whether the system as a whole enables borrowers to get the capital they need at reasonable cost, and savers to earn adequate returns on their savings.

Exhibit 1.1

WE ARE ANALYZING CHINA'S FINANCIAL SYSTEM ACROSS FOUR DIMENSIONS



Source: McKinsey Global Institute analysis

Second, we approach financial system performance from a microeconomic perspective. In light of McKinsey's extensive work with financial institutions, regulators, and corporations, we assess how specific parts of the financial system are functioning at an institutional and operational level. This work therefore complements that of other economists who take a top-down, macroeconomic perspective.

Third, we use cross-country comparisons to assess performance. We recognize that China's financial system is still developing and will not raise and allocate capital as efficiently as financial systems in mature markets. Yet comparing China's performance to other emerging markets, such as South Korea, or even India, is helpful for highlighting avoidable performance gaps and identifying feasible goals for China's regulators.

Fourth, we examine how China's financial system is influencing growth and efficiency throughout the economy. How well a financial system mobilizes domestic savings and allocates them to the best investment opportunities influences an economy's structure and growth. We therefore analyze the sources and uses of funds in China, how they flow through the financial system, and how this pattern influences China's national productivity level and economic structure.

Finally, we quantify the cost of financial system inefficiencies and misallocation of capital to China's households and companies. The nonperforming loan problem is one aspect of this cost. At least as important, and more onerous, are the costs that China's underdeveloped financial system imposes on companies, households, and the economy. We hope that quantifying these costs will demonstrate the urgent need for further financial market reforms.

In this report, we do not assess China's exchange rate or the policies affecting it. Extensive debate continues over the appropriate exchange-rate level for the yuan, and over the global imbalance in savings. But changes in China's exchange-rate policy will not address the significant and costly inefficiencies in China's financial system described in this report. As we will show, reducing these inefficiencies could shift China's development onto a more sustainable trajectory while generating significant improvements in the standard of living for China's people.

THE RESEARCH METHODOLOGY

In the first phase of our research, we measured China's financial system performance against a comprehensive set of metrics and compared it to that of a range of other countries, including not only developed economies such as the United States but also other emerging economies such as South Korea, Malaysia, Chile, Brazil, and India. Data from the McKinsey Global Institute's proprietary Global Financial Stock database[2], combined with information from central banks, national statistical agencies, and company financial reports, were used for the analysis. Using data as well as interviews with participants in China's financial system, we then identified the root causes for the key performance gaps highlighted by these comparisons and traced their interlinkages among markets.

In the second phase of research, the team assessed the flow of funds within China's economy from savers to users of capital. We used proprietary household data from McKinsey's China Consumer Center to analyze China's savings patterns. Drawing on McKinsey's experience serving Chinese corporations, we identified how well the financial system is meeting companies' funding needs

2 See *$118 Trillion and Counting: Mapping the World's Capital Markets*, available for free at www.mckinsey.com/mgi

and the root causes of its performance shortfalls. We also conducted interviews with small- and medium-size business owners who are unable to raise funds in the formal financial system, as well as academic researchers who study informal finance.

This process enabled our team to acquire a new perspective on China's financial system, its evolution, and the critical reforms that are required to catalyze its evolution.

QUESTIONS ADDRESSED BY THIS STUDY

Our research sheds light on several questions:

- How does each component of China's financial system (banking system, equity market, bond markets, financial intermediaries, payments system) perform compared with those in other emerging and mature markets? What are the most critical performance gaps, and what are the root causes of those gaps?
- How effectively does China's financial system allocate funding to users of capital, both corporations and households? What implications does this have for China's pattern of savings, investment, and consumption and for its economic structure?
- What is the direct cost to China's businesses and households of observed inefficiencies in the financial system? What is the indirect cost of poor allocation of funding to different players in the economy?
- How should China's financial system regulators coordinate and prioritize reform efforts?

ORGANIZATION OF THIS REPORT

This report is divided into five subsequent chapters:

- **Chapter 2.** *Benchmarking China's Financial System Performance*: compares the performance of the components of China's financial system to that of other countries. This includes financial depth, banking system, bond markets, equity market, financial intermediaries, and payments system.

- **Chapter 3.** *Effect of Financial System Performance On China's Economy:* analyzes how the financial system is allocating funding to different users of capital throughout the economy. This chapter then demonstrates the impact of the observed misallocation of capital on China's savings, investment, and domestic consumption and assesses the implications for China's growth trajectory.

- **Chapter 4.** *The Value of Financial System Reform*: quantifies the costs to China of the financial system's inefficiencies and misallocation of capital, and the potential value of financial system reforms.

- **Chapter 5.** *Priorities for the Reform Agenda*: traces interlinkages among problems across the financial system and demonstrates why a coordinated, systematic reform effort is needed. This chapter then outlines key reforms that should be a priority.

- **Chapter 6.** *Closing Remarks*: makes the case for faster, more aggressive liberalization of the financial sector.

2. Benchmarking China's Financial System Performance

A mature financial system plays several critical functions in an economy: it mobilizes savings, enabling households and companies to transfer consumption to the future; it allocates savings to users of capital in the economy; it provides price signals and information about users of capital; it creates financial vehicles that enable the disaggregation and trading of risk; it provides oversight to borrowers from investors and intermediaries who can threaten to withdraw funding; it provides an efficient payments system; and it improves the incentives of companies to operate efficiently.[1] It does so through a variety of financial institutions—namely, banks, equity markets, and debt markets—and through intermediaries such as mutual funds, pension funds, insurance companies, and brokerages.

China's reforms have certainly laid the foundation for a modern financial system. Since 1978, China has created nearly all of the institutions that modern financial systems comprise: a commercial banking system, a payments infrastructure, financial intermediaries, capital markets, and financial regulators. But benchmarking the performance of each component of this system against other countries reveals it is still in an early stage of development.

In this chapter of the report, we compare the performance of each component of China's financial system to those in other emerging markets and developed countries, and we then identify the barriers to further progress. We examine the system's overall financial depth, banking system, equity market, bond markets, and payments system. We benchmark the performance of these institutions using a comprehensive set of indicators organized along four dimensions: their relative size, as measured by their depth; their accessibility and liquidity; their internal efficiency, determining the cost of intermediation; and their portfolio of customers (Exhibit 2.1).

1 For more on the functions of a financial system, see Kenneth Froot et al, *The Global Financial System: A Functional Perspective*.

Exhibit 2.1

METRICS FOR BENCHMARKING FINANCIAL SYSTEM PERFORMANCE

Institutions →

Performance dimension	Overall financial system	Banking system	Bond markets	Equity market
Depth	• Total financial system assets as a percentage of GDP	• Deposits (corporate and retail) as a percentage of GDP	• Corporate bond market size as percentage of GDP • Percentage of corporate debt coming from bonds • Government bond market size as a percentage of GDP	• Equity market size as a percentage of GDP • Portion of equity market growth due to earnings increases vs. P/E increases
Access and liquidity	• Size of informal lending market • Currency in circulation • Amount invested in non-financial assets (e.g., gold, real estate)	• Number of branches per million inhabitants • Number of ATMs per million inhabitants • Percentage of households with bank relationship	• Longest maturity on yield curve • Bid-ask spread • Volume of secondary trading	• Equity market turnover • Bid-ask spread • Impact cost of large trades • Proportion of retail vs. institutional investors, domestic vs. foreign
Efficiency/ cost of inter-mediation	• Relative size of banking system vs. debt market vs. equity market	• Lending as a percentage of deposits • Capital adequacy ratio • Nonperforming loans as a percentage of total loans • Bank efficiency ratio	• Corporate bond default rate • Commissions in basis points • Cost of issuance	• Average trading commissions in basis points • Cost of issuance
Portfolio of customers	• Percentage of total financing going to consumers, government, and corporate sector • Distribution of total financing by firm size, ownership, industry	• Percentage of credit to consumers (including mortgages) • Distribution of credit by firm size, ownership, industry	• Distribution of issuers by firm size, industry, firm ownership	• Percentage of market capitalization in top 10 companies • Distribution of issuers by industry, firm size, firm ownership

Source: McKinsey Global Institute analysis

CHINA HAS A HIGH LEVEL OF FINANCIAL SYSTEM DEPTH

Financial depth is the ratio of a nation's stock of financial assets, divided by the size of its economy, or GDP. It measures the degree to which funding in a nation's economy is intermediated through the formal financial system marketplace. Calculating financial depth is one way to quantify how well a financial system is mobilizing savings. In contrast to other researchers,[2] we make this measurement from the bottom up; that is, we use the value of a nation's money supply and bank deposits, the market capitalization of its listed companies, and the face value of the outstanding corporate and government debt securities, using MGI's proprietary Global Financial Stock database.[3]

2 An alternative method of measuring financial system depth is by adding up the assets of all financial intermediaries in a country—banks, insurance companies, pensions, mutual funds, etc. We prefer the approach used here because it allows us to decompose financial depth into equities, bonds, and bank deposits, and identify where increases in depth are coming from. It also allows us to exclude holdings of foreign financial securities and measure directly the debt and equity of a country's domestic companies.

3 For more on measuring the size of the global capital market, see MGI's 2005 report, $118 Trillon and Counting: A Look at Global Capital Markets, at www.mckinsey.com/mgi, and the 2006 update.

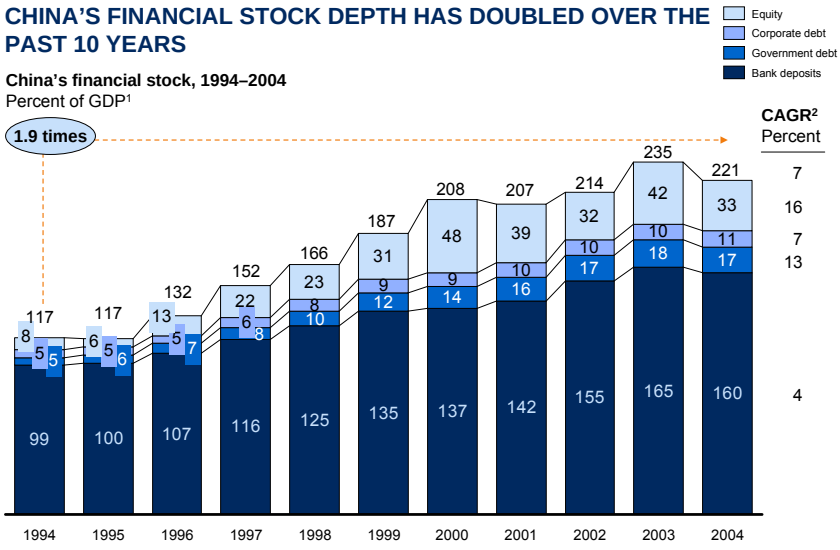
China has a relatively high level of financial system depth, indicating that a large portion of savings in the economy is intermediated by formal financial institutions. Financial depth grew from 117 percent of GDP in 1994 to 221 percent of GDP[4] at the end of 2004 (Exhibit 2.2). This level far exceeds that of other countries at similar levels of income per capita (Exhibit 2.3).

The depth of China's financial system is explained mainly by China's high savings rate and closed capital account. Chinese households save somewhere between 20 percent and 25 percent of their disposable income[5] —higher than Japan or South Korea (although not as high as India's household savings rate today[6]). Because China prohibits most capital outflows, this huge pool of savings is kept in the domestic financial system. It is augmented by a high level of foreign capital

Exhibit 2.2

CHINA'S FINANCIAL STOCK DEPTH HAS DOUBLED OVER THE PAST 10 YEARS

China's financial stock, 1994–2004
Percent of GDP[1]



Note: Depth is defined as financial stock component over GDP.
[1] Reflects recently restated figures.
[2] CAGR = compound annual growth rate.
Source: McKinsey Global Institute Global Financial Stock Database

4 Reflects China's recent GDP restatement. See Technical Notes at the end of this report for how we treat China's restatement of GDP in December 2005.

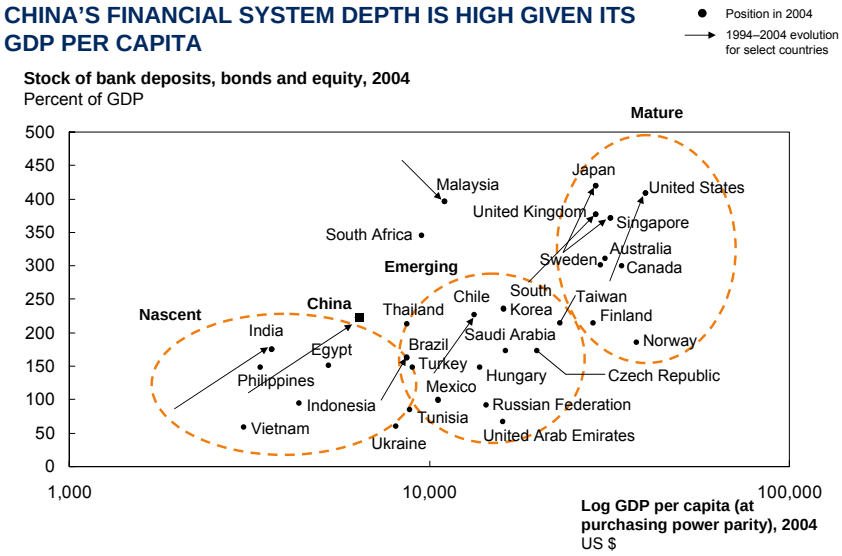
5 The range of China's household savings rate is due to the recent GDP restatement by China's government that increased GDP by 17 percent. The National Bureau of Statistics has indicated that 27 percent of the restatement is attributed to previously unaccounted household consumption, but has not yet released new savings figures. We estimated the new household saving rate to be between 20 and 25 percent of disposable income. See Chapter 3 for more on China's savings rate.

6 See the McKinsey Global Institute's forthcoming report on India's financial system, to be released in Spring of 2006.

inflows, both directly into its equity markets and indirectly into the financial system through foreign direct investment.

Exhibit 2.3

CHINA'S FINANCIAL SYSTEM DEPTH IS HIGH GIVEN ITS GDP PER CAPITA



Source: WEFA; BIS; FIBV; WDI; IMF; GFS; McKinsey Global Institute analysis.

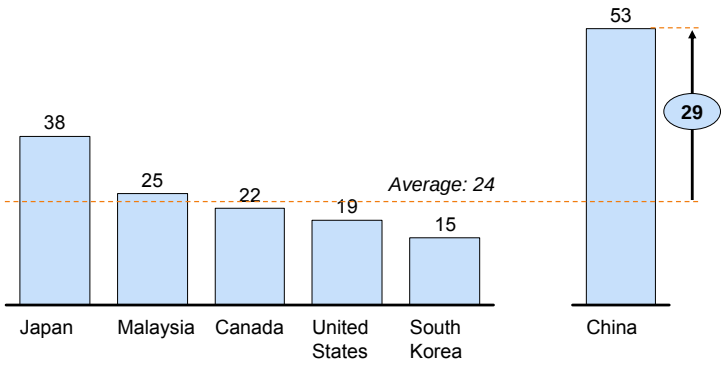
Two factors are likely to be overstating the depth of China's financial system, however. The first is China's unusually high level of corporate deposits. These are equivalent to 53 percent of GDP and account for almost a quarter of China's financial depth. They are high partly because corporations are sometimes obliged to keep deposits as collateral against loans. If the level of corporate deposits were equivalent to that in most other non–financial hub countries, China's financial depth would be lower by 29 percent of GDP (Exhibit 2.4).

The second factor that may be inflating financial depth is China's nontradable, state-owned equity shares. Two-thirds of the shares issued on China's domestic exchanges are owned by the government and legally nontradable. This is equivalent to half of the market capitalization of Chinese companies (which also includes the market capitalization of Chinese companies listed overseas). But because these shares cannot be monetized or exchanged, nontradable shares should not strictly count as financial assets. Excluding the value of nontradable shares lowers China's equity market depth from 33 percent of GDP to 17 percent.

Exhibit 2.4

HIGH CORPORATE DEPOSITS INFLATE CHINA'S FINANCIAL DEPTH

Corporate bank deposits, 2004
Percent of GDP



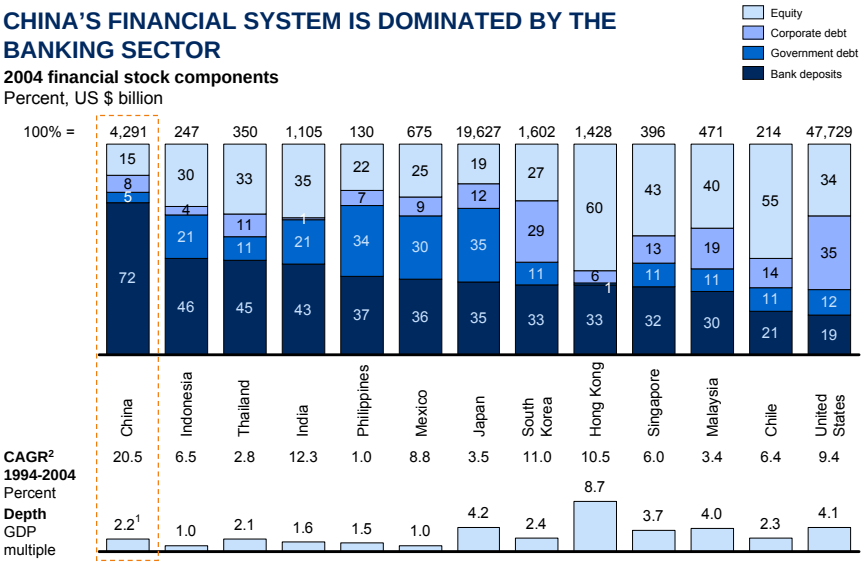
Source: PBOC; Bank of Japan; Bank Negara Malaysia; Bank of Canada; US Federal Reserve; Bank of Korea; McKinsey Global Institute analysis

Excluding "excess" corporate deposits and the value of nontradable equity shares lowers China's overall financial depth to 176 percent of GDP, rather than 221 percent. However, even this level of financial depth is higher than in other countries with similar levels of GDP per capita. China's financial system is thus unequivocally successful in mobilizing savings.

THE BANKING SYSTEM IS DOMINANT

The most striking institutional feature of China's financial system is the dominance of its banking sector. In more mature financial systems, the share of bank deposits in the financial system typically ranges from under 20 percent of the stock of financial assets in developed economies to about half in emerging markets. But in China, banks intermediate nearly 75 percent of the capital in the economy, a significantly higher proportion than in other Asian countries (43 percent in India, 35 percent in Japan, and 33 percent in South Korea) and the United States (only 19 percent) (Exhibit 2.5). Looking at the flow of funds through China's financial system, we see that banks' role is even larger: they garner the bulk of household savings and have provided 95 percent of corporate funding in recent years.

Exhibit 2.5



1 Reflects China's recently restated GDP.
2 CAGR = compound annual growth rate.
Note: Numbers may not add to 100 percent due to rounding.
Source: McKinsey Global Institute Global Financial Stock Database

China's banking system is also very large in absolute terms, with assets equivalent to 160 percent of GDP at the end of 2004, compared to 77 percent in the United States, 119 percent in Singapore, and 145 percent in Japan (Exhibit 2.6). Its size is partly due to the artificially high level of corporate deposits mentioned previously. Banks' requirement for deposits as a partial guarantee against loans they give out may seem counterintuitive. But banks accept very few forms of collateral, and companies comply with the requirement because banks are the major source of capital in China. Some corporations also have excess capital that they keep in bank deposits because they cannot find suitable investment opportunities and because paying out profits to shareholders is not an established practice. In addition, some companies say they hold high levels of bank deposits because of lack of commercial paper and other debt securities to fund their liquidity needs and because payment system inefficiencies prevent large companies with many branches from optimizing cash management nationally.

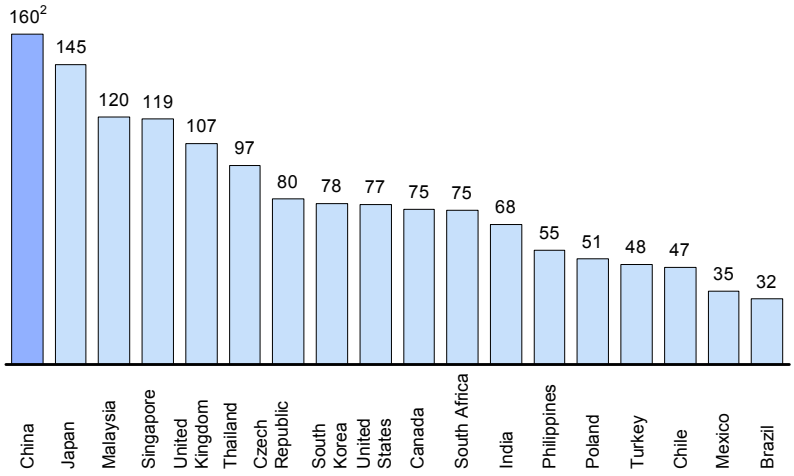
Led by the China Banking Regulatory Commission (CBRC), China's banking sector is undergoing a transformation. In recent years, prudential standards have been strengthened, as have loan classification systems and governance requirements. The stock of nonperforming loans has been reduced. In 2004, interest rates

were partially liberalized, with the removal of the ceiling on lending rates and the floor on deposit rates. This move allows banks to engage in risk-based pricing of loans, while preserving margins. The remaining floor on lending rates and ceiling on deposit rates is set to be lifted gradually between 2006 and 2010.

Exhibit 2.6

COMPARISON OF BANKING SYSTEM SIZE ACROSS COUNTRIES

Bank deposits[1] as percent of GDP, 2004



1 Includes bank and nonbank financial institutions, deposits, money market, and currency in circulation.
2 Reflects China's recently restated GDP.
Source: McKinsey Global Institute Global Financial Stock Database; McKinsey Global Institute analysis

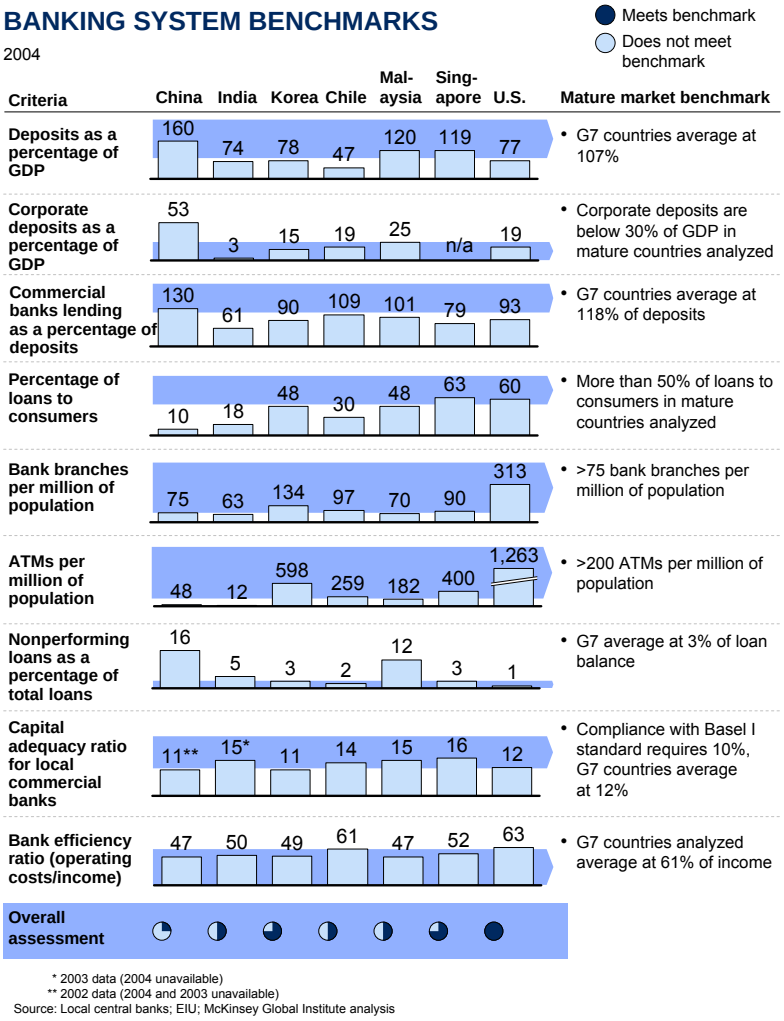
Still, benchmarking the operations of China's banking system against those of other economies shows that it still has an unusually large stock of nonperforming loans and negligible lending to consumers, the natural customers of banks in other countries (Exhibit 2.7). Further examination shows that the root causes of these problems lie in a number of operating weaknesses, combined with inadequate incentives and weak governance, and a decentralized structure.

Anomalies in the pattern of bank lending

The most obvious, and most-discussed, problem for China's banking system is its stock of nonperforming loans (NPLs). Official figures on NPLs show that significant progress has been made in reducing this stock, from 31 percent of loan balances in 2001 to only 10 percent in 2005 for the large commercial banks (Exhibit 2.8). Nearly 60 percent of the reduction over that period was due to the

transfer of roughly $150 billion[7] worth of NPLs at face value to the four state-owned asset-management companies: Huarong, Cinda, Great Wall, and China Orient (Exhibit 2.9). So far, the average recovery rate of NPLs within the asset-management companies has been only 20.5 percent. Banks were compensated for the face value of transferred loans with bonds from the asset-management companies, an expense that is likely to fall on the government when the bonds mature, given the low recovery rates. The remainder of the reduction in NPLs is due to improvements within individual banks and to the rapid expansion in bank lending, when new lending peaked at 23 percent of GDP in 2003 (Exhibit 2.10).

Exhibit 2.7



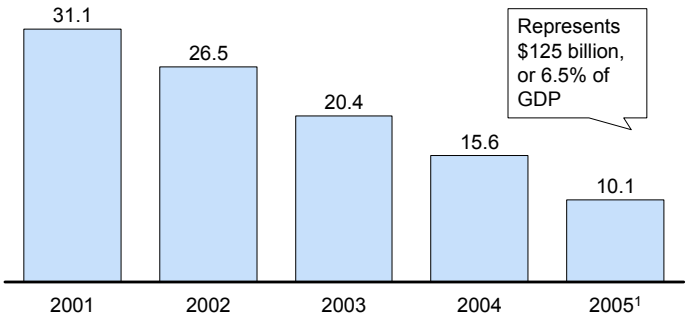
* 2003 data (2004 unavailable)
** 2002 data (2004 and 2003 unavailable)
Source: Local central banks; EIU; McKinsey Global Institute analysis

7 More than $300 billion worth of NPLs were transferred from the large state commercial banks to asset-management companies since their creation in 1998. However, only half of the transfer ($150 billion) occurred since 2001.

Exhibit 2.8

NONPERFORMING LOAN RATIO IS DECLINING

Nonperforming loans from large state-owned commercial banks
Percent of loan balances

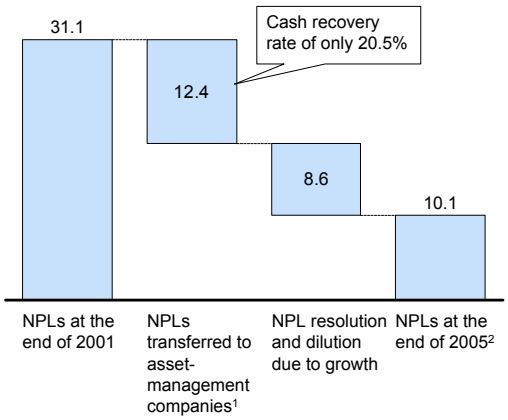


[1] As of Q3.
Source: PBOC; CBRC; Press Search; McKinsey Global Institute analysis

Exhibit 2.9

59% OF THE NPL REDUCTION IS DUE TO TRANSFER OF BAD LOANS TO ASSET-MANAGEMENT COMPANIES

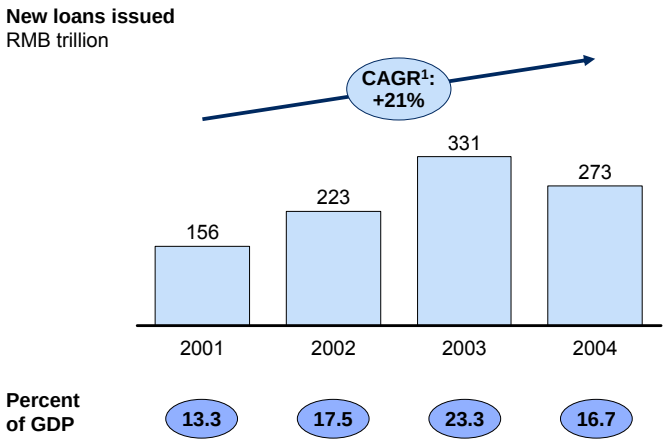
Source of NPL reduction for large state-owned commercial banks, 2001–2005
Percent of loan balance



[1] A total of $150 M was transferred between 2001 and 2005, which represents 12.4 percent of the 2005 loan balance.
[2] End of Q3.
Source: CBRC; PBOC; McKinsey Global Institute analysis

Exhibit 2.10

RAPID GROWTH IN BANK LENDING HAS CONTRIBUTED TO REDUCING NPL RATIO



[1] CAGR = compound annual growth rate.
Source: PBOC Monetary Policy Report; McKinsey Global Institute analysis

However, private estimates for recent years suggest the real value of NPLs may be twice as large as the official figure, because loan reissues could be masking the true extent of the problem, making banks technically insolvent.[8]

An equally significant anomaly is the distribution of Chinese bank lending. In more mature economies, banks mainly serve individuals and small and medium enterprises (SMEs). The banks take deposits from these segments, offer a variety of accounts, and provide debit and credit cards as well as mortgages and loans. They also derive a large part of their income and profits from noninterest revenue earned on fee-based services. The largest companies seek funding not from banks but from capital markets, where overheads are lower. In China, however, 10 percent of bank loans have gone to consumers, compared to 18 percent in India and 48 percent in South Korea and Malaysia. Instead, two-thirds of all China's bank lending goes to corporations, the bulk of it to large businesses that would normally raise their funding from capital markets. As we will see in Chapter 3, a disproportionately large share of funding goes to state-controlled companies, leaving smaller private companies credit constrained. Chinese banks also offer very few off–balance sheet services: these accounted for less than 10 percent of their income in 2003.

8 For instance, UBS estimates the true value of nonperforming loans is $500 billion, as opposed to the $300 billion official figure. Anderson, 2006.

Root causes for problems in lending

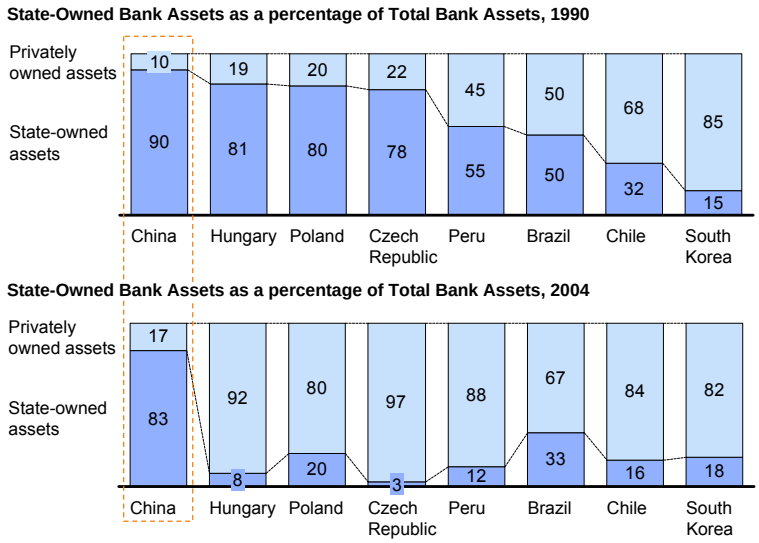
The anomalies in lending are explained by several factors. The first is the high level of state ownership of Chinese banks, which contributes to weak governance and lack of commercial mindset. In addition are operational weaknesses and poor incentives within banks. Finally, banks' maintain a highly decentralized structure that makes change difficult to implement. Until these problems are addressed, the non-performing loan problem is likely to persist, and the banking system will remain vulnerable to potential liquidity shocks.

1. *Weak governance and lack of commercial mindset*

   Not surprisingly, China has the highest level of state ownership of banks of any major economy in the world. In contrast to the rest of China's economy, in which state ownership has declined greatly over the past 10 years, the banking system remains firmly in government hands. This also stands in contrast to the experience of Eastern Europe's transitional economies and other emerging markets. State-controlled banks accounted for 83 percent of bank assets in China in 2004, compared with 33 percent in Brazil, 18 percent in South Korea, 20 percent in Poland, and 16 percent in Chile (Exhibit 2.11).

Exhibit 2.11

STATE OWNERSHIP OF BANKS REMAINS HIGH IN CHINA



Source: Central banks; McKinsey analysis

Sixty percent of bank assets are held by China's four largest commercial banks: Bank of China (BoC), China Construction Bank (CCB), Industrial and Commercial Bank of China (ICBC), and Agricultural Bank of China (ABC). In the past year, the government has allowed "strategic" pre-IPO investments by foreign banks in several large banks. Along with the listing of CCB in Hong Kong in late 2005, this raised $18 billion. Although these foreign investments bring with them new management ideas and a position on the board, foreign ownership stakes are still small, and the state remains firmly in control.[9] China also has roughly 120 city commercial banks and joint stock banks, as well as more than 30,000 rural and urban credit cooperatives, most of which are controlled or influenced by various levels of government.

State ownership of banks reduces competition and lessens pressure on banks to operate on a commercial, profit-oriented basis. This is particularly true in China, where the government has injected $105 billion into the banking system since 1998 to recapitalize banks and has engineered a transfer of $307 billion of nonperforming loans to the asset-management companies at face value. Although the CBRC has publicly stated that banks should not count on future capital injections and instead should make money through profitable lending, the Chinese government has clearly been willing to provide funds in the past, which lessens profit pressures. Moreover, high levels of state ownership make it more difficult to reduce local political influence over lending decisions and to reduce bloated bank payrolls.

Until recently, the boards of Chinese banks had no clear roles and exercised little authority over management or operations of the institutions. China's regulators have made changes to improve governance requirements in recent years, however, particularly in the banks being prepared for foreign IPOs (CCB, BoC, ICBC, and Bank of Communications). They are now required to appoint independent outside directors. Still, these directors are a minority, even at CCB, which has already done its IPO. Moreover, there are not explicit guidelines for the type and structure of board committees, the qualification and mix of directors, or the role and rotation of auditors. Most banks still

9 There is only one bank in China that is run by foreign owners, the Shenzhen Development Bank, which is managed by the American private equity firm Newbridge Capital. It is the largest shareholder with almost 20 percent of the shares, and it was chosen by a controlling group of shareholders to run operations.

lack clear decision-making structures with lucid accountabilities that run throughout the organization, making it challenging for boards to control risks effectively.

Effective corporate governance is needed to manage the risks that banks undertake in their business. It is also needed to avoid misappropriation and fraud, which have plagued China's banking system. According to the CBRC, the Big Four banks handled 98 criminal cases of fraud among bank employees in the first half of 2005 alone. In one reported case, several former Bank of China employees have been charged with fraud and money laundering worth $485 million.[10] The prospectus of CCB in fall 2005 stated the bank had 100 cases of fraud between 2002 and 2004. Strong governance is needed to resolve these issues.

2. *Operational weaknesses*

Several of China's largest banks have made significant changes to upgrade management oversight and lending skills in recent years. But improving lending operations and developing the required tools in a banking system so vast will undoubtedly take time. Several operational weaknesses are still evident, particularly in the 120 or so smaller commercial banks and the 30,000 urban and rural credit cooperatives that dot the country. As a group, these smaller institutions are quite important, accounting for more than half of new lending (Exhibit 2.12). But they are more difficult to regulate and monitor because of their geographic dispersion, and their skills in most cases lag behind those of the large commercial banks.

One problem in many banks is lack of good internal credit-assessment capabilities. Most of the nonperforming loans in the past were due to directed lending policies by the government to fund state-owned enterprises, regardless of their profitability. In this environment, loan officers were not required to develop good credit-assessment skills, nor did banks see the need to develop credit scoring tools or to keep good records of borrowers' credit histories. Lending decisions today are still often based on incomplete data with insufficient analysis in many parts of China, due in part to the poor quality and unreliability of many companies' financial statements. When one

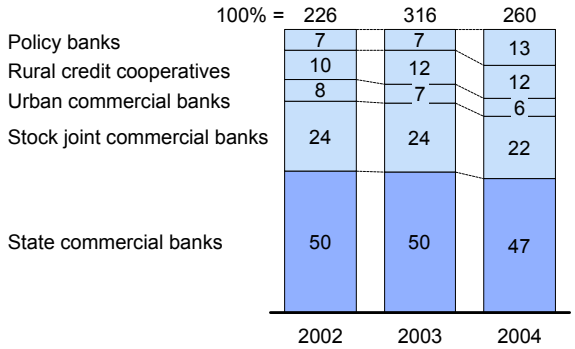
10 Brian Bremner, "Banking on China's Reforms," Business Week Online, February 6, 2006.

bank reviewed the loan portfolio of a particular region, it found that for 60 percent of loans made, it could not identify the industry of the borrower, the type of collateral posted, or even who made the lending decision.[11]

Exhibit 2.12

STATE COMMERCIAL BANK SHARE OF LENDING DIPPED BELOW 50% IN 2004

Distribution of new local currency lending in China's banking industry
Percent, US $ billion



Note: Numbers may not add to 100 percent due to rounding.
Source: The Industrial Map of China 2005: Financials

Some of the largest banks have made a big push to upgrade skills of loan officers in recent years. In part to overcome the pervasive lack of skills, some banks now require provincial or regional approval for larger loans, although these policies vary by bank. In many smaller banks, loan decisions are based more on "past experience" and hierarchical approvals rather than on rigorous analysis of companies.

Lending decisions are also hampered by the lack of external information on the credit histories and the financial condition of potential borrowers. This is true for both corporations and for consumers. China lacks coverage from independent credit rating agencies and analysts, such as Standard and Poor's, Moody's, or Fitch that provide essential information to banks on

11 See Matthias M. Bekier, Richard Huang, and Gregory P. Wilson, "How to fix China's banking system," The McKinsey Quarterly, 2005 Number 1, pp. 110–9, available online at www.mckinseyquarterly.com.

potential borrowers. It is also in the very early stages of developing a national consumer credit bureau, which limits both consumer and small-business lending, since even in mature markets small-business owners typically give personal guarantees for loans. Part of the problem is that there are no nationwide standards for collecting and sharing the necessary data. Until January 2006, Shanghai was the only city that had a local data collection directive and a formal personal credit bureau system. Quite recently, the system was expanded to cover 300 million people.

Finally, Chinese banks need more effective performance-management systems. Loan officers face few consequences for issuing bad loans, particularly to state-owned companies, and little reward for taking a well-calculated risk in new segments, such as consumer lending or small-business loans. Managers therefore have insufficient incentives to expand lending to household and SME loans, which typically have higher risks, but also potentially higher average returns, than the loans to very large companies and state-owned enterprises (SOEs).

These weaknesses are a barrier to expanding lending to SMEs. Although China's banking regulators lifted the ceiling on interest rates in 2004, most banks have yet to make a significant foray into lending at higher rates. This is evident from the distribution of lending rates reported by the People's Bank of China. In 2004, more than half of new loans had rates at or below the benchmark for the largest commercial banks, and just 6 percent were more than one-third above the benchmark (Exhibit 2.13). Rural and urban credit cooperatives, whose mission is to lend to smaller borrowers, had 80 percent of loans at the higher rates.

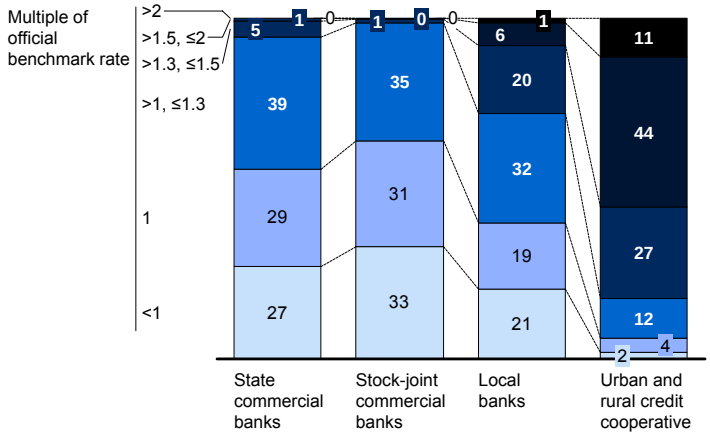
3. *Decentralized structure*

Upgrading lending and risk-assessment skills is a multiyear effort for any banking system. The challenge is even more daunting in China because of its massive size and decentralized power structure. Long before the current era, China had a history of strong provincial leaders and relatively weak central control. Because of this geographic dispersion, China's economy is often said to be a collection of provincial economies that are only loosely integrated.

Exhibit 2.13

LARGE COMMERCIAL BANKS STILL PRICE LOANS CLOSE TO THE OFFICIAL BENCHMARK RATE

Distribution of new commercial bank lending by interest rate category, 2004
Percent



Source: The Industrial Map of China 2005: Financials

The same holds true in the banking system. Although China's national banks are massive, they have yet to reap the benefits of their scale because of their decentralized structures. A good deal of autonomy remains at the branch and regional levels in many places, with little direct control from the headquarters. This decentralized structure makes introducing more market-oriented lending decisions more difficult, because lending decisions made at the local branch level are more susceptible to influence from local government to favor local SOEs. Their diffuse structure also makes it difficult for banks to focus on particular customer segments or to collect and share useful information among their regions. As a result, some corporate borrowers (and increasingly consumers) that default on a loan in one bank or region can still quite easily acquire a loan in another place.

Vulnerabilities put banking system at future risk

These deficiencies in lending skills, incentives, and governance mean that the nonperforming loan problem is likely to persist, albeit at far lower levels than the peak levels of the beginning of the decade. More than half of the decline in NPLs, as we saw previously, was due to transferring the bad loans off banks'

books. Bank credit-assessment and pricing skills, while improving, are still not sufficient. And the large increase in lending in 2003 and 2004 means that many loans may go bad in years to come. There is already evidence that some of the newer forms of lending, although a small portion of the total, are yielding poor results. The proportion of nonperforming auto loans at some banks has already reached 50 percent, and Moody's reports that 8 percent to 12 percent of loans to developers are going bad.[12] The growing amount of mortgage and other real estate–backed loans is at risk of a downturn in real estate values.

Operational weaknesses also leave China's banking system vulnerable to sharp reductions in liquidity and profitability that could prove costly for the government and taxpayers. This could stem from several sources. First is when foreign banks start offering renminbi services to the local population at the end of 2006, as per China's WTO commitments. Chinese banks' customer base is currently highly dependent on a small number of affluent customers, 2 percent of whom account for half of all total household deposits and the bulk of banking profits (Exhibit 2.14). If even a small number of customers from this group shift to foreign competitors, existing banks could face a liquidity crisis. Chinese banks can potentially avert this outcome if they improve operations now, however, because foreign banks currently have small branch networks, and Chinese consumers do not place a lot of value on foreign brands.[13]

Banks' dependence on corporate lending means they would be in trouble should large companies turn to bonds as their preferred form of debt, as they do normally in market-based economies, if and when China's corporate bond market is developed. Moreover, when interest rates are further deregulated over the next four years as planned, bank margins will likely be squeezed. This is because the deposit rate ceiling will be lifted and the lending rate floor removed, both of which are the binding constraints today. And if banks move toward more fixed-rate or longer-term products, they may be exposed to large asset-liability-management (ALM) risks on their balance sheets. But banks do not currently have the sophisticated treasury and ALM capabilities they need to cope with this outcome of a deregulated interest environment. Increasingly, they accept real estate as collateral for corporate loans, but China's real estate market has grown

12 Brian Bremner, "Banking on China's Reforms," Business Week Online, February 6, 2006.

13 McKinsey Personal Financial Services survey in China, 2004.

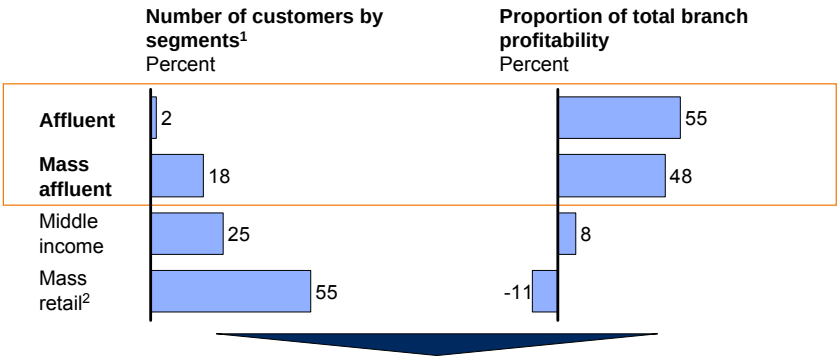
rapidly in recent years. If the real estate market slows down dramatically, or if economic growth slows significantly, nonperforming loans could shoot upward.

This is not to say that a banking crisis is imminent, or even likely. China's government has clearly shown that it is willing to use its resources to recapitalize the banking system, and it also has the financial ability to do so. Still, there might clearly be some bumps in the road in the years to come, and further reforms are needed.

Exhibit 2.14

2% OF AFFLUENT CUSTOMERS PRODUCE MORE THAN HALF OF BANK PROFITS

Breakdown of clientele segments in a provincial branch



[1] Segmented by customer deposits in 2003.
[2] 50% of all customers are loss making.
Source: Disguised client data; McKinsey analysis

UNDERDEVELOPED EQUITY MARKET

In a mature financial system, equity markets provide long-term funding for companies. In return, shareholders become owners of the company and get a say in how management operates. The rapid and transparent price adjustments reflect information about the company's value and prospects, and they similarly exercise market discipline on companies.

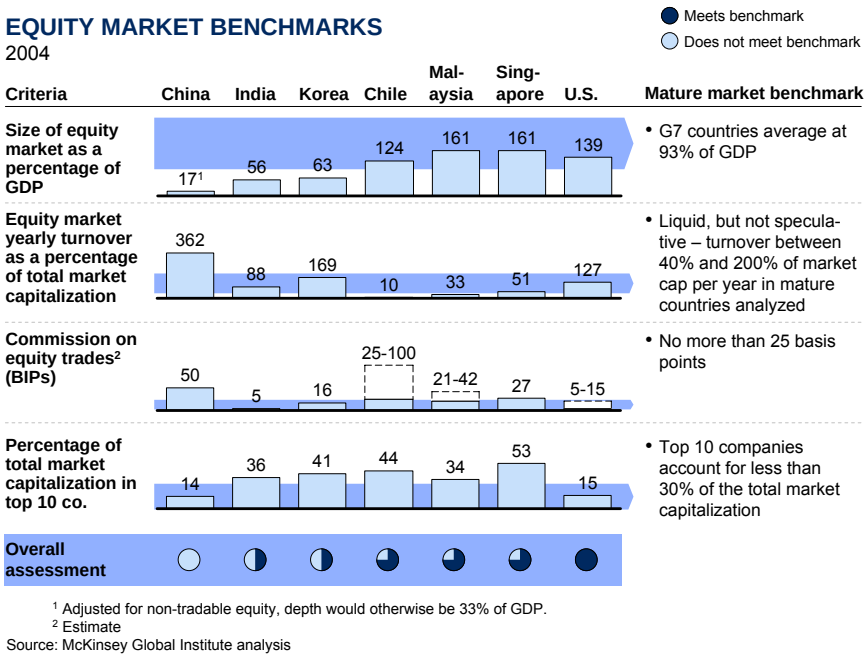
China's goal in developing its equity markets was to raise funds for SOEs and take pressure off banks to extend further loans. They created four classes of shares: A-shares, which are denominated in renminbi and available to domestic investors and a very limited number of foreign investors; B-shares, which are traded in US

dollars (or Hong Kong dollars in Shenzhen) and were available originally to foreign investors only, but now some domestic investors; H-shares, listed in Hong Kong and available only to foreign investors; and nontradable "legal person" shares held by founding shareholders, most often government entities.

Equity market is in early stages of development

Benchmarking the performance of China's mainland equity markets in Shanghai and Shenzhen to other countries shows they remain in a very early stage of development (Exhibit 2.15). Three anomalies stand out.

Exhibit 2.15



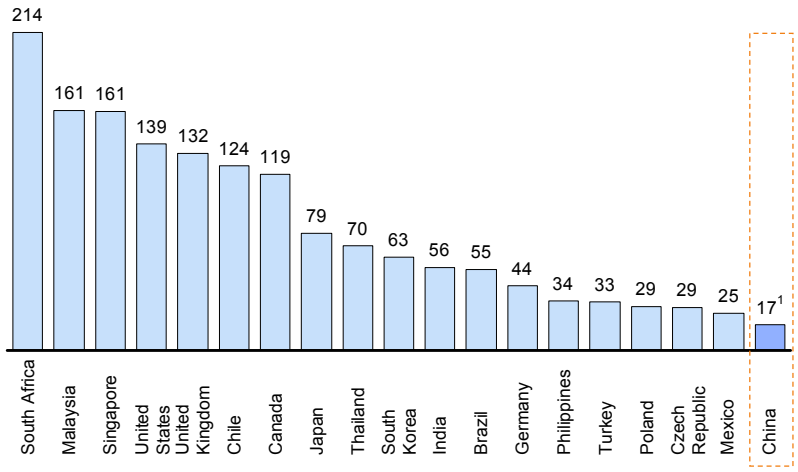
[1] Adjusted for non-tradable equity, depth would otherwise be 33% of GDP.
[2] Estimate
Source: McKinsey Global Institute analysis

First is the low level of depth in the market. The total market capitalization for all Chinese listed companies, whether they are listed domestically or on Hong Kong and other international exchanges, is only 33 percent of GDP. But roughly half of total market capitalization (and two-thirds of domestic market capitalization) is due to nontradable shares owned by "legal persons", or government entities. Excluding the value of these shares (because they are non-tradable financial assets) leaves China with an equity depth of only 17 percent of GDP, which is very low compared to other countries: India is at 56 percent, South Korea at 63 percent, and Malaysia is at 161 percent (Exhibit 2.16).

Exhibit 2.16

COMPARISON OF EQUITY MARKET SIZE ACROSS COUNTRIES

Equity capitalization, 2004
Percent of GDP



1 Adjusted for nontradable equity, depth would otherwise be 33% of GDP.
Source: McKinsey Global Institute Global Financial Stock Database; McKinsey Global Institute analysis

In addition, China's mainland exchanges have performed very poorly over the past five years. The Shanghai market lost half of its value between 2001 and mid-2005, despite average annual economic growth of 9 percent over the period (Exhibit 2.17). While the market has risen 18 percent in the 10 months that followed the May 2005 low point, it would need to increase another 70 percent to get back to 2001 levels. This fall was undoubtedly a market correction, and the average P/E level of the Shanghai Stock Exchange main index fell from 40 in 2001 to 25 in 2005. Still, some retail investors have suffered irretrievable losses. Finally, the benchmarking reveals very high market turnover in China's tradable shares, indicating it has become a highly speculative market.

Root causes for underdeveloped equity markets

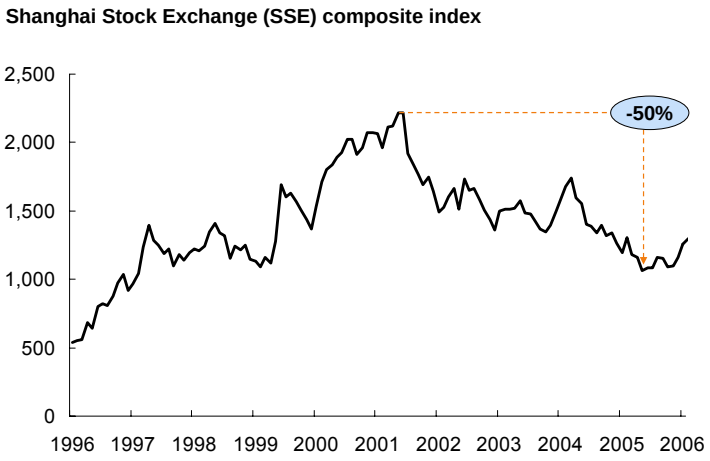
There are several root causes for the underdevelopment and observed problems in China's equity markets: government share ownership and influence over IPOs, the fact that many of the best-performing Chinese companies list overseas, and lack of institutional investors to provide a long-term investor base.

1. *Government share ownership and influence over IPOs shape the market*

   The large number of nontradable shares held by government entities reduces the corporate governance role of the market, because minority shareholders

Exhibit 2.17

CHINA'S DOMESTIC EQUITY MARKET HAS PERFORMED POORLY IN THE PAST 5 YEARS, DESPITE RECENT GAINS



Source: Shanghai Stock Exchange; China Statistical Yearbook, 2004; World Federation of Exchanges; McKinsey Global Institute analysis

have little say in management. The government plans to monetize these shares gradually. A successful pilot flotation of its nontradable shares in 40 companies was conducted in 2005. However, floating the entire stock of nontradable shares will take many years because new investors need to be lined up and a fair compensation scheme for current investors agreed upon. Still, this will be an important step in creating a free market for equity capital, and will increase China's equity market depth significantly.

A more important reason the equity market performs so poorly is that many badly performing companies are listed on it. This is due to government involvement in the IPO process. Until a few years ago, companies were chosen for IPO by a committee closely linked to the government, and their choice was often influenced by industrial policy criteria. In some cases, the government encouraged struggling companies to list shares as a way to relieve banks from the pressure of continuing to lend to them. More recently, the regulators have established a more independent committee to approve IPOs. However, the government has effectively stopped new listings. Only 15 new companies listed shares in 2005, and all those were in the first half of the year. (This restriction is set to be lifted in May 2006.)

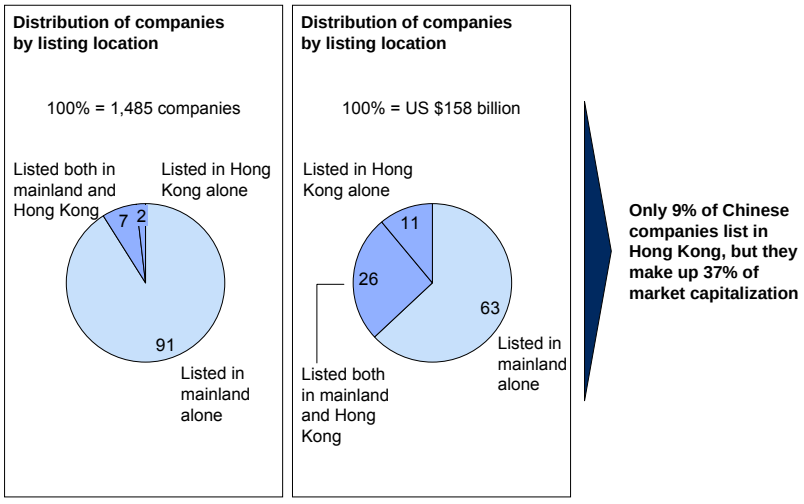
The stock market has consequently been more a vehicle for delivering government policy on privatization and changes in financial planning for SOEs, rather than a market where strongly performing companies seek to raise funds.

2. *Best Chinese companies list on overseas exchanges*

A second factor that has slowed the development of China's mainland equity markets is that the biggest and most profitable Chinese companies are encouraged by the government to list on international exchanges to raise foreign capital. The majority prefer to list in Hong Kong (Exhibit 2.18). This gives them exposure to international standards of governance and accounting, and provides the liquidity necessary for large share issues (CCB raised $9 billion in its IPO last fall, something it could not have done on domestic markets). Still, this practice leaves smaller and riskier companies to list in Shanghai or Shenzhen. Local investors, whose access to foreign exchanges is limited by government restrictions on capital flows, are thus left with inferior returns. Some companies are encouraged by the government to list shares in both Hong Kong and Shanghai. For these companies, the shares traded in Shanghai command a premium, seen in a high P/E ratio (Exhibit 2.19). This is further evidence that Chinese investors are clamoring for a good investment but getting a poor deal from local equity markets.

Exhibit 2.18

LARGER COMPANIES LIST IN HONG KONG

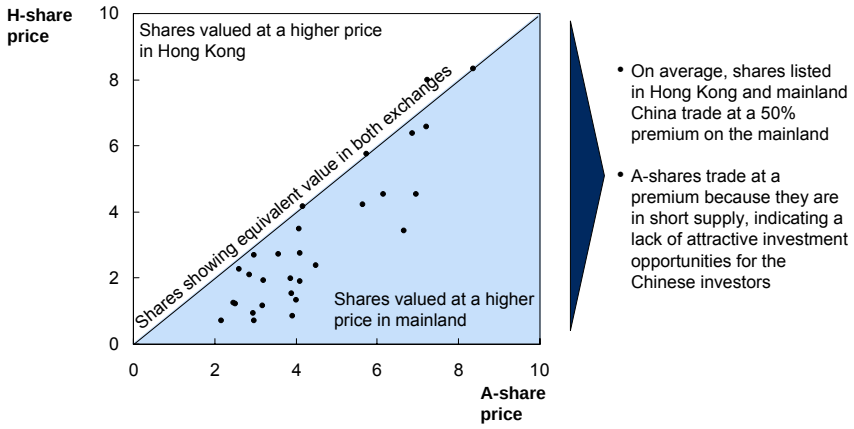


Note: Companies listed in foreign exchanges other than Hong Kong are not included because of their relative small number and size. If included, foreign-listed companies would make up, at most, 6% of the number of companies and less than 8% market cap (including nontradable shares).
Source: China Securities and Futures Statistical Yearbook; *Cajing Magazine*; Bloomberg; McKinsey Global Institute analysis

Exhibit 2.19

FOR COMPANIES LISTED IN HONG KONG AND MAINLAND, SHARES TRADE AT A 50% PREMIUM IN MAINLAND, ON AVERAGE

Share prices for companies listed both in mainland China and in Hong Kong, October 12, 2005
RMB



Source: *Caijin Magazine*; McKinsey Global Institute analysis

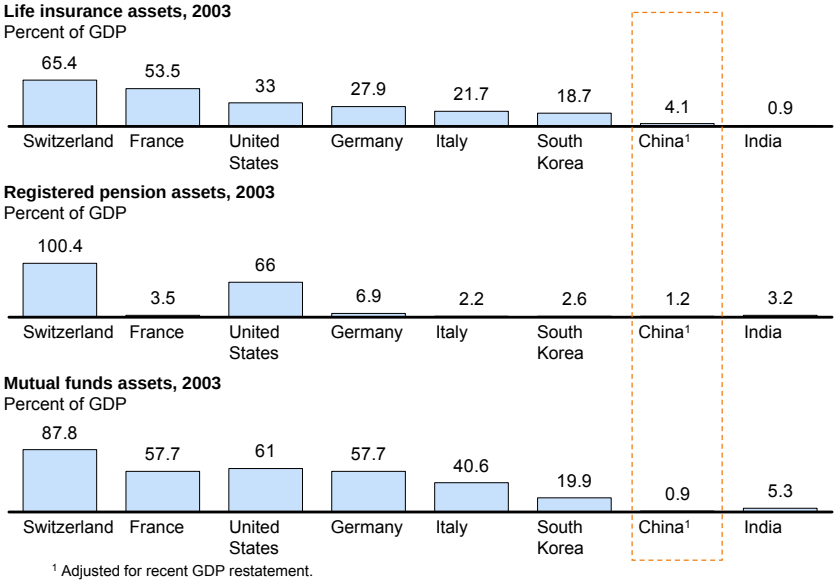
3. *Lack of institutional investors results in speculative trading and diminishes market discipline*

   Insider trading scandals and an overall lack of good corporate governance among companies have further eroded trust in the equity market and compounded its poor performance. The result is today's highly speculative market environment. This both depresses share prices further and drives institutional investors away.

   Professional institutional investors, in sufficient number, would provide liquidity to China's equity markets and ensure pricing was based on a rational, long-term view of companies' future earning capabilities. But mutual funds, insurance companies, and pension funds are still in the early stages of development. All together they add up to only 6 percent of GDP, as opposed to 160 percent of GDP in the United States and 41 percent of GDP in South Korea (Exhibit 2.20). In addition, these intermediaries are hindered by restrictions on their investment portfolios. Because of lack of alternatives, insurance companies, for instance, hold roughly 50 percent of their assets in bank deposits and savings accounts that earn very low returns.

Exhibit 2.20

CHINA'S FINANCIAL INTERMEDIARIES ARE VERY SMALL



[1] Adjusted for recent GDP restatement.

Source: EFIC; ICI, European AM Database; CSRC; McKinsey analysis

As a result, retail investors account for two-thirds of the trading on Chinese equity markets (compared to 38 percent in the United States), and trading is highly speculative, with annual tradable share turnover at 300 percent (compared to 125 percent and 140 percent for New York Stock Exchange and London Stock Exchange, respectively) (Exhibit 2.21). China's equity market, therefore, lacks the institutional investors who would bring more stability into the market, and they do not enter because of regulations on their portfolios and because of its poor performance.

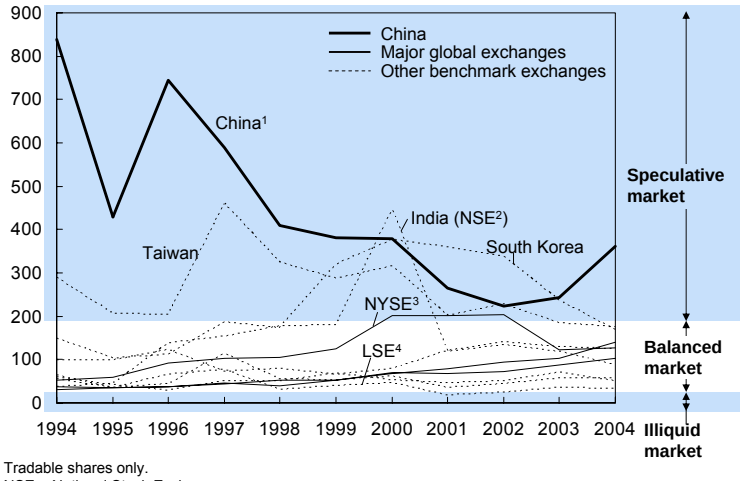
VERY SMALL CORPORATE BOND MARKET

In mature economies, the bond market is an important channel for providing companies and government longer-term funding options at lower cost than banks can offer. Bond markets offer a more liquid source of debt financing than banks, and because their prices adjust continuously, bonds also provide information about the company's performance to investors and market discipline to management.

Exhibit 2.21

TRADING ON SHANGHAI MARKET IS SPECULATIVE

Equity market annual turnover over market capitalization
Percent



[1] Tradable shares only.
[2] NSE = National Stock Exchange.
[3] NYSE = New York Stock Exchange.
[4] LSE = London Stock Exchange.

Source: CMIE; China Statistical Yearbook; S&P Global Stock Market Factbook 2005; McKinsey Global Institute analysis

Government bond market is sound, corporate bond market is tiny

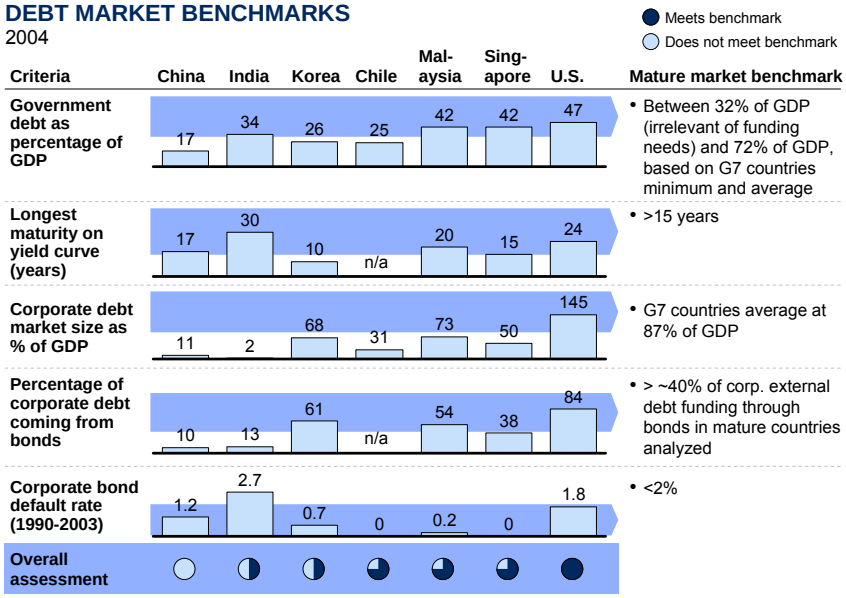
International benchmarking shows that China's bond markets are very small (Exhibit 2.22). A government bond market is necessary to establish a yield curve and a risk-free rate against which other securities are priced. China's government bond market, at just 17 percent of GDP, is small. However, a comparison of China's bond market performance against other countries shows that China's market has most of the basic features on the government bond side that would ensure its success: a regular auction schedule and good reliability. It has also established a long-dated yield curve, albeit at very low rates (Exhibit 2.23). This low rate reflects China's huge and captive pool of domestic savings.

A corporate bond market allows large companies to raise funds more cheaply than through banks. But in China, the corporate bond market for maturities greater than one year is tiny (Exhibit 2.24). It accounts for just 11 percent of GDP, of which 10 percent is accounted for by policy banks, and these bonds can be bought only by commercial banks. The remaining corporate bonds available on the open market are essentially nonexistent, at just 1 percent of GDP. This compares to 68 percent in South Korea, 73 percent in Malaysia, and 145 percent in the United States. As well as being tiny, the corporate debt market is dominated by just a few large issuers, all companies in which the government is heavily involved.

Exhibit 2.22

DEBT MARKET BENCHMARKS

2004



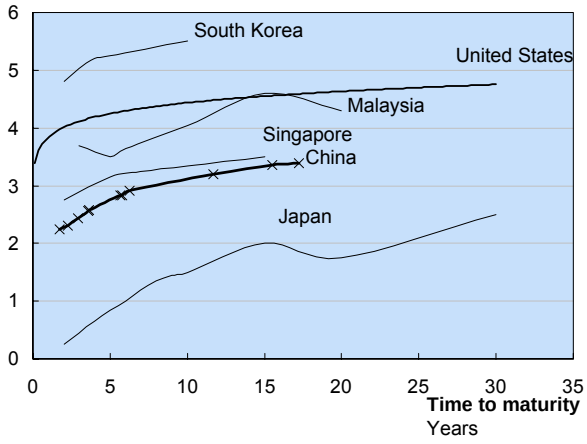
Source: GFS; Moody's; local central banks; Asia Development Bank; McKinsey Global Institute analysis

Exhibit 2.23

YIELD CURVE ON CHINA'S DEBT MARKET

Government bonds[1] yield curves for a selection of countries, January 24, 2006

Percent per year



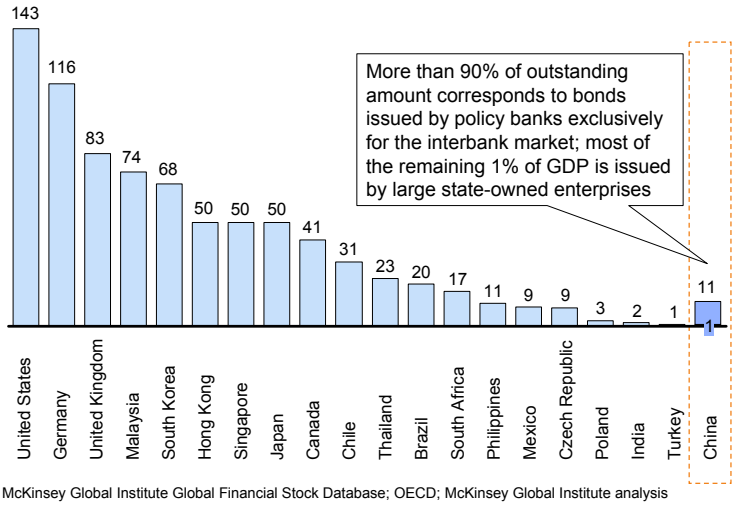
[1] Local currency denominated.

Source: China Government Securities Depository Trust & Clearing Co.; Valubond; Reuters; Bloomberg; McKinsey analysis

Exhibit 2.24

COMPARISON OF CORPORATE DEBT MARKET SIZE ACROSS COUNTRIES

Corporate debt, 2004
Percent of GDP



Source: McKinsey Global Institute Global Financial Stock Database; OECD; McKinsey Global Institute analysis

China's commercial paper market, for maturities less than one year, is another story. The government allowed the first such issuances in May 2005, and, by the end of the year, the market had already raised $16.2 billion worth of commercial paper. This is equivalent to less than 1 percent of GDP, offering significant potential for future growth.

Excessive regulation holds back corporate issuance

The main obstacle to the development of a larger corporate bond market is highly restrictive government regulations. The approval and issuance process is so cumbersome that it takes 14 to 17 months simply to issue a corporate bond. This process takes 1 to 2 months in Pakistan and the Philippines and less than a month in all other Southeast Asian countries (one week or less in most other cases).

Returns on bonds are depressed because by law they cannot offer a rate higher than 140 percent of the bank deposit rate (now at only 2.5 percent in nominal terms—and negative in real terms), although bonds could entail a much higher risk. Furthermore, the interest that is earned on corporate bonds is taxed at 20 percent, whereas interest on government bonds is not taxed. The rate on government bonds slightly exceeds comparable bank deposit rates, leaving very little room for a risk premium on corporate bonds that would enable them to compete effectively with government bonds.

These stringent regulations came about in response to many corporate defaults in the late 1980s and 1990s. But these rules have the effect of stifling growth of the bond market and directing the flow of large company borrowing back toward the banking system, which depends largely on making loans to large corporations.

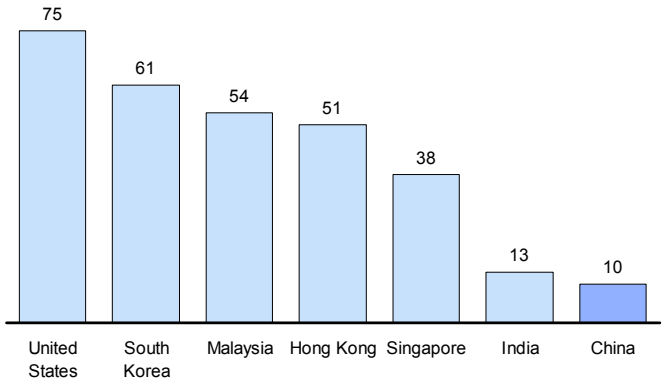
A further hindrance to the development of a properly functioning bond market is the nascent state of credit rating agencies in China, which makes it very difficult to price debt appropriately and to attract investors. Last, there are not enough institutional investors to create a vibrant market for corporate bonds. (Retail investors almost never buy bonds in any country, because they are usually traded over the counter and thus difficult for individual investors to access.)

As a result, Chinese companies raise only a very small proportion of their funds from corporate bonds (Exhibit 2.25). They are missing out on the benefits that this form of financing provides to companies in more mature economies, namely, a lower cost of intermediation, longer maturities, and more direct market access. Large companies opt instead for bank borrowing, the low-cost source of financing that is available to them. Consequently, smaller companies are crowded out of bank lending.

Exhibit 2.25

THE PROPORTION OF CORPORATE DEBT COMING FROM BONDS IS VERY LOW IN CHINA

Corporate debt coming from bonds as a proportion of total corporate debt, 2004
Percent



Source: McKinsey Global Institute Global Financial Stock Database; Economist Intelligence Unit; local central banks; McKinsey Global Institute analysis

PAYMENTS SYSTEM IS DEVELOPING SLOWLY

China is currently in the process of building a modern payments infrastructure for both wholesale and retail payments. Its success would create benefits for actors across the economy: consumers and businesses would enjoy faster and easier payments, companies could improve treasury operations and cash management, banks could earn significant fees and expand banking services to more of the population, the government could keep better track of transactions and reduce tax evasion, and the central bank would reduce risk of systemic failure (Exhibit 2.26). But cultural factors are limiting the expansion of both wholesale and retail payments systems.

Exhibit 2.26

INCREASING THE PENETRATION OF ELECTRONIC PAYMENTS WOULD BENEFIT ALL FINANCIAL SYSTEM PARTICIPANTS

Government	• Increased payment efficiency, ultimately leading to higher, more sustainable economic growth • Lower level of informality in the economy, as tax evasion becomes harder with a greater proportion of electronic payments
Banks	• Increased profits from electronic payment processing services offered to households and corporations • Increased sector penetration, as more households will need basic banking products to participate
Households	• Faster, easier payments • Increased security because individuals need to carry lower amounts of liquidities • Easier-to-trace payments
Corporations	• Better access to capital due to shorter payment processing times • Increased efficiency of payment processes and accounting • Increased security and reduced default risk for large payments • More efficient treasury management
Central bank	• Increased security, reducing the risk of a financial crisis

Source: McKinsey Global Institute analysis

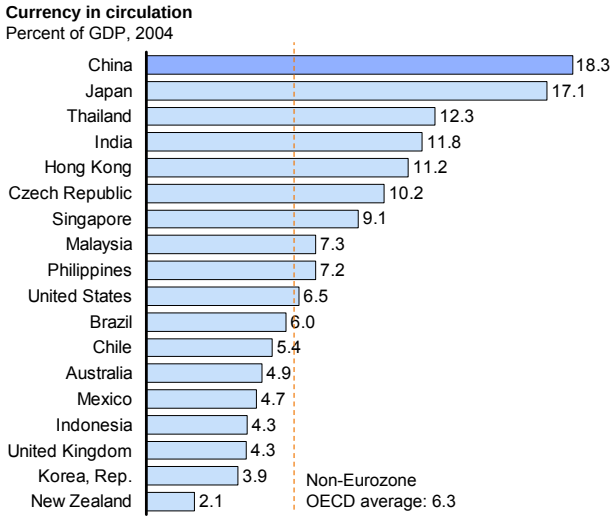
Until a few years ago, interbank payment transactions across China were made using the "Electronic Interbank System" (EIS), a system with very high costs (8 to 9 renminbi per transaction) that functioned on a gross, rather than net, settlement basis (each payment settled individually, even small ones). Since 2003, however, the China National Automatic Payment System (CNAPS) has been put in place in some cities and offers functionalities comparable to those offered by payment systems in more developed economies, namely gross settlement of high-value payments and net end-of-day settlement of smaller-value payments.

Still, CNAPS has a relatively low level of coverage in the economy today, and the decentralized structure of most banks is prohibiting more widespread adoption. CNAPS currently covers most regions for high-value payments, and pilots are currently being conducted in three regions for low-value payments. Part of the reason for this lack of coverage is the high capital investments required by local banks to build links with CNAPS. Their lack of understanding of its potential benefits, combined with their autonomy from headquarters, has allowed them to avoid building links rapidly.

For retail payments, the emergence of China UnionPay as a leading electronic transaction processor in the recent years has facilitated the move to electronic payments. But consumers and businesses, too, have failed to migrate rapidly to electronic payments. They still prefer to use cash for most transactions. Households and small businesses in China hold much more cash than in almost any other country. Currency in circulation is 16 percent of GDP, compared to a non-Eurozone Organisation for Economic Co-operation and Development (OECD) average of 6 percent of GDP. This difference is equivalent to almost $200 billion (Exhibit 2.27). The preference for cash transactions in China is due in part to both consumers and businesses seeking to avoid taxes. In addition, most retail businesses in China are small shops and do not want to make the investment required for processing credit card payments or pay the surcharge involved in each transaction. Moreover, a large portion of China's population is still unbanked and so naturally would not use electronic payments.

Exhibit 2.27

CURRENCY IN CIRCULATION IS VERY HIGH IN CHINA



Source: GFS database; Local central banks; McKinsey Global Institute analysis

CONCLUSION

Despite China's high level of financial depth, its financial institutions are failing to play the roles they should. Equity and bond market development has been suppressed largely as a result of government involvement in these markets, and so large companies are forced to borrow from banks instead. The decentralized structure of banks, lack of credit-assessment capabilities, and skewed incentives hamper the banking system and mean that the NPL problem is likely to persist, even if at lower levels than previously. The result, as we will see in the next chapter, is an inefficient allocation of capital.

Inefficiencies in China's financial system also illustrate one of the nation's conundrums: despite China's massive size, many of its businesses have yet to reap the benefits of scale. As a country, China would seem to offer many opportunities to achieve scale economies, for example, by replicating excellent practice in one region across a national network. But China's economy is highly decentralized, as is political authority; the country in some ways is best understood as a collection of independent provinces. Local leaders have significant influence both on companies and on the banking system that serves them. This decentralization has limited the effectiveness of China's financial system so far, and it also makes reform more difficult.

3. The Effect of Financial System Performance on China's Economy

The shortcomings in China's financial system discussed in Chapter 2 lead to an inefficient allocation of capital to the economy. The academic literature and popular press have focused on one very noticeable outcome of the misallocation of capital—namely, China's high volume of nonperforming loans. We recognize that nonperforming loans are a costly problem, and one that is likely to persist in many banks that have not upgraded their lending skills. But poor lending decisions that fund the least productive companies while depriving good companies in the economy impose a far heavier cost, even if the loans do not go bad.

A closer examination of the flow of funds in China reveals that, despite the progress made in moving toward a modern financial system, it still channels a disproportionately large part of the savings to large state-owned enterprises (SOEs). Some of these enterprises are undoubtedly highly profitable, due to restructuring efforts, their huge scale, and the monopolistic environment some enjoy. But as a group, the productivity of state-owned companies is just half that of privately owned enterprises. Consequently, the real growth engines of the economy—private enterprises and small and medium-sized enterprises (SMEs)—are deprived of capital. This poor allocation of capital lowers productivity and investment efficiency, skews the structure of the economy, and contributes to China's high savings rate. Indeed, it raises questions about the sustainability of the investment-led growth path that China is pursuing.

ALLOCATION OF CAPITAL TO COMPANIES

Before reforms began in 1978, China's financial system was designed to provide low-cost funding to state-owned companies in accordance with the government's economic plans. Households bore the cost of this policy, earning negligible returns on their savings. Although China's financial system is virtually unrecognizable from what it was 25 years ago, the allocation of capital to companies in the economy is changing only slowly: a disproportionately large share of funding still goes to large SOEs that are often unproductive, and it is given at low cost. Households continue to earn very low returns on their financial assets. In this way, China's financial system is both distorting China's growth and holding it back.

Large, state-owned enterprises receive the majority of funding from the financial system

Over the past ten years, privately controlled companies in China[1]—Chinese-owned, foreign-owned, and joint ventures—have become an increasingly large part of the economy. According to the latest government figures, they produced more than half of GDP in 2003. The state-controlled portion of the economy, meanwhile, is shrinking. Directly state-owned enterprises produced roughly one-quarter of GDP in 2003, and the remainder was produced by shareholding companies and collectives, most of which have partial state ownership. Employment in wholly state-owned companies fell from 80 million in 2000 to 67 million in 2004.

Nevertheless, wholly and partially state-owned companies continue to absorb the majority of funding from the financial system. Wholly state-owned companies have accounted for virtually all equity and bond market issues and have received 35 percent of nonagricultural commercial bank loans—despite producing just one-quarter of GDP (Exhibit 3.1).[2] Enterprises with partial state ownership (shareholding companies and collectives) account for another 38 percent of outstanding credit.

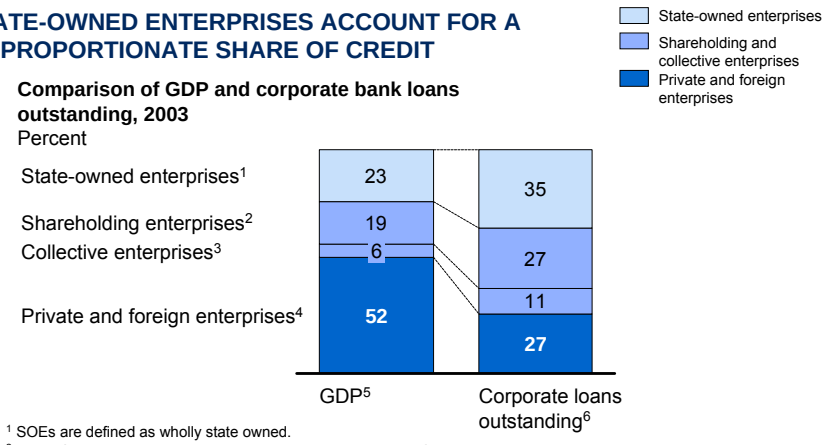
1 Determining whether companies in China are state controlled or privately controlled is very difficult, and the government does not often release data on GDP by ownership type. There are at least seven different ownership types of registered companies, including state owned, collective, township and village, private, foreign joint venture, joint-stock, and joint-operation enterprises, but the controlling interest in each varies. In this analysis, we use the OECD definition for state-controlled versus privately controlled companies. See Technical Notes at the end of this report for more detail.

2 These findings are consistent with other research. A 2006 report by Jonathan Anderson of UBS, for instance, reports that state-controlled companies account for 28 percent of GDP but have received two-thirds of nonagricultural commercial credit. Also see Yanzhong Wang, 2004, or Sheng and Lau, 2004.

Exhibit 3.1

STATE-OWNED ENTERPRISES ACCOUNT FOR A DISPROPORTIONATE SHARE OF CREDIT

Comparison of GDP and corporate bank loans outstanding, 2003
Percent



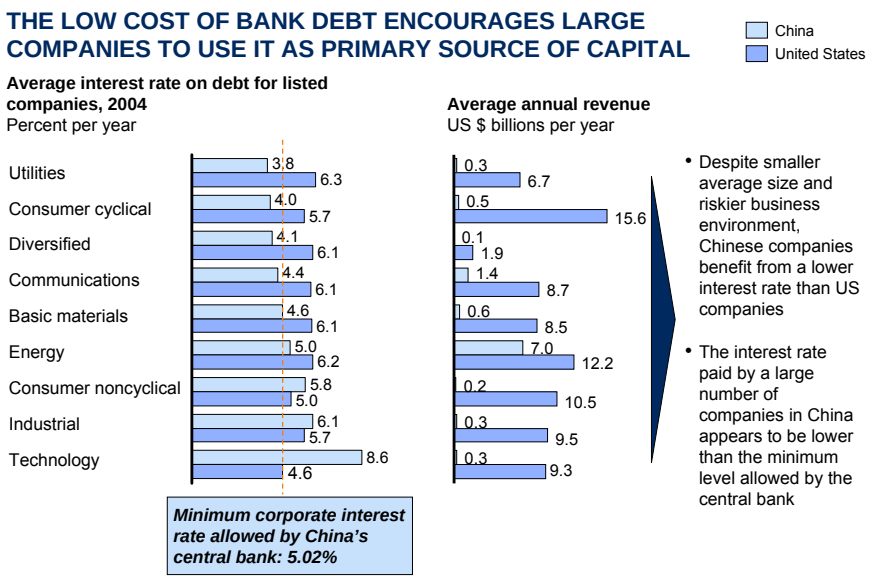
[1] SOEs are defined as wholly state owned.
[2] Most of the shareholding enterprises are partly state owned. Some are state controlled; some are not.
[3] Collective enterprises are owned by the population. Many are run like private enterprises, but some are effectively controlled by local political interests.
[4] Fully private enterprises include local privately owned enterprises, foreign joint ventures, and wholly owned foreign enterprises.
[5] Breakdown of industrial value added by ownership type, 2003, as determined by the OECD.
[6] Total corporate and government bank lending, based on a survey on commercial bank new loans conducted in 2002 by the People's Bank Of China (PBOC). This is the most recent publicly available data on lending by firm type. In the absence of more recent data, we are making the assumption that new lending in 2002 reflects the stock of outstanding credit in 2004. A higher portion of new lending today may go to private companies, but we have no evidence of this.

Source: OECD; PBOC; McKinsey Global Institute analysis

To be sure, the share of credit going to state-owned companies has declined over time, from virtually 100 percent in the early 1990s, while lending to private businesses and consumers has grown. Still, the transition is happening only slowly.

In mature financial systems, very large companies like China's state-owned enterprises do not take bank loans because they are a more expensive form of financing than corporate bonds and commercial paper. But in China, bank loans made to state-owned companies are at surprisingly low interest rates. Our analysis shows that in most sectors of the economy, Chinese companies have a significantly lower cost of debt than US companies—even though Chinese companies are much smaller in size and face a greater country risk (Exhibit 3.2). Combined with the long and cumbersome issuance process for bonds, this explains why even very large companies continue to seek funding from banks and not bond markets.

Exhibit 3.2



Note: Based on balance sheet analysis of the 10 largest listed companies in each sector; interest rate is obtained using the ratio of interest expense over bank debt.
Source: Bloomberg; McKinsey Global Institute analysis

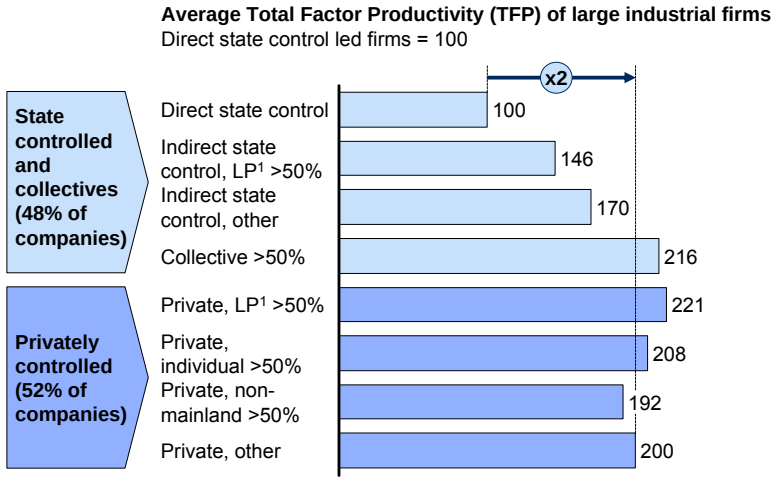
The skewed pattern of lending in favor of state-owned enterprises is an inefficient use of China's capital. The state-owned sector in China is undoubtedly improving its performance and profitability, due to the restructuring or closure of many small and medium-sized SOEs, improved management at others, and the monopolistic environment that many enjoy. Still, as a group, the productivity of state-owned companies is very low. A joint analysis by researchers from the OECD and National Bureau of Statistics in 2005 found that the total factor productivity of privately controlled companies, after taking into account company size, location, and industry, is twice as high as that found in majority state-owned companies (Exhibit 3.3).[3] By channeling a disproportionate share of credit to state-owned companies, the financial system is thus lowering overall productivity.

MGI's analysis shows that the same pattern holds within industries. We compared the capital and labor efficiency of state-owned companies, domestic private companies, and foreign-owned companies in two sectors of China's economy: automotive and consumer electronics. These sectors were chosen

3 OECD Economic Surveys: China, 2005.

Exhibit 3.3

THE PRODUCTIVITY OF STATE-OWNED FIRMS IS HALF THAT OF PRIVATE COMPANIES



[1] Legal person.
Source: OECD (Dougherty and Herd, 2005); McKinsey Global Institute analysis

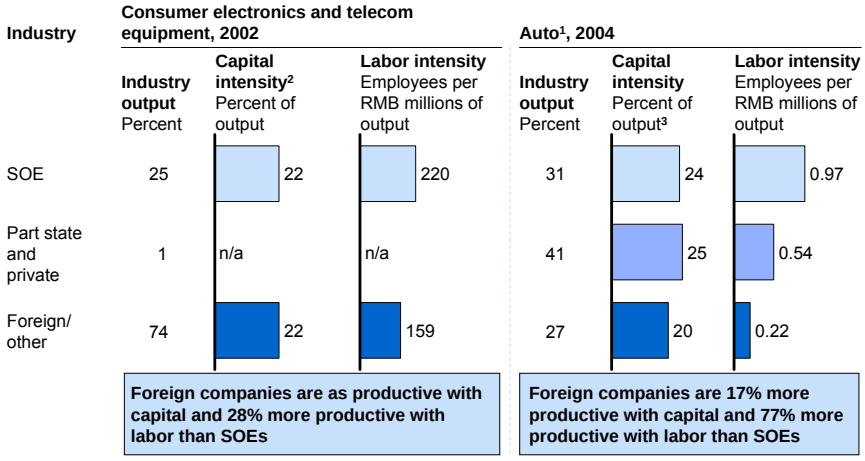
because data is available for them on a company-ownership level[4] and because foreign and private company activities are directly comparable to those of state-owned enterprises in those sectors. This analysis confirms the large disparity in productivity between state-owned companies and better-run foreign and private companies (Exhibit 3.4).

Why do banks continue to give a disproportionate share of funding to state-owned companies? Explicit government-directed lending policies have long since been abandoned, and China's regulators instead have urged banks to make only commercially viable loans. But as we have seen in Chapter 2, numerous problems with skills, incentives, governance, and information often prevent banks from making better lending decisions. These problems are more pronounced in the smaller-city commercial banks and credit cooperatives, whose share of lending is growing.

4 In some sectors in China, foreign and domestic companies do different things and so their operations are not comparable. For example, in the pharmaceuticals industry, foreign players only market and distribute drugs but do not manufacture them, so we cannot compare the capital intensity of foreign and state-owned companies in that sector.

Exhibit 3.4

PRIVATE ENTERPRISE IS MORE PRODUCTIVE THAN SOE, EVEN WITHIN INDUSTRIES



[1] Auto is considered as a comparable sector even if SOEs are not active in the same segment as foreign firms (trucks and cars, respectively). The two industry segments are relatively similar, and a significant difference is observable in productivity growth as well. See China auto case in McKinsey Global Institute's "New Horizons" report for more details.
[2] Gross fixed assets/2x output; net fixed assets not available.
[3] Numbers do not add to 100% due to rounding.
Source: NBS, McKinsey Global Institute analysis

From the banks' perspective, lending to state-owned enterprises is considered a "safe bet," as they are perceived to have an implicit guarantee by the government. Moreover, branch managers sometimes face political pressure from local government leaders to continue to supply SOE funding, because this keeps the largest employers in the area afloat, and it is in the interest of both the local government and the bank itself to protect local jobs. Some of the lending to state-owned enterprises may therefore be best understood as a corporate welfare and job creation scheme.

Private companies and SMEs receive a disproportionately small share of formal financing

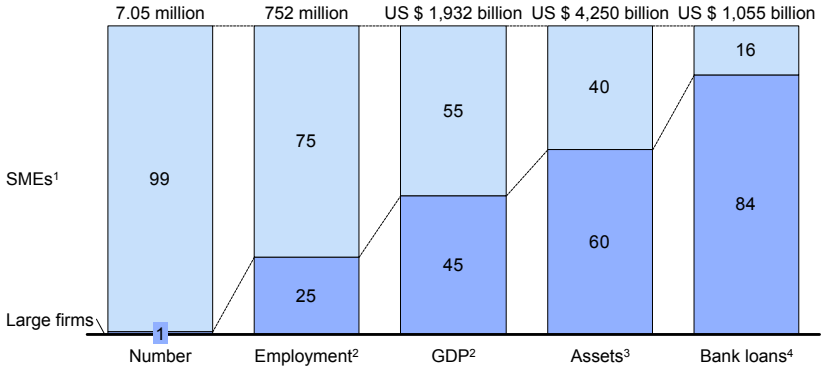
Meanwhile, China's financial system gives a disproportionately small share of funding to the fast-growing private portion of the economy. By our estimates, as we saw in Exhibit 3.1, privately controlled companies (including foreign ones) produce 52 percent of GDP but have received only 27 percent of bank loans outstanding.

Another way to look at funding for the most dynamic parts of China's economy is by company size. Since the mid-1990s, when the government began to privatize or shut down most of the small and medium-sized SOEs, most SMEs are privately controlled. As a group, they are estimated to account for 55 percent of GDP and employ 75 percent of the labor force. But they have received only 16 percent of bank credit outstanding (Exhibit 3.5). This is low even by emerging market standards. In South Korea, for instance, SMEs produce about half of output but have received 42 percent of loans (Exhibit 3.6).

The share of new loans going to private and small companies has clearly grown over time. But the situation is not changing fast enough, and access to capital is the most frequently cited constraint in several surveys of small companies in China.[5] According to the World Bank, 80 percent of SMEs in China report that access to credit is a significant obstacle—more than any other business constraint—and small-company access to bank loans is less than half that reported by companies in India, Thailand, or South Korea.[6]

Exhibit 3.5

SME FINANCING IS CROWDED OUT BY LENDING TO LARGE COMPANIES
Percent



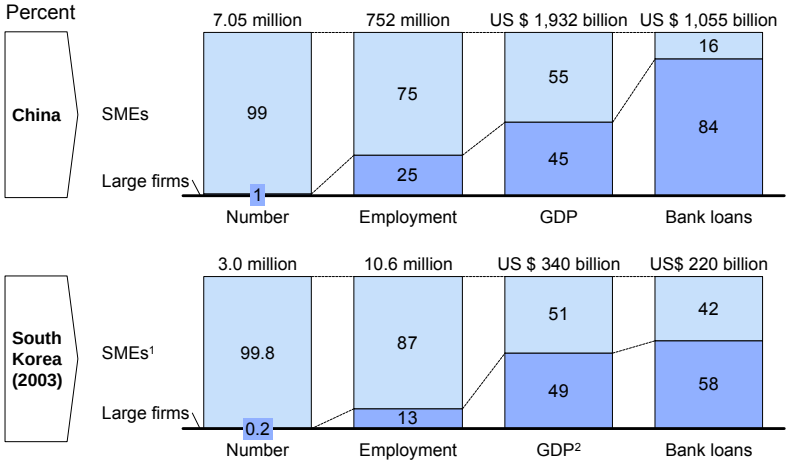
[1] SMEs are defined in China as enterprises with between 8 and 2,000 employees, less than US $50 million assets, and less than US $37 million sales (which varies depending on sector); 80% of SMEs were estimated to be private by Citibank in 2001.
[2] Press Search; Xinhua 2005 estimates.
[3] International Finance Corporation.
[4] Academic paper, Regional Conference on Investment Competitiveness in East Asia, 2005.
Source: World Banks; Press Search, McKinsey Global Institute analysis

5 See, for example, Wang, 2004; OECD, 2005.

6 See International Finance Corporation, 2005; World Bank Investment Climate Assessments.

Exhibit 3.6

SMEs IN CHINA CONTRIBUTE MORE TO GDP THAN IN SOUTH KOREA, BUT GET A SMALLER SHARE OF BANK LOANS



[1] SMEs in South Korea are defined as firms with between 10 and 300 employees, less than U.S. $30 million assets, and less than US $20 million sales (which varies depending on sector).

[2] Estimated from output shares.

Source: Press Search, RCIC paper by Guojun, 2005; IFC; Korea Federation of Small and Medium Business; McKinsey Global Institute analysis

The portion of lending to private companies and SMEs also varies significantly in different regions of the country. It is highest in the coastal regions, where private business is more prevalent. In Guangdong province, for example, the share of new lending to nonstate enterprises reached 65 percent in 2002, the latest year for which data are available.

Banks lend little to private companies and SMEs for the same institutional reasons that they favor lending to large state-owned companies: they often lack the incentives, skills, and information to do so. Although the ceiling on lending rates was removed in 2004, banks are still hesitant to lend to private companies and SMEs because they lack the skills and tools to assess their credit and to price the loans accordingly. Indeed, although lending interest rates have risen slightly since the ceiling was lifted in 2004, there is still little dispersion in lending rates charged by the large commercial banks (see Exhibit 2.13). Banks are particularly hampered by the limited coverage of independent, centralized credit rating agencies that assess the creditworthiness of companies, and by the lack of a consumer credit bureau, which would allow small-business owners to borrow funds directly.

Moreover, some banks are finding that private companies are more likely to default on loans than state-owned ones. This is due in part to the unreliability of the financial reports of private companies, combined with a lax attitude towards the obligation to repay. It is also due to lack of legal enforcement of contracts that impedes banks' ability to collect on loans when borrowers miss payments.

Because they get little external finance, SMEs and private companies must rely on informal lending, retained earnings, and private equity in order to finance their operations, long after their start-up and growth periods when such financing would be appropriate. This skews China's economic growth: the best corporations and entrepreneurs cannot always get the capital they need to grow as fast as they could. Many small-business owners we interviewed indicate that access to capital and connections with banks and regulatory bodies are the keys to success for a small business in China, regardless of operational efficiency.

SMEs use China's large, but high-cost, informal lending market

A large informal lending market has sprouted up in China to fill the gap left by the formal system in providing funding to SMEs. Our interviews with small-business owners in China reveal that most small entrepreneurs finance their operations entirely outside of the formal financial system, using loans from business connections and family and friends, sometimes from overseas. Not only small street vendors or family-run shops use informal lending; even factories with more than 500 employees operate on informal finance. Capital from this market is high cost, however, and many potential borrowers who lack personal connections are excluded.

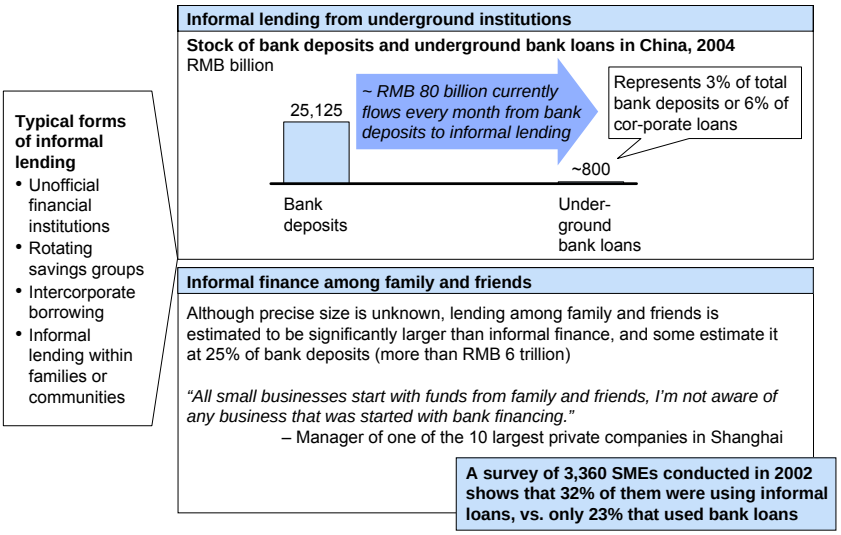
There are two types of informal lending: the first comes from underground lending institutions and the second from family and friends. The latter is more prevalent and often does not carry an interest rate. According to academic experts, it could represent up to a quarter of total bank deposits, or several hundred billion dollars.

Underground lending organizations operate mostly in the coastal regions, where private enterprise is more common. They function like banks, pooling savings from local investors and granting loans to local entrepreneurs at interest rates as high as 15 to 20 percent. They often rely on an intermediary with personal connections to both parties. Despite being in some cases illegal and subject to frequent shutdowns by regulatory authorities, lending from these institutions is estimated by academic experts to be 6 percent of corporate loans or $100

billion (Exhibit 3.7). Because of the high cost of underground financing, the small-business owners we interviewed use it as a last resort, or for bridge financing until they can find cheaper funds. Although this type of informal lending is more institutionalized, it still operates entirely on the basis of personal connections, so many potential borrowers are probably excluded.

Exhibit 3.7

INFORMAL LENDING MARKET IS AS HIGH AS US $100 BILLION



Source: Press Search; Credit Suisse First Boston; CASS; IWP; Beijing Central University of Finance and Economics; McKinsey Global Institute analysis

Personal relationships are the foundation for informal lending, both from underground institutions and among family and friends. Rates of repayment are therefore reported to be very high, because of social pressure and regard for reputation rather than any formal recourse. Because of the general shortage of high-risk and high-return investment options for households, they often participate in informal lending because it represents a relatively attractive savings option.

LACK OF FINANCIAL SERVICES FOR HOUSEHOLDS LOWERS CONSUMPTION

The current structure of China's financial system leaves households with very few options outside of bank deposits in which to invest their money. Personal financial services such as consumer lending, mortgages, and pensions are also at an early stage of development, although these are growing rapidly. The very high level of household bank deposits in China therefore reflects a deficiency in the financial system, rather than a success for the banking sector.

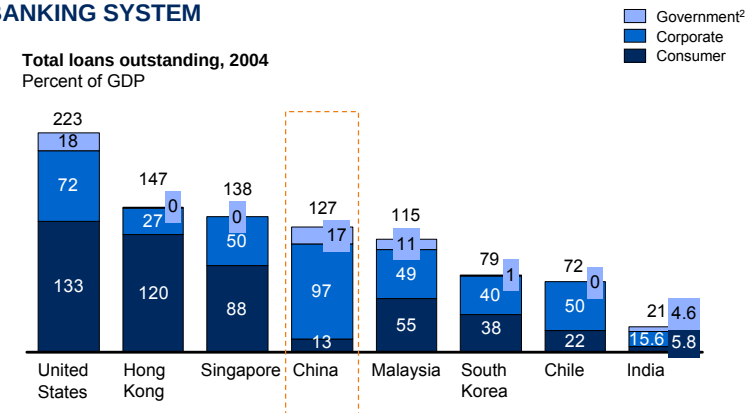
Chinese households lack consumer credit

The emphasis on lending to large corporations has left retail banking in China underdeveloped. With the exception of bank deposits, personal financial services such as investment opportunities, credit, and insurance are available to only a small portion of households in China, mainly affluent ones.

Despite the huge size of China's banking sector, consumer lending remains rudimentary: it makes up only 13 percent of loans outstanding, compared to 38 percent in South Korea (Exhibit 3.8). This is largely because the real estate market is still in early stages of development, so mortgages make up only 11 percent of GDP (compared to 26 percent for South Korea and 81 percent for the United States). The affluent segments of the population have better access to bank loans; a recent consumer survey showed that 11 percent of the wealthiest quintile had loans, compared to just 2 percent of the poorest quintile of the sample.[7] Credit card penetration is also low, at only 2 percent of households, compared to more than 75 percent in the United States.

Exhibit 3.8

CONSUMER LENDING IS NASCENT IN CHINA, DESPITE THE LARGE SIZE OF THE BANKING SYSTEM



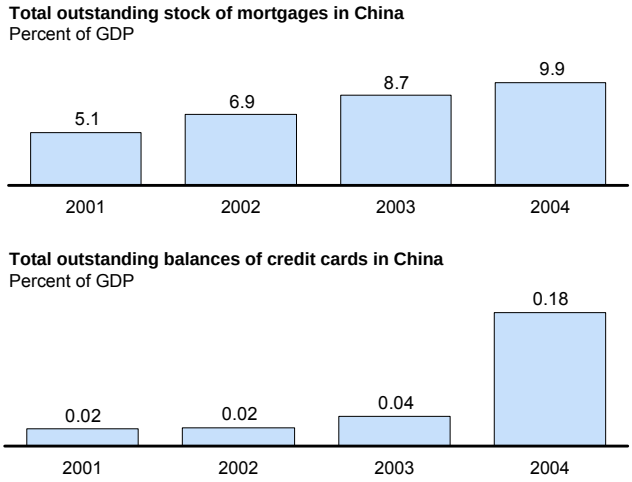
1 2003 data; includes securitized loans and nonbanking institution loans.
2 Includes only government loans; figure would be significantly higher for India if government bonds were considered.
Note: Loan split not available at the commercial bank level for some countries, in which case more general data was normalized to match the commercial loans total.
Source: Local central banks; GFS; EIU; RBI; McKinsey Global Institute analysis

7 McKinsey China Consumer Center Survey, 2005.

But consumer credit is growing fast, due to rapid expansion in both the real estate market and the credit card market (Exhibit 3.9). Though the amount of outstanding mortgages is still small, it has doubled from 2001 to 2004. Balances on credit cards may have been only 0.02 percent of GDP in 2004, but penetration is increasing; it jumped to 75 percent in 2005 from just four million holders the preceding year. However, although credit cards are becoming more widely accepted in China, there is concern over their profitability. Interchange fees are low, and bank deposits are high, which means there may be relatively few cardholders who want to have revolving balances—the most lucrative segment for credit card companies. Only 14 percent of credit card holders in China are "revolvers," as opposed to 52 percent in the United States.

Exhibit 3.9

MORTGAGE AND CREDIT CARD MARKETS ARE GROWING



Source: China Statistic Yearbook (A Development Report on China's Bankcard Industry), Lit-search; McKinsey China Insurance white paper; McKinsey Global Institute analysis

Households also lack diversified savings options

In addition to finding it hard to procure credit, Chinese households are also deprived of diversified investment options because financial intermediaries are so scarce in the financial system. To illustrate, life insurance assets amount to only 4 percent of GDP, compared to 33 percent in the United States and 19 percent in South Korea. Although the public health insurance system does not provide adequate coverage for health services, health insurance penetration is even lower than that of life insurance: only 3 percent of Chinese households buy

private health insurance compared to 60 percent of US households. Retirement investment options are equally scarce: pension funds are just 1 percent of GDP, compared to 66 percent in the United States and 3 percent in South Korea. Mutual funds are also underdeveloped at just 1 percent of GDP, compared to 61 percent in the United States and 20 percent in South Korea.

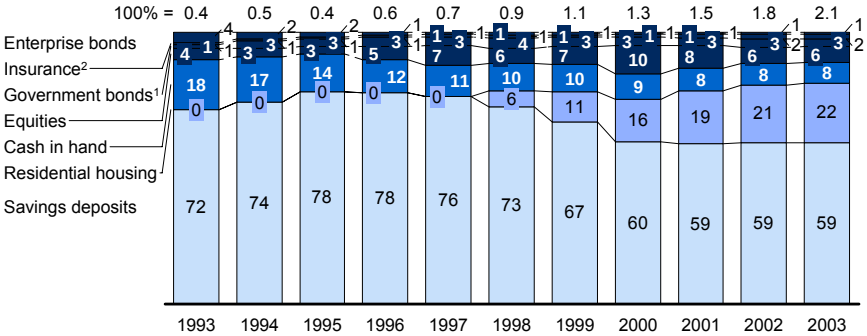
Given the lack of other investment opportunities, it is small wonder, then, that Chinese households choose to save so much in low-yielding bank deposits. Over 80 percent of total household financial assets are kept in cash, bank deposits, and savings accounts, which generally provide poor returns (Exhibit 3.10). But Chinese households' choice of bank deposits as their favored savings vehicle is entirely rational, given the risk-return profile of alternative assets available to them (Exhibit 3.11). Equities have performed only slightly better than bank deposits over the 1995–2005 period (and far worse since 2000) and have proved a lot riskier. The government bonds with regulated returns that are accessible to households are only marginally better investments than bank deposits. Only real estate and private lending have performed notably better than bank deposits over the 1995–2005 period. But both require significant investments, and private lending depends on good informal connections. Investing in international equity, which would have been a very good option for Chinese households over the 1995–2005 period, is closed to them because of restrictions on capital flows.

Exhibit 3.10

HOUSEHOLD WEALTH IS CONCENTRATED IN SAVINGS DEPOSITS

Distribution of Chinese household wealth

Percent, US $ trillions



Note: Numbers may not add to 100 percent due to rounding

[1] Government bonds include treasury bills, treasury bonds, state construction bonds, key state construction bonds, special bonds, index linked bonds, and special purchase bonds. The value here represents the year end outstanding bond value.

[2] Insurance includes insurance premiums of life, health, and personal accident.

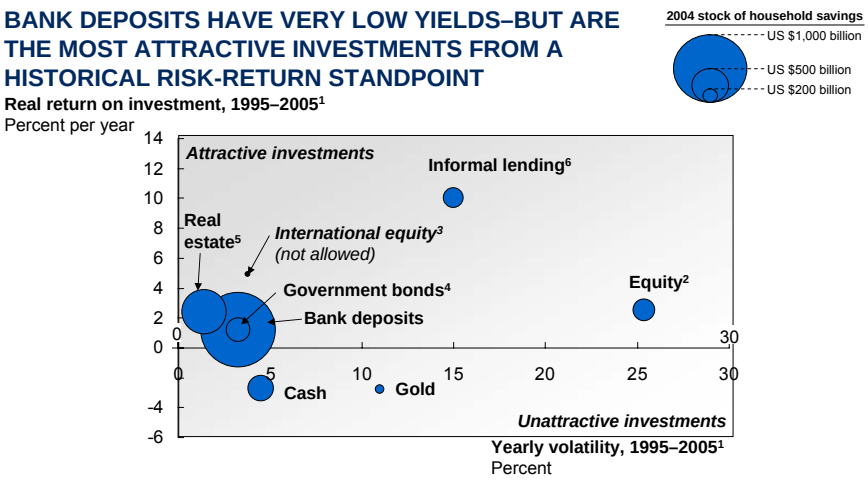
[3] Based on academic research estimates.

Source: Economist Intelligent Unit; Nichalas Lardy (1998). *China's Unfinished Economic Revolution*, p. 132; Almanac of China's Finance and Banking, 2001; Caijing (Finance), March 5, 2002, p. 31; China's Insurance Regulatory Commission (CIRC); *China Insurance News*, February 28, 2002, p.3; Monetary Policy Implementation Report, 1H 2002, PBOC, August 2, 2002; "China Urban Household Assets Survey Report", State Statistics Bureau, September 27, 2002, Shanghai Securities Post China Statistics Abstract 2004; Press Search; McKinsey Global Institute analysis

Exhibit 3.11

BANK DEPOSITS HAVE VERY LOW YIELDS–BUT ARE THE MOST ATTRACTIVE INVESTMENTS FROM A HISTORICAL RISK-RETURN STANDPOINT

Real return on investment, 1995–2005[1]



[1] Except for real estate (1998–2005) and private lending (best estimate based on newspaper articles, varies by region).
[2] Shanghai Stock Exchange Composite Index.
[3] S&P 500.
[4] Government bonds made available to households have the same return as bank deposits (bonds on the interbank market have a better yield).
[5] Based on official countrywide figures, may be higher in some regions.
[6] Estimate for private financial institutions, based on academic research and interviews with small and medium size business owners close to the informal lending market.

Source: DataInsight; DataStream; Global Insight; Bloomberg; Press Search; McKinsey Global Institute analysis

Households' understanding of the worth of different savings vehicles matches their historical performance. A survey on personal financial products in China conducted by McKinsey in 2004 shows that households perceive life insurance and savings accounts as providing a better return than bonds, mutual funds, and equity (Exhibit 3.12), which they also perceive as significantly more risky.

Lack of financial services contributes to higher household savings rate

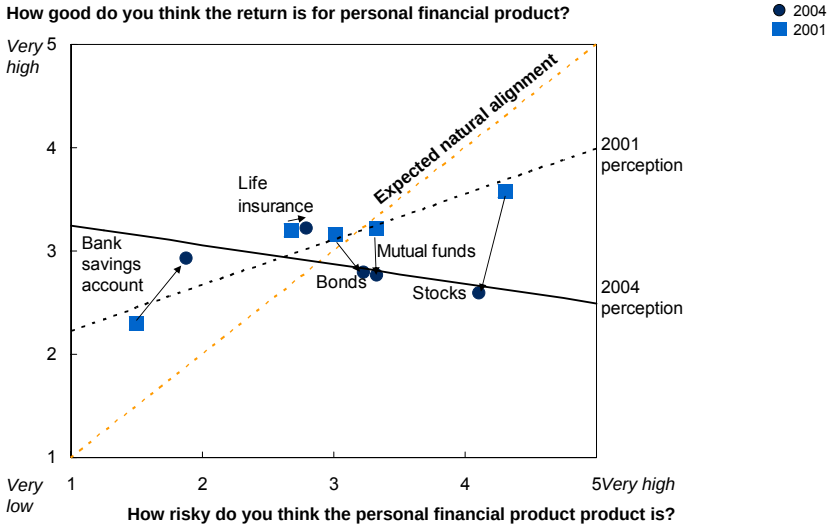
The lack of basic household financial services in China contributes to the country's very high savings rate. Chinese households save roughly 24 percent of their disposable income, a higher rate than most other countries (Exhibit 3.13).

Why do Chinese households save so much? Academic research has shown that the country's fast growth and its demographic profile are two important factors (Exhibit 3.14).[8] A large proportion of the Chinese population is of working age, the years of highest saving. And as incomes rise with rapid economic growth, the relative value of past savings decreases, and households choose to save more out of their current income.

8 See Cao and Modigliani, 2004

Exhibit 3.12

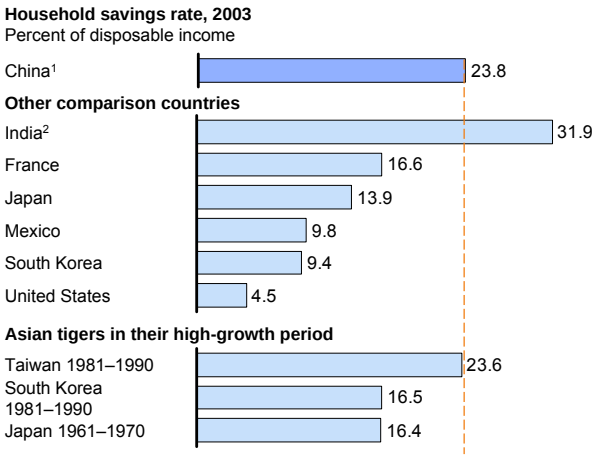
CHINESE CONSUMERS' RISK-RETURN PERCEPTION IS INVERTED, BUT COHERENT WITH THEIR HISTORICAL PERFORMANCE



Source: Personal Financial Services Surveys; McKinsey Global Institute analysis

Exhibit 3.13

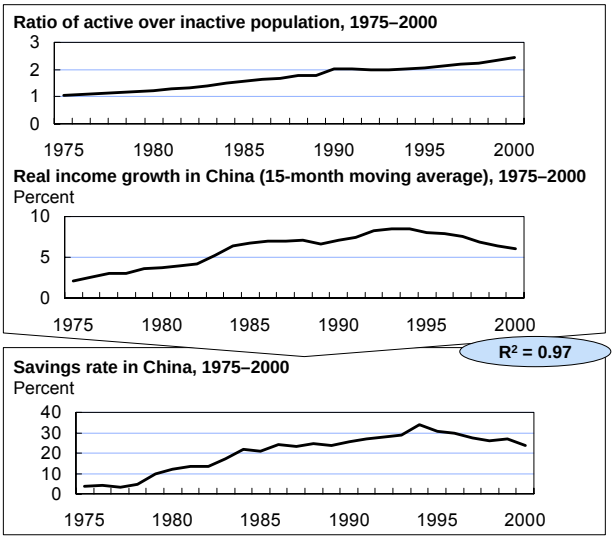
CHINA'S HOUSEHOLD SAVINGS RATE IS HIGH RELATIVE TO MOST COUNTRIES, BUT CLOSE TO OTHER ASIAN TIGERS IN THEIR HIGH GROWTH PERIOD



[1] Estimate, based on official figures prior to GDP restatement, adjusted with the assumption that household disposable income increased by the same amount as household consumption as a result of the restatement.
[2] Believed to be overstated, as many SMEs are accounted as households.
Source: Local central banks; China National Bureau of Statistics; World Bank; OECD; McKinsey Global Institute analysis

Exhibit 3.14

ACADEMIC RESEARCH SHOWS THAT CHINA'S HOUSEHOLD SAVINGS RATE IS LARGELY DUE TO ECONOMIC GROWTH AND DEMOGRAPHICS



- Academic research has shown that China's high household savings rate has been driven mostly by strong economic growth and favorable demographics
- These 2 factors are believed to explain a large part of the historical household savings rate fluctuations

Source: Franco Modigliani, *Journal of Economic Literature*, March 2004, volume; Federal Research Division of the Library of Congress; McKinsey Global Institute analysis

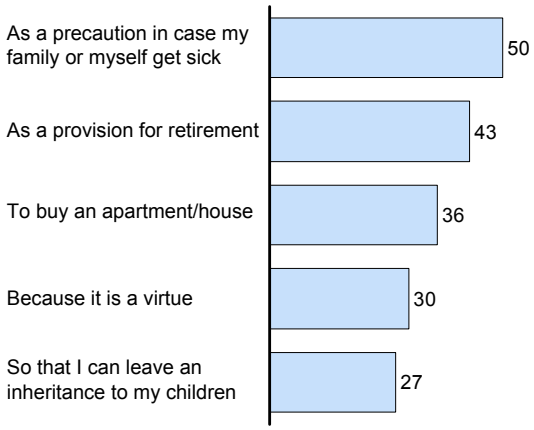
Household-level data show that the precautionary motive for saving is also very strong in China, possibly because there are so few consumer financial products available. A survey of 6,000 Chinese households conducted by McKinsey's Chinese Consumer Center found that "precaution in case a family member gets sick" and "provision for retirement" are the two main motivations for savings (Exhibit 3.15). These findings suggest that if life and medical insurance and pension products were more widely available, then the savings rate might go down and consumption increase. However, a closer analysis of savings patterns in China shows that households with life or health insurance do not save less than household that are not covered, even after adjusting for income groups (Exhibit 3.16).

The main way that China's current financial system contributes to a higher household savings rate is by providing very low returns on the financial assets available to households. This means that households have to save more out of current income to accumulate wealth than they would if higher-yielding financial products were readily available. Over the past ten years, based on the currently available asset mix, the weighted average real return on total wealth for Chinese households has been 1.3 percent, compared with 3.0 percent in the United States (Exhibit 3.17). With a much slower pace of wealth appreciation, Chinese

Exhibit 3.15

PRECAUTIONARY SAVING MOTIVE IS ALSO STRONG IN CHINA

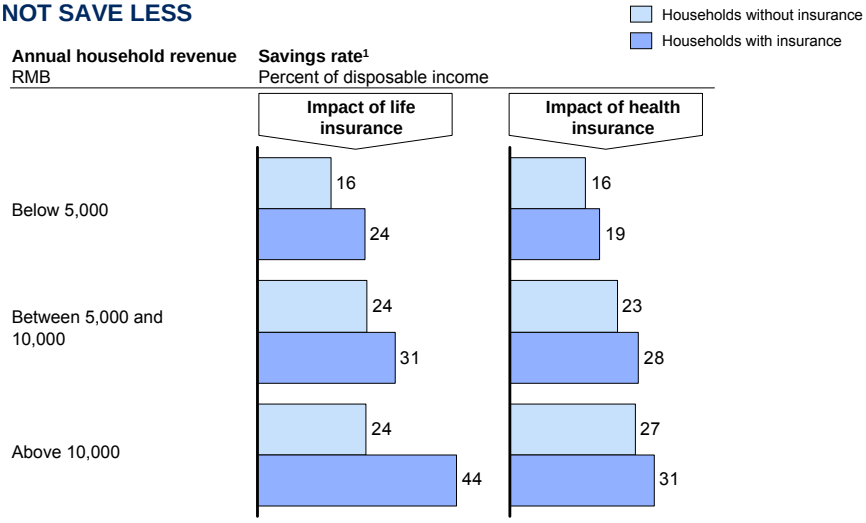
Reasons for saving, 2004
Percent of respondents; N = 6,000



Source: McKinsey China Consumer Center, September 2005; McKinsey Global Institute analysis

Exhibit 3.16

BUT CHINESE HOUSEHOLDS WITH LIFE OR HEALTH INSURANCE DO NOT SAVE LESS



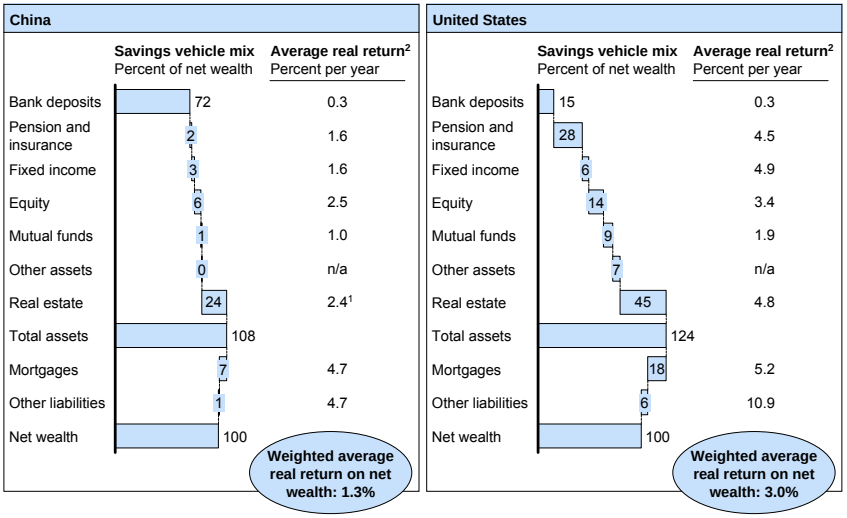
[1] Declared savings rate based on a survey of 6,000 Chinese households; 7% of the households in the sample have life insurance, and 22% of the households in the sample have health insurance.

Source: McKinsey China Consumer Center Survey; McKinsey Global Institute analysis

households need to save more each year to reach the same level of wealth at retirement as US households at comparable income levels. (And higher rates of return for US households are one reason why their savings rate is so low).

Exhibit 3.17

REAL RETURN ON HOUSEHOLD WEALTH IN CHINA IS LOW



[1] Official number, actual returns may be higher in some areas.
[2] Some numbers are estimates.
Source: PBOC; US Federal Reserve; McKinsey Global Institute analysis

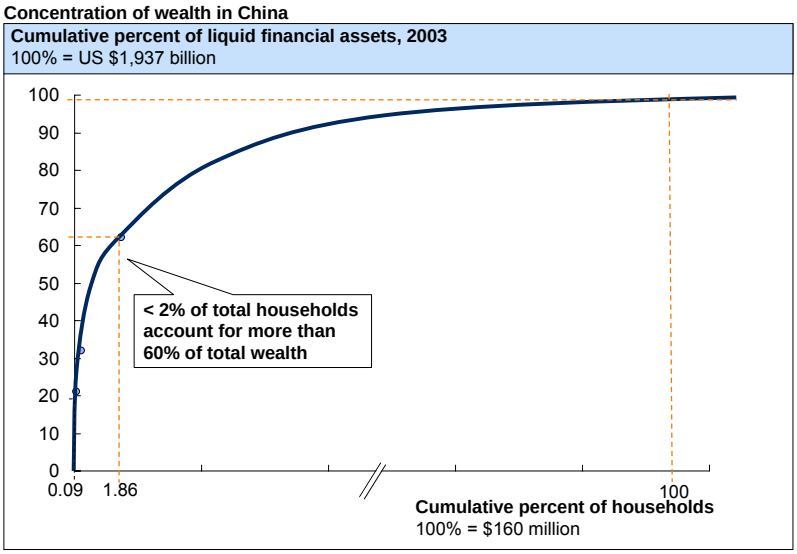
The uneven distribution of wealth and income in China also contributes to the high savings rate. In 2003, fewer than 2 percent of the households in China accounted for 60 percent of the stock of liquid financial household assets (Exhibit 3.18). The wealth gap continues to widen and income disparities, as measured by the Gini index,[9] have been greater than in the United States since 1999 (Exhibit 3.19). But academic research has shown that higher-income households save at a higher rate in the United States.[10] A McKinsey survey of consumers in China shows the same is true of Chinese households: the top quintile saves 30 percent of their income, compared to 20 percent for the lowest quintile (Exhibit 3.20). A few very wealthy households are able to save a large percentage of their large disposable incomes, which pushes up total savings, even though the majority of households save a far lower percentage of their incomes.

9 The Gini index measures inequality over the entire distribution of income or consumption. It is the Gini coefficient expressed in percentage terms. A value of 0 represents perfect equality, where everyone has the same income. A value of 100 represents perfect inequality, in which one person has all the income and everyone else has none.

10 See Dynan, Skinner, and Zeldes, 2000.

Exhibit 3.18

CONSUMER WEALTH IS HIGHLY CONCENTRATED IN CHINA

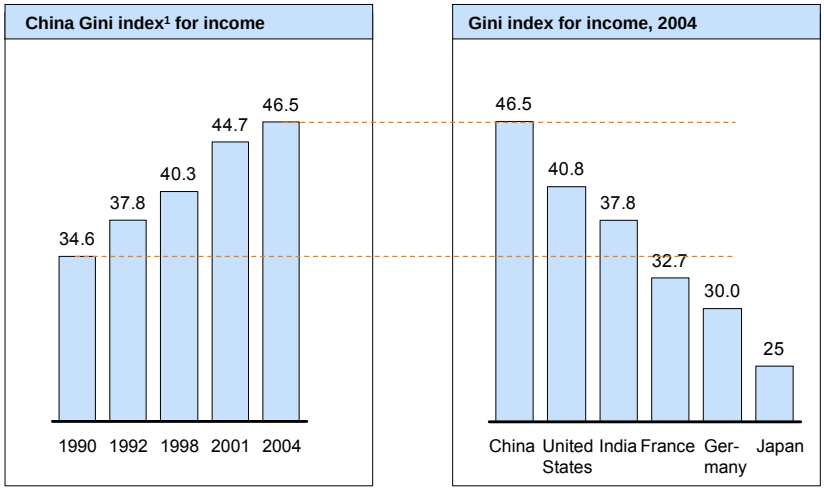


Note: In the United States, top 12% of the households own 83% of total liquid financial assets; in Hong Kong, top 11% of the household own 78% of total liquid financial assets; in the United Kingdom, top 5% of the households own 71% of total liquid financial assets.

Source: Datamonitor; BCG Global Wealth Report 2003; McKinsey Global Institute analysis

Exhibit 3.19

CHINA'S INCOME CONCENTRATION IS RISING FAST AND IS ALREADY ABOVE THE US LEVEL



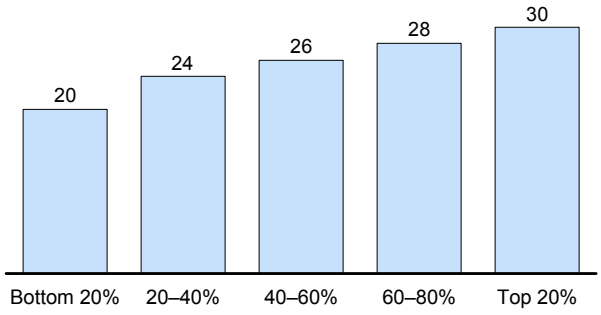
[1] The Gini index measures inequality over the entire distribution of income or consumption. A value of 0 represents perfect equality, and a value of 100 perfect inequality.

Source: World Bank; Human development report; CIA World Factbook

Exhibit 3.20

WEALTHIER HOUSEHOLDS HAVE A HIGHER SAVINGS RATE IN CHINA

Declared household savings rate by income percentile[1]
Percent of disposable income



[1] Average answer to the question, "What percentage of your income do you save every month?" asked in a survey of 6,000 Chinese households conducted in 2005 by McKinsey's China Consumer Center.

Source: McKinsey China Consumer Center; McKinsey Global Institute analysis

RESULT IS INVESTMENT-DRIVEN GROWTH AND LOW CONSUMPTION

The disproportionately large flow of funding to the less productive state-controlled enterprises has biased China's growth toward investment rather than consumption. It has decreased the efficiency of investment and has effectively lowered consumption and living standards for Chinese people today. It does not bode well for China's future that the financial system backs weaker players in the economy rather than the strongest, particularly as China opens its doors further to foreign competitors.

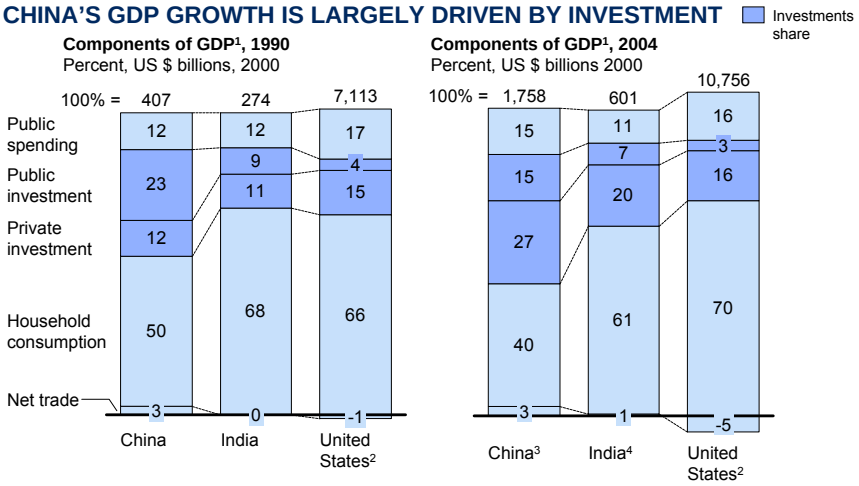
China's growth is increasingly fueled by using more inputs, rather than getting as much output as possible from existing inputs. Investment as a share of GDP growth in China is very high. Public and private sector investments represent 42 percent of GDP in 2004, compared to 23 percent in India and 19 percent in the United States (Exhibit 3.21).

A high level of investment has led to an increase in capital intensity of China's economy (Exhibit 3.22). Although rising capital intensity is often seen by economists as a desirable and necessary step in economic development, China's case is extreme. Very few countries at any time in history have reached a point where gross national investment reached nearly 50 percent of output. Since

1983, the growth of China's real capital stock has consistently been higher, year over year, than real GDP growth.

Exhibit 3.21

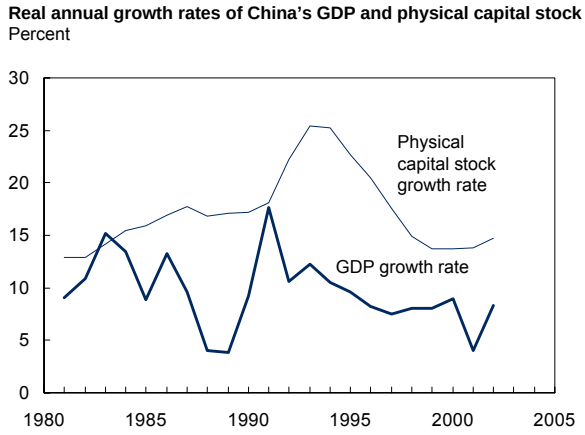
CHINA'S GDP GROWTH IS LARGELY DRIVEN BY INVESTMENT



[1] Total corresponds to GDP by income approach although breakdown is derived from expenditure-based GDP calculation
[2] Shares are based on nominal GDP due to nonadditivity of real chain weighted aggregates.
[3] Reflects recently restated GDP. Split between private and public investments is not known for the restated GDP figured, we assumed the same split as for the original figures.
[4] India data is based on fiscal years (e.g., 1990 is the fiscal year from April 1990 to March 1991).
Note: Numbers may not add due to rounding
Source: China Statistical Yearbook; CSO India; BEA US

Exhibit 3.22

CHINA'S PHYSICAL CAPITAL STOCK HAS GROWN FASTER THAN GDP FOR THE PAST 20 YEARS



Note: China does not publish net capital stock figures; the growth rate has been estimated based on detailed statistical data prior to recent GDP restatement.
Source: China Statistical Yearbook 2005; World Bank; Ezaki & Sun (1999); McKinsey analysis

MGI's past research in Japan, South Korea, and other countries around the world has shown that an input-led growth model will inevitably reach its limits. China's investment is already increasingly inefficient at generating growth. In the first half of the 1990s, China needed only $3.30 of investments to support $1.00 of GDP growth. Since 2001, it has had to invest $4.90 to produce $1.00 of GDP growth. For the same new dollar of GDP growth, India needs only $4.10 in investments, while Japan and South Korea needed $3.50 and $3.70 of investment, respectively, during their periods of rapid growth (Exhibit 3.23).

Exhibit 3.23

THE EFFICIENCY OF CHINA'S INVESTMENT IS DECLINING

	Years	Incremental capital-output ratio[3]	Investment ratio Percent of GDP	Annual GDP growth Percent
China[1]	1991–1995	3.3	40.0	12.0
	1996–2000	4.6	37.8	8.3
	2001–2003	4.9	41.2	8.4
India	1995–2004[2]	4.1	21.2	5.6
Japan	1961–1970	3.5	36.2	10.5
South Korea	1981–1990	3.7	32.0	8.7

[1] Based on figures prior to recent GDP restatement, as investment data has not been restated for years prior to 2004

[2] Fiscal years, finishing in March of the following year.

[3] Measures the investment required to produce $1 of additional GDP; see Technical Notes at the end of the report for more detail on the calculation.

Source: World Bank 2004 World Development Indicators; PBOC, Reserve Bank of India, McKinsey Global Institute analysis

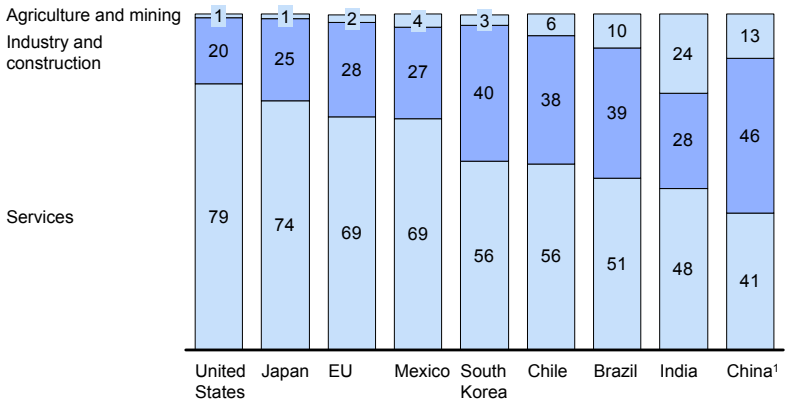
The corollary of high investment is low current consumption. In China, household consumption as a share of GDP has fallen. It represented just 40 percent of GDP in 2004, compared to 65 percent and 70 percent for India and the United States, respectively. In absolute terms, this means that India's household consumption is about 60 percent of China's—even though China's GDP is nearly three times as large. Chinese households today, as we saw earlier, are sacrificing current consumption for future consumption, in the form of high domestic savings to protect them in their old age. But these savings misallocated to poorly performing businesses but they are generating a progressively lower output for each yuan invested.

The skewed allocation of capital in China toward large state-owned companies has also favored growth toward the manufacturing sector rather than domestic service industries (apart from services such as telecom and power, where very large state-owned players are dominant). China has one of the highest shares of manufacturing in GDP in the world, even after the recent restatement of GDP (Exhibit 3.24). But China would develop its domestic service sector, which is dominated by the small and medium-sized enterprises that lack access to capital. Service sectors are the engines of sustainable economic growth in most economies; even China has lost an estimated 15 million manufacturing jobs over the past ten years on a net basis.[11] Moreover, service jobs are spread more evenly across the population than manufacturing operations, which require scale in particular locations and access to world markets. In China, manufacturing is concentrated in the export zones and coastal areas. Service industries are also more labor intensive, so every investment in services creates more jobs than the same sum invested in manufacturing. Financial system reform that improves the allocation of capital toward smaller private companies, particularly in services, could thus help promote employment, particularly in inland regions and rural areas.

Exhibit 3.24

CHINA'S ECONOMY IS WEIGHTED TOWARDS MANUFACTURING AND CONSTRUCTION

Contribution to national GDP by sector, 2004
Percent of GDP



1 Reflects recently restated GDP figures, assuming all of the increase is attributable to services.
Note: Numbers may not add up to 100 percent due to rounding.
Source: CIA World Factbook; National Statistics Bureau; McKinsey Global Institute analysis

11 MGI's *Domestic Services: The Hidden Key to Growth*, available at www.mckinsey.com/mgi/. For manufacturing job loss figures, see the Conference Board report by McGuckin et al., 2004.

CONCLUSION

Despite significant reforms, partial interest rate liberalization, and the ending of directed lending policies, China's financial system continues to channel capital mainly to state-controlled enterprises, which have very low productivity as a group. The smaller private enterprises in China often lack funding to grow, even though they are much more efficient with the capital they do raise. Chinese households, too, lack all but the most basic financial services and see very low returns on their wealth. This skewed allocation of capital has several detrimental effects on the structure of China's economy: it lowers overall productivity, requiring increasingly more inputs to sustain growth; and it represses domestic consumer demand, instead relying on investment and exports to drive growth. Going forward, China would benefit from raising productivity levels, not simply using more inputs. Financial system reform can contribute to this by changing the allocation of capital.

4. The Value of Financial System Reform

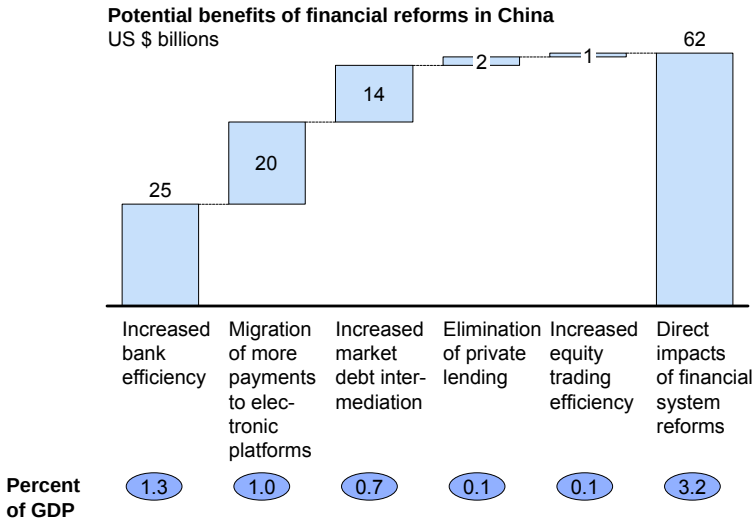
Addressing the shortcomings in China's financial system could create enormous value for China's economy. One way is by reducing the cost of financial system inefficiencies. Channeling funds from savers to borrowers has a cost in every financial system, but this cost is much higher than it needs to be in China because of the performance gaps described in Chapter 2. Reforms to improve banking efficiency, move the paper-based payments system to an electronic one, and diversify the mix of financing vehicles available to companies could save $62 billion per year (Exhibit 4.1). This is nearly equal to the amount of foreign direct investment that China receives each year, or 3.2 percent of GDP. These savings would accrue to Chinese households, in the form of higher returns on savings, and Chinese companies, in the form of a lower cost of capital.

An even larger benefit to China's economy would come from improving the allocation of capital. As we saw in Chapter 3, China's financial system channels a disproportionatly large share of funds to state-owned enterprises that, on average, have very low productivity. Reforms that enabled a larger share of funding to go to the more productive private enterprises would, over time, increase investment efficiency and raise GDP by up to $259 billion per year, or 13 percent. This would improve the financial performance of China's businesses and raise the very low returns earned on financial assets today by Chinese savers. While such reforms would result in job loss in the state-owned enterprises that failed to improve their operations, many new jobs would be created in private enterprises. Net job loss, at least in the medium to long term, is likely to be negligible. China has already experienced this dynamic in its auto industry, where restructuring has shed jobs but net employment has increased. Moreover, the additional GDP would raise tax revenues, even without increasing tax rates, for the government to fund job retraining and other social programs to help displaced workers develop needed skills.

Further financial system reforms thus present an important opportunity for raising the efficiency of China's economy and improving the wealth and living standards of its people.

Exhibit 4.1

REDUCING FINANCIAL SYSTEM INEFFICIENCIES WOULD SAVE $62 BILLION ANNUALLY



Source: McKinsey Global Institute analysis

REDUCING INEFFICIENCIES WOULD SAVE $62 BILLION ANNUALLY

The inefficiencies of China's banks, payments system, bond markets, and equity markets significantly increase the cost of financial intermediation in China's economy. To cover these costs, China's financial intermediaries must offer lower returns to savers, or raise the rates charged to borrowers, or both. Reforms to improve the efficiency of the financial sector would reduce these costs, enabling it to provide the same services and functions as today, but at a lower price. This is clearly a no-regrets move for China.

We calculate that increasing the efficiency of China's financial system would save $62 billion annually. Of this, $25 billion comes from improvements in bank operations, $20 billion comes from speeding the development of the payments system, $14 billion comes from improving the mix of corporate bonds and bank loans used by companies, $2 billion comes from replacing the high-cost informal lending used by small companies with more efficient formal banking services,

and $1 billion comes from the development of a more efficient and competitive equities trading system. These gains would go to users of China's financial system: households, companies, and in the case of the payments system, financial institutions themselves.

Improving banking system efficiency would save $25 billion annually

The main source of banks' revenue, particularly in China, where fee-based income is low, is their net interest margin, or the difference between the interest rates that banks charge borrowers and pay to depositors.[1] With a spread of 3.3 percentage points between the average borrowing and lending rates, China's banking system appears to be about as efficient as banks in more mature financial systems.[2] The average net interest margin for our benchmark countries—the United States, South Korea, Malaysia, Singapore, and Chile—is 3.1 percent.

Chinese banks, however, have also needed roughly $215 billion[3] from the government to recapitalize their balance sheets since the late 1990s. Adding these funds (but amortizing the cost over ten years) to their net interest margin raises the true cost of intermediation in China's banking sector to 4.5 percent. This means that Chinese banks require $25 billion more each year in revenue than banks would in our benchmark countries to do the same amount of lending (Exhibit 4.2). Reforms to raise the efficiency of China's banking operations to the benchmark would eliminate this added cost. This savings would accrue mostly to Chinese depositors, which include both households and corporations, who receive negligible interest rates on bank deposits and savings accounts. (In Chapter 3, we saw that banks charge low interest rates on corporate loans, so these inefficiencies affect borrowers less.)

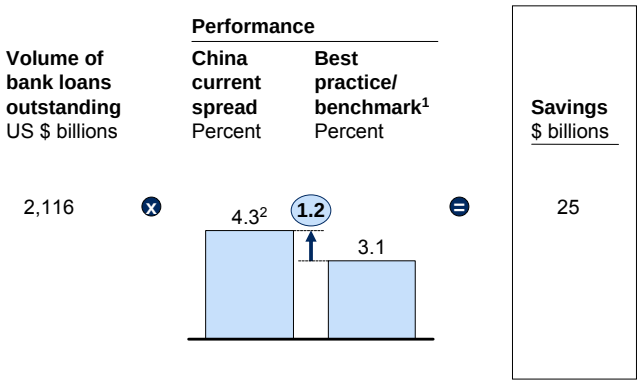
1 As an indicator of operating costs, the net interest margin is sometimes criticized because banks also earn money from fee-based businesses, such as ATMs, credit cards, and advisory businesses, and these might allow them to subsidize lending operations. In China, however, banks have very little fee-based businesses, as shown in Chapter 2.

2 See Technical Notes at the end of this report for more detail on the data we used and on alternative methodologies.

3 Includes $105 billion in direct recapitalization of the top four banks since 1998, plus $110 billion, the amount S&P estimates the government will need to inject in ABC prior to an IPO.

Exhibit 4.2

IMPROVING BANKING EFFICIENCY WOULD SAVE $25 BILLION ANNUALLY



[1] Average for United States, South Korea, Malaysia, Singapore and Chile (except for corporate bonds, where Moody's default rate is used).
[2] Cost of intermediation estimated as lending rate–borrowing rate (3.3% spread) + government funds injected in the banking system/loan balance ($105 billion in direct recapitalization since 1998 plus $110 billion to come for Agricultural Bank of China based on S&P estimates, together representing 1.0% of loan balance assuming financial problems were built over a 10-year period). This figure is conservative as it does not account for the losses incurred by the asset management companies in the NPL disposal.

Source: GFS; S&P; Moody's; EIU; McKinsey Global Institute analysis

Improving the payments system would save $20 billion annually

As discussed in Chapter 2, China's payment system is still heavily paper based for both wholesale and retail transactions. The reason is the slow adoption of electronic payments by consumers and retailers, and the reluctance of many bank branches to build links to CNAPS. However, the benefits to the broader economy of moving to electronic payments would be significant. We estimate that speeding the adoption of electronic payments would result in $20 billion of savings each year (Exhibit 4.3). This clearly justifies the introduction of some forms of incentives to both banks and retail stores to accelerate the modernization of China's payment system.

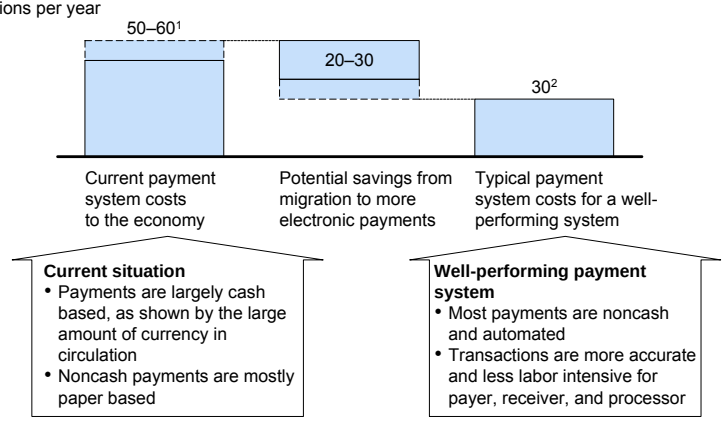
Developing a corporate bond market would save $14 billion annually

Lack of a healthy corporate bond market forces Chinese corporations to seek most debt funding from banks instead of bond markets. But this raises the cost of financial intermediation for companies, because banks are a more high-touch, expensive source of capital. (Chinese banks provide low-cost loans, but only because of regulated deposit rates that preserve their margins while enabling them to give low-cost funds. But this regulation is set to be gradually lifted in 2008 and 2010.)

Exhibit 4.3

IMPROVING THE PAYMENTS SYSTEM WOULD SAVE $20 BILLION ANNUALLY

US $ billions per year



[1] Academics estimate the cost of a heavily cash-based and paper-based payment system at 2.5%–3.0% of GDP, which puts it at $50 billion–60 billion per year for China. This cost takes into consideration higher labor intensity from all parties involved as well as greater error rate.
[2] Academics estimate the cost a well-functioning payment system where most transactions are electronic at approximately 1% of GDP; 1.5% was assumed as a conservative estimate, given the highly decentralized footprint of China's electronic payment system (represents $30 billion per year for China).

Source: Humphrey, Pulley, Vesala (2001); Humphrey (1996); Humphrey, Kim, Vale (2000); McKinsey Global Institute analysis

In our benchmark countries[4], bonds account for roughly 47 percent of all debt financing in the economy, while bank loans account for 53 percent (Exhibit 4.4). In China, bonds account for only 1 percent of debt, informal loans account for about 4 percent, and bank loans account for 95 percent. Shifting the mix of corporate debt funding to what we observe in the benchmark countries would save $14 billion annually for Chinese companies.

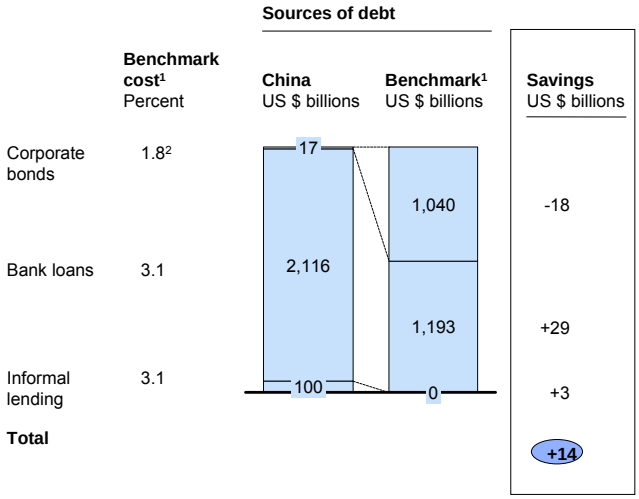
Replacing informal lending with formal banking services would save $2 billion annually

The very large informal lending market in China that funds most small and private businesses also contributes to a higher-than-necessary cost of intermediation. Based on interviews, we estimate that the difference between the lending and borrowing rates for informal lending in China is around 5 percentage points—not much higher than China's formal banking system, once the government capital injections are taken into account. This is surprising because informal lending, which lacks scale, technology, legal contracting, and so forth, should be a higher-cost form of intermediation. However, our interviews show that although informal

4 United States, South Korea, Singapore, Malaysia, Chile.

Exhibit 4.4

DEVELOPING A HEALTHY CORPORATE BOND MARKET WOULD SAVE $14 BILLION ANNUALLY



[1] Average for United States, South Korea, Malaysia, Singapore and Chile.
[2] Worldwide Moody's default rate.
Source: GFS; S&P; EIU; Moody's; McKinsey Global Institute analysis

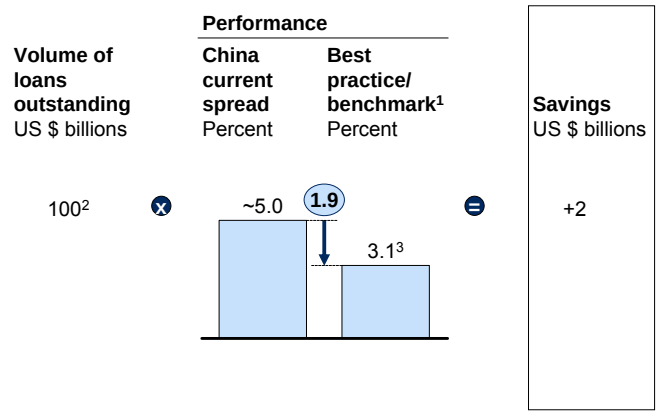
lending does incur high administrative costs for all the reasons listed, repayment rates on informal loans are very high because loans are made on the basis of personal connections. Moreover, as discussed previously, China's banking system operations are very inefficient. Reducing the use of informal finance by increasing credit for SMEs and private companies from formal banks operating at the efficiency of benchmark countries would save $2 billion in intermediation costs each year (Exhibit 4.5). This would accrue mainly to SMEs and private companies through lower interest charges on loans.

Improving equity market would save $1.4 billion, and bond market inefficiencies are negligible

In China's equity market, we know that there are several inefficiencies that raise the cost of intermediation. It suffers from poor selection of companies for IPO and inadequate supervision and oversight of listed companies. These problems are compounded by the sometimes-unreliable financial information released by listed companies. Being aware of these problems, investors would normally demand a higher risk premium than they would on a more efficient stock exchange, although we cannot measure this. One way we can measure the

Exhibit 4.5

REPLACING INFORMAL LENDING WITH FORMAL BANK FINANCE WOULD SAVE $2 BILLION ANNUALLY



[1] Average for United States, South Korea, Malaysia, Singapore, Chile. (except for corporate bonds, where Moody's default rate is used).
[2] Cost of intermediation estimated as default rate between 1990 and 2003; benchmark estimated at the level of bank intermediation.
[3] Estimated at the level of bank intermediation for benchmark countries, as private lending is not a desirable form of intermediation.

Source: GFS; S&P; Moody's; EIU; McKinsey Global Institute analysis

cost of equity market intermediation is through commissions on trades. In our benchmark countries, these average around 17 basis points. On the Shanghai Stock Exchange, commissions average 50 basis points. Given China's current market capitalization and volume of trading, higher commissions cost investors about $1.4 billion annually.

In the bond market, the cost of intermediation can be seen in the commissions charged by dealers plus the bond default rate (see Technical Notes for more detail). In China, it is difficult to get data on commissions because so few corporate bonds are issued and none have secondary trading. The corporate bond default rate is very low because the government clamped down on bond issues after a string of corporate defaults in the 1980s. Today, only a small number of SOEs have issued bonds. The current default rate is therefore only 1.2 percent, the same as in our benchmark countries. China's bond market does not appear to have high intermediation costs. However, the stringent and cumbersome issuance process discussed in Chapter 2 does carry the significant costs discussed earlier of stifling the market's development.

IMPROVING ALLOCATION OF CAPITAL COULD RAISE GDP BY UP TO $259 BILLION ANNUALLY

China's financial system gives state-owned companies better access to funds than more efficient, private enterprises. But China's state-owned enterprises, as a group, are far less productive than private companies. As discussed in Chapter 3, a joint analysis by the OECD and National Bureau of Statistics found that the total factor productivity of private companies, after taking into account company size, location, and industry, is twice as high as that found in majority state-owned companies.[5] MGI analysis finds a similarly large disparity in productivity between SOEs and better-run foreign and private companies within industries (see Exhibits 3.3 and 3.4). Thus, the poor allocation of funding lowers China's overall productivity and promotes wasteful investment.

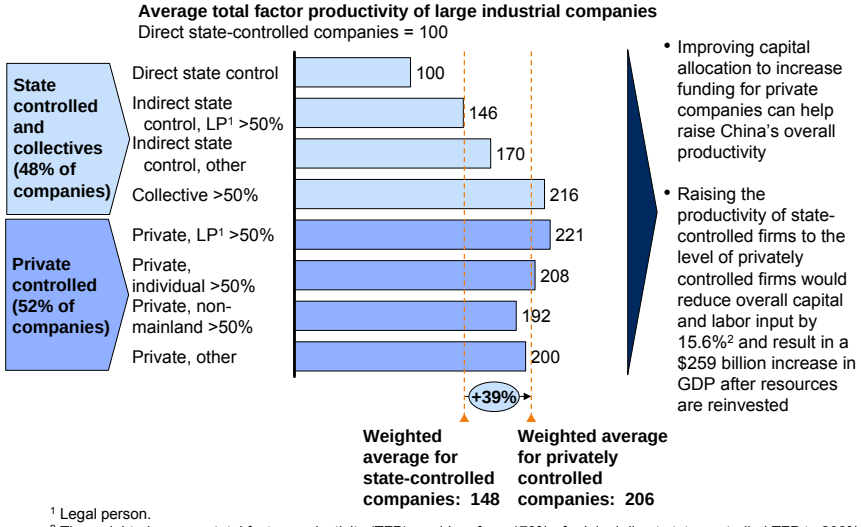
Financial system reforms that channeled a larger portion of funding to privately controlled companies would raise China's overall productivity in several ways. First, more efficient private companies would get the funding they need to grow faster and at lower cost than the informal lending market on which they now rely. Second, less-efficient SOEs would either have to improve their operations, so they could continue to attract funding from the financial system, or shut down. In addition, equity market reforms could improve the performance of state-owned companies by enabling them to privatize and by promoting better governance and more shareholder oversight.

Improving the financial system's allocation of capital, along with continued restructuring of SOEs and product market liberalization, can therefore raise the productivity and investment efficiency in China's economy. We calculate that China could increase the capital and labor efficiency of its state-controlled sector by as much as 39 percent, or the difference in total factor productivity between all types of state-owned companies and all types of private ones (Exhibit 4.6). This would translate into savings of up to $259 billion annually, or 13 percent of GDP. Said another way, China could produce its current level of output with $259 billion less investment each year. These resources could then be used for additional consumption or investment, creating new jobs and raising living standards in the process.

5 OECD Economic Surveys: China, 2005.

Exhibit 4.6

AVERAGE PRODUCTIVITY OF PRIVATELY CONTROLLED COMPANIES IS 39% HIGHER THAN STATE-CONTROLLED FIRMS



[1] Legal person.
[2] The weighted-average total factor productivity (TFP) would go from 178% of original direct state-controlled TFP to 206% of original direct state-controlled TFP, a 15.6% increase; assumes sector mix does not cause productivity differential.
Source: OECD (Dougherty and Herd, 2005); McKinsey Global Institute analysis

Clearly, a change of this magnitude will not happen overnight. But financial system reform can hasten China's transition to a more modern, market-based economy. Moreover, the opportunity for improvement is so large that even if only a fraction of the potential were realized, it would result in significant gains for China's people.

Today, China's financial system supports the state-owned sector by giving it a disproportionate share of the nation's savings, and at very low cost. Ending these effective subsidies by lending money on the basis of financial performance, rather than political concerns, would force more rapid change in the SOE sector. China's government has long resisted rapid change to avoid massive unemployment in the state sector. This goal is understandable. But reallocating funding to the private sector will create new, more productive jobs to absorb those lost from the less-efficient state-owned sector. Through a $259 billion increase in GDP, this would also increase government tax revenues by 13 percent, providing funds that could be used to provide job retraining and other social programs for displaced workers.

Moreover, political concerns only partly explain the skewed allocation of funding to state-controlled companies. Weak banking skills, lack of information, inadequate governance, and inappropriate capital market regulations that have made capital markets effectively off-limits to private companies also contribute. These inefficiencies are not in the interest of China's government or its people.

CHINESE HOUSEHOLDS COULD EARN HIGHER RETURNS ON FINANCIAL ASSETS

Raising the productivity of Chinese companies would increase the returns on financial assets earned by savers. As we saw in Chapter 3, bank deposits and savings accounts are one of the only practical investment options for Chinese households, largely because other parts of the financial system are underdeveloped. For want of better options, Chinese households have 76 percent of their financial savings invested in bank deposits, even though these have yielded a return only slightly higher than inflation over the past ten years and have a current interest rate below today's level of inflation.

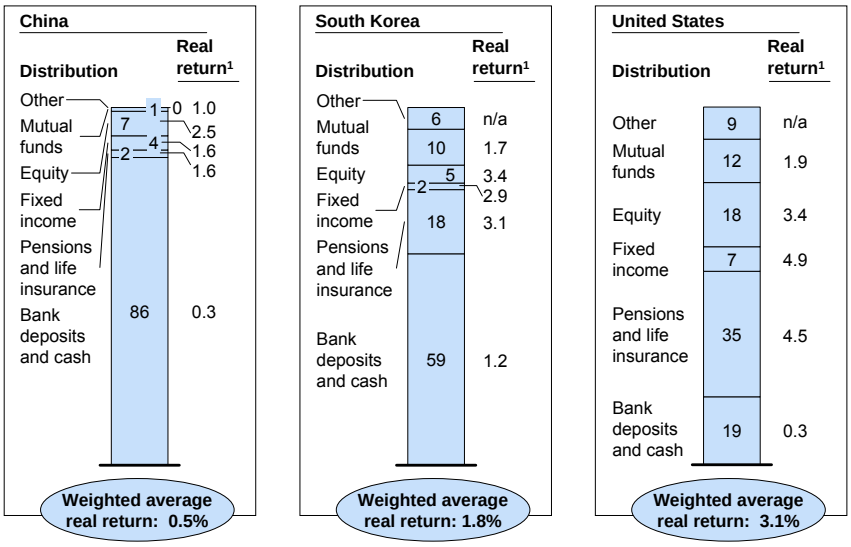
Households in China have earned a real return on their financial assets of just 0.5 percent over the past ten years, compared with 1.8 percent in South Korea and 3.1 percent in the United States (Exhibit 4.7). This weak performance has barely maintained the value of households' financial savings after inflation and has provided little incentive for savers to put their money into the financial system rather than keep it as cash. Moreover, it may contribute to China's high savings rate, because almost all wealth accumulation must come from new savings out of income rather than asset appreciation.

Over time, financial system reforms could raise the returns earned by household savers by raising overall levels of productivity and increasing the value of the underlying companies. This process is dynamic and would take several years before any improvement could be seen. But the potential gains for Chinese households would be enormous, given their huge stock of savings. If China's rate of return on financial assets were doubled, to just 1 percent in real terms, Chinese households would earn an additional $10 billion annually on their savings. If returns were raised to 1.5 percent, Chinese households would gain more than $20 billion annually. This would help enable them to consume more and raise their current living standards. Raising domestic consumption in China might also help address some of the imbalances in the global economy.

Exhibit 4.7

REAL RETURN ON CHINESE FINANCIAL ASSETS IS VERY LOW

Percent



[1] 1995–2005; some numbers are estimates.

Source: US Federal Reserve; PBOC; RBI; Bank of Korea; McKinsey Global Institute analysis

CONCLUSION

China's nonperforming loan problem has directly cost the government more than $100 billion so far to recapitalize the banks, plus the roughly $200 billion spent on transferring NPLs to asset management companies. But far more costly are the inefficiencies in China's financial system and its misallocation of capital. By the same token, however, the value of reforms would be large. Raising the efficiency of China's financial system would save households and companies $62 billion annually. Improving capital allocation would, over time, increase the productivity of China's economy and boost GDP by up to $259 billion each year. This, in turn, would increase employment and raise more tax revenues for the government to spend on social programs or other investments. China's households, meanwhile, could be earning billions more each year through higher returns on their savings. Pursuing faster and deeper financial system reforms may seem risky to China's regulators. But the risk and cost of delaying is greater.

5. Priorities for the Reform Agenda

China is pursuing many financial market reforms, all of them important and necessary. Because many problems in the financial system are interlinked, only a coordinated, transparent, systemwide financial reform can shape the modern financial system China requires to support the country's rapid growth and shift the economy onto a more sustainable development path. Without such an effort, the financial system could constrain China's future economic prospects.

CURRENT REFORM AGENDA

China's financial system regulators have many reforms under way or already on the agenda (Exhibits 5.1). The banking sector is undergoing a comprehensive reform effort, focused mostly on the large commercial banks to prepare them for foreign equity listings. Since its creation in 2003, the China Banking Regulatory Commission (CBRC) has focused on reducing and resolving the volume of nonperforming loans in the banking system and has set specific bank targets to this end. The conditions of China's accession to the WTO have also forced some specific reforms on the banking system. In 2006, these will include allowing foreign banks access to the local currency lending business and eliminating special regulations on investments for foreign banks. In addition to these changes under way, the government is set to revise the corporate bankruptcy law, expand the coverage of consumer credit bureaus, gradually remove the lending floor rate, and continue to recapitalize the banks. Longer term, the government is expected to increase the maximum level of foreign ownership of local banks and to gradually remove the ceiling on deposit interest rates between 2008 and 2010, a move that will eat into bank margins.

Exhibit 5.1

MAJOR FINANCIAL SYSTEM REFORMS CURRENTLY ON THE AGENDA

	Commitment	Timing of implementation
Banking	• Local currency business of foreign banks for consumers allowed without geographic restrictions	2005
	• Elimination of special regulations on investments from foreign banks	2006
	• Corporate bankruptcy law to be revised	
	• Credit bureau to be established	
	• Lending floor rate removed gradually between 2006 and 2009	
	• Recapitalization of banks to become part of a comprehensive program	
	• Domestic consumer business open to foreign banks	
	• Maximum foreign banking stake may be raised to 25%	2007
	• Deposit ceiling rate removed gradually from 2008 to 2010	2008
Securities	• Securities law amended to provide greater investor protection. It grants China Securities Regulatory Commission (CSRC) more power to supervise the market and requires investor's cash to be deposited into their personal accounts rather than the accounts of the securities companies	May 2005
	• All non-tradable shares being monetized in next 3 to 5 years	2008
	• CSRC may create "risk compensation fund" with the approval of Ministry of Finance and People's Bank of China, which will be used to compensate the loss of the investors when the securities companies are bankrupt or closed due to the illegal embezzlement of the client's capital	To be determined
	• CSRC is helping to lower dividend tax	To be determined
Corporate Law	• Revision to lower the minimum registered capital to start a business from up to CNY 500,000[1] to CNY 30,000 for all industries; new law also allows up to 70% of this to be noncash contributions	Jan 2006
Brokerage	• China Banking Regulatory Commission (CBRC) approved establishment of first money broker, a joint venture between British interdealer Collins Stewart Tullett and Shanghai International Trust and Investment Corp.	Nov 2005
	• Wholly foreign-owned insurance brokerage companies are allowed.	2006
Debt market	• Commercial banks allowed to issue financial bonds	2005
	• New corporate bond regulation may be issued and the commercial banks will be allowed into this market; government approval procedure may also be eliminated	2006
	• Gradually allow Qualified Foreign Institutional Investor (QFII) to invest in the interbank bond market	
Derivatives market	• In the future, short-term interest rate futures, Exchange-Traded Funds (ETF) options, index options, share options and other more complex products will be available	
Pension funds	• In current "personal endowment account" employees contribute 8% instead of 11% of salary; employers contribute 3%, which will be put into a social security fund instead of being a transfer into personal accounts	2006
	• Carry out social security reform in rural areas of China	
	• In the next 5 years to increase the total asset of pension fund to RMB 1,000 billion; in order to realize this goal, the pension funds will increase their investment in equity	2006
Mutual funds	• Pilot commercial banks are allowed to set up fund-management companies	2005
	• The foreign investment in fund management companies can be raised to 49%	2007
Insurance	• A new insurance law will be issued; at that time the insurance capital can enter the stock market with few limitations	2007
	• Different insurance products will have their own accounts, the premium from which will be transferred to the trust account of the parent company and then allocated, invested, and distributed by the parent company	

[1] Manufacturing or wholesaling business.

Source: World Bank (China and the ETO, 2004), literate search

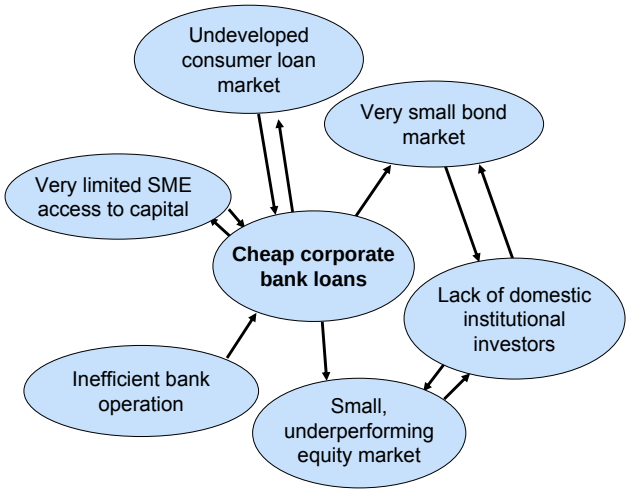
The reform agenda for the securities markets is significantly less precise. One of the current priorities for the regulator is to float the stock of nontradable shares on equity markets. Although a limited number of companies have had such a flotation, it will take an estimated three to five years to complete for all affected companies. Other major reforms on the agenda of the securities regulatory commission include creating a risk-compensation fund to protect investors from fraud by securities companies, progressively reducing the dividend tax, and modifying the regulation of corporate bonds to allow commercial banks access to the market and to eliminate the government's discretionary powers over bond issues. No time line has yet been determined for these reforms.

PROBLEMS CUT ACROSS FINANCIAL MARKETS; SO SHOULD REFORMS

However, there are many interlinkages among the development of China's banking system, equity markets, bond markets, payments system, and intermediaries (Exhibit 5.2). For instance, some banking system performance problems are directly related to the underdevelopment of the securities market, which stems in part from the scarcity of financial intermediaries such as insurance brokers and pension funds. A reform agenda that spans all these markets and intermediaries is therefore essential.

Exhibit 5.2

OBSERVED PROBLEMS IN CHINA'S FINANCIAL SYSTEM ARE CLOSELY INTERLINKED



Source: McKinsey Global Institute analysis

A first major group of reforms that needs to be coordinated comprises the proposed changes to interest rate regulations and measures to develop the equity and bond markets. Bank loans are cheap, due to the ceiling on deposit interest rates that provide banks a cheap source of funds, the capital controls that keep all savings within the country, and the lack of alternative household investment opportunities. But cheap bank credit dampens companies' appetite for bond and equity financing. Therefore, development of China's capital markets will depend on banks moving to risk-based pricing for bank loans. This will also be a necessary step for future capital account liberalization.

The rudimentary state of the bond market forces large companies to get debt from banks. But this crowds out bank lending to SMEs and consumers, because lending to these segments carries more potential risks, and because banks lack the skills to assess these risks accurately and price loans accordingly. Consequently, the development of a healthy corporate bond market will prompt banks to increase lending to SMEs and households, once banks' interest rates have been deregulated and banks have acquired the skills to set risk-based loan rates.

A second set of interlinkages binds reforms to the securities market with the development of financial intermediaries. The lack of domestic mutual funds, pension funds, and insurance investments in China deprives equity and bond markets of skilled institutional investors, an essential element of more developed markets. Without them, the markets are subject to higher volatility and speculative trading. However, these intermediaries cannot develop and offer consumers attractive financial products before there are decently performing equity and bond markets as well as a regulatory framework that allows them to enter these markets. Therefore, development of intermediaries and improvements to capital markets governance must be pursued simultaneously. One way to achieve this in China would be to expand some activities of the Hong Kong Stock Exchange to the mainland, as recommended in more detail later. (The recent statement of cooperation between HKSE and the mainland exchanges is a welcome first step.)

A third group of interrelated reforms is expanding China's nascent independent consumer credit bureau to record credit histories for individuals and independent corporate rating agencies for businesses, along with banking reforms to promote better capital allocation. Lack of credit information about small and medium-sized private companies and households deters banks from lending to them. Instead, they lend mainly to large SOEs, which are perceived to have an implicit

government guarantee and the scale to be deemed creditworthy. Thus, an independent bureau with a nationally recognized credit rating system *and* further banking regulation is necessary to ensure that the financial system effectively performs its task of allocating capital to the engines of growth in the economy.

COORDINATION AMONG CHINA'S REGULATORY BODIES WILL BE ESSENTIAL

Integrating reforms to take account of the interlinkages among markets that lie behind the financial system's inefficiencies will require closer coordination among the regulatory bodies currently managing the reform agenda. Today China has four main regulatory bodies to oversee financial markets. The People's Bank of China (PBOC) is responsible for monetary policy and the payment system, similar to most developed countries' central banks. In addition, the China Securities Regulatory Commission (CSRC) oversees the securities and futures market, the China Insurance Regulatory Commission (CIRC) regulates the insurance industry, and the China Banking Regulatory Commission (CBRC), which emerged from the PBOC in 2003, is an independent regulator for the banking institutions, the asset-management companies, trust and investment companies, and other depository financial institutions. In addition, the National Development and Reform Commission (NDRC) sets macroeconomic policies for the country.

This divided regulatory structure is similar to that found in many other countries, such as the United States, and has many benefits. These include a focus on each market, the potential for regulators to develop specific and deep expertise, and clear accountability for the performance of each market. For developed markets, where the regulators' main task is to ensure efficient operations and to prevent corruption in a mature system, this regulatory structure makes sense. But China's financial system is still in an early stage of development. Regulators have the additional (and more important) task of promoting the development of the financial system to maturity.

For this task, a divided regulatory structure is less ideal because of the interlinkages across markets discussed earlier and because regulators are more likely to give more attention to problems within their sector rather than those that cut across sectors. Coordination of China's regulatory bodies is therefore essential. Recently, the China Business Post reported that the government is considering creating one supraregulatory body to oversee reforms, an idea that has considerable merit. Alternatively, China's government might appoint a single commissioner to create cooperation across agencies and ensure that the

reform agenda for each agency meets the broader needs of financial system development, not just narrow operational goals. The commissioner's first role would be to plot the interlinked effects of existing and planned reforms on the financial system as a whole and to assess how they might be adjusted and augmented to achieve the optimal systemic impact.

PRIORITIES FOR THE REFORM AGENDA

A comprehensive reform agenda that will improve the allocation of capital in China and create a more evenly balanced, less bank-dominated, and more efficient financial system must address each of the key interlinkages discussed here. The reform agenda should therefore make the following additional reforms a priority (Exhibit 5.3). Although they are grouped under their main effect, interlinkages among elements of the financial system mean that each one will have systemwide benefits, as the exhibit illustrates.

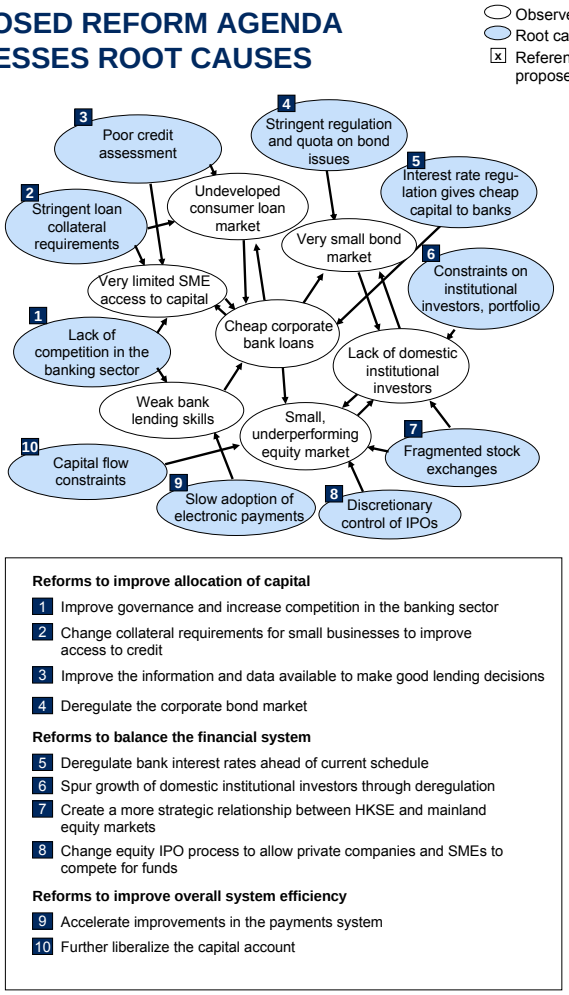
Reforms primarily to improve allocation of capital by the banking system

1. *Improve governance and increase competition in the banking sector to strengthen bank lending decisions*

   Given China's geographic dispersion and history of decentralized power, many bank branches are still not free of local political influence in some regions. Moreover, despite progress made in some of the large commercial banks, the sector as whole still needs to improve and centralize its systems to optimize lending decisions, upgrade skills of loan officers, and improve performance-management systems to be competitive with foreign banks, which will enter the local currency market for consumers in December 2006. China has already taken steps in this direction, most notably in its WTO commitments. Regulators should ensure those commitments are met in full and continue to reform at an aggressive pace. To this end, the CBRC should adopt several additional reforms: create a level playing field for private banks and give local investors more access to the banking market; increase foreign-ownership limits on banks ahead of WTO time line, particularly for the smaller city and regional banks, because foreign investors bring much-needed bank skills and technology; continue to improve bank governance by increasing board independence and offering director-training programs; and increase financial reporting standards and auditing procedures to create more transparency on company performance.

Exhibit 5.3

PROPOSED REFORM AGENDA ADDRESSES ROOT CAUSES



Source: McKinsey Global Institute analysis

2. *Change collateral requirements for small businesses to improve their access to bank credit*

   Small businesses currently can borrow bank capital only by using real estate and some limited types of equipment as collateral. But in many parts of China, property rights are unclear, depriving small businesses of needed collateral. Moreover, today's real estate prices are soaring in China, so using real estate as the main form of collateral for loans may not be the safest decision for banks. Banks need to improve their capabilities to be able to assess the soundness of small businesses based on their financial

information. But they also need to accept other forms of collateral. Two specific reforms are needed by the CRBC: first, regulators must make it possible for banks to accept more types of equipment and accounts receivable as loan collateral. In addition, the government should expand the current program of guarantees on loans to small businesses. But banks in the past have had trouble collecting collateral from borrowers that was not a fixed asset. So in addition, it is imperative that China further develop its legal infrastructure to give banks the ability to call on movable forms of collateral.

3. *Improve the information and data available to make good lending decisions*

   Small and medium businesses and consumers need to get a greater share of bank capital. Before they will be willing to make such loans, however, banks will need better tools to assess the credit quality of borrowers (and the ability to price such risks accurately). In early 2006, China recently expanded its consumer credit bureau to cover most of the country. This is an important step, and will increase in usefulness as more consumers start using credit. But China would also benefit from better information on corporate borrowers, particularly private companies and SMEs. To this end, regulators should continue to strengthen financial reporting standards and auditing, and also support further development of independent rating agencies, such as S&P and Moody's, which have limited coverage today.

4. *Deregulate the corporate bond market so that the largest companies can seek funding outside of the banking sector*

   The financial system would be significantly more efficient if large enterprises used corporate debt instead of bank loans as their main source of debt finance. This would also leave more bank capital for SMEs, who are currently underfunded. To spur development of the corporate bond market, regulators must ease the regulations that now hold it back. Specific actions include eliminating quotas for issuers and allowing more private companies to emit bonds; streamlining the approval process from the 14 to 17 months it takes today; abolishing interest rate regulations that currently limit the interest that corporate bonds can pay; and adopting consistent tax treatment for interest income from corporate bonds and bank deposits (today the former are taxed while the latter are not).

Reforms to balance the financial system and reduce the dominance of the banking sector

5. *Deregulate bank interest rates ahead of current schedule*

   In 2004, China removed the ceiling on bank lending rates and the floor on deposit rates, opening the door for more lending to smaller and private businesses. But the floor on lending rates will be gradually removed starting in 2006, and, even more important, the ceiling on deposit rates is not set to be lifted until between 2008 and 2010. The rationale for this is to prevent bank margins from declining rapidly when foreign competitors enter the market at the end of 2006. But these regulations limit competition and guarantee that Chinese banks will continue to enjoy a low-cost source of funds, allowing them to provide cheap corporate loans at the expense of savers. In conjunction with liberalizing the corporate bond market, regulators must allow lending rates to increase to create corporate demand for bonds. To do this, the CBRC should deregulate interest rates sooner than the current schedule.

6. *Spur growth of domestic institutional investors (e.g., pensions, insurance companies, mutual funds) through deregulation*

   The presence of more domestic financial intermediaries is needed to give the mainland securities markets long-term, professional institutional investors and to give Chinese households more diversified investment options. Regulations on these intermediaries today, combined with restrictions on their operations, have stunted their development. To promote their growth, regulators can take several specific actions: they can reduce the currently strict restrictions on investment types; offer investing education and financial services planning to Chinese households; create favorable tax conditions on these investments; and partially open the capital account to allow domestic intermediaries to invest a small portion of their assets abroad, thereby allowing them to offer more attractive returns to households and a unique investment opportunity.

7. *Create a more strategic relationship between HKSE and mainland equity markets to leverage strengths of both*

   The Chinese government has made significant investments in the creation of the Shanghai and Shenzhen stock exchanges, but they have a long way

to go to reach the level of operational performance of other international exchanges. Meanwhile, the Hong Kong Stock Exchange enters in direct competition with the mainland exchanges. In a world in which stock exchanges become increasingly global, China should adopt a strategy that reinforces the leadership of one of its exchanges to better compete against international players such as the London Stock Exchange and New York Stock Exchange, instead of creating divisions among its own local exchanges. A specific strategy could include specialization in the current system of three exchanges (Shanghai, Shenzhen, Hong Kong), where each location would handle the trading of some types of financial products. Very recently, the HKSE and mainland exchanges have begun to form a more strategic relationship, a move that should be encouraged.

8. *Change equity IPO process to allow private companies and SMEs to compete for funds*

   Equity markets are an essential vehicle for providing long-term funding for corporate investments, for providing start-up funds to newer ventures, and for spurring development of private equity and venture capital by giving them an exit option. In China, however, the equity markets have remained an option open almost only to SOEs. Although the equity IPO process has recently been reformed to move away from explicit industrial policy criteria, with the establishment of a more independent committee to approve companies, listing decisions are still conditional on discretionary approval from regulators. The CSRC should seek to allow more private companies that qualify for an IPO to list on its exchanges and should continue to develop the nascent small-cap exchange in Shenzhen by allowing more IPOs and increasing foreign-investor access to that market. This would provide more diversified and high-risk/high-return investment options for households and improve the stock market performance.

Reforms to improve overall system efficiency

9. *Accelerate improvements in the payments system to increase efficiency of financial transactions*

   A large number of business-to-business transactions are conducted using paper-based vehicles, which are significantly less efficient than electronic fund transfers. Business-to-consumer transactions are almost always cash based,

which creates other types of inefficiencies for corporations and individuals. Under the current payments system, which operates at the local and national levels, the banks themselves cannot optimize their fund balances with the central banks. Fixing the payments system problems and encouraging the use of electronic payment vehicles would result in savings for banks and corporations and would simplify the life of individuals. It would also improve the government's control on the economy (as most black market activities are cash based), offer new business opportunities for the banks, and increase the stability of the financial system. Regulators can enable the development of a payments system by adopting several measures: they can offer incentives to banks for making the necessary branch-level capital investments to build electronic links with the local central bank; they can create incentives for consumers to use electronic payment vehicles and for retail businesses to adopt the technology to accept electronic payments; and they can encourage the use of electronic payments in the government sector.

10. Further liberalize the capital account

China currently maintains strict capital controls on its residents that prevent investments in foreign financial markets or securities. This policy ensures that domestic savings stay within the country, maintains a high level of liquidity in the banks, and helps China to control its exchange rate. But it also lowers returns for savers and sharply limits the competitive pressure on banks and domestic capital markets, which enjoy a very large pool of captive savings. To overcome this disincentive, China's regulators should begin to slowly open the capital account for foreign investments. One first step would be to allow domestic intermediaries to invest a small portion of their assets in Hong Kong. This would enable them to create attractive products for savers, while creating competition for mainland banks and equity markets. Longer term, China should proceed to remove more restrictions on domestic investments abroad.

6. Closing remarks

China's transition to a market-based economy over the past quarter century has been remarkable, unleashing faster economic growth than almost any other country has experienced at any time in history. China's financial system has evolved rapidly too, in a transformation especially striking given that none of the financial institutions in China today even existed just 25 years ago.

Yet China's financial system needs more reform. This report has shown that two major opportunities remain: improving the allocation of capital to the most productive investment opportunities in the economy, and addressing the operational inefficiencies in each of the system's components—banks, bond markets, equity markets, financial intermediaries, and the payments system. These problems impose significant costs on savers and borrowers and hold back the natural evolution and restructuring of China's economy. By the same token, if the causes of these problems were tackled by a comprehensive set of reforms, China's financial system could catalyze an enormous increase in wealth for China's people.

China has been gradually opening its financial sector to foreign investment, and last year it received $18 billion for the sale of small stakes in several of the largest banks. But foreign direct investment, while helping to improve skills and increase competition, will not by itself be enough to strengthen the financial system's performance significantly. Changes to the regulatory framework are also essential to spur growth in China's capital markets, enable domestic institutional investors to flourish, foster the development of consumer financial services, and shift the banking sector's focus from lending to large companies toward extending credit to consumers and small and medium-sized enterprises. When the markets

comprising the financial system compete with each other on a level regulatory playing field, as they do in more mature financial systems, China's system will naturally develop a more balanced, less bank-dominated structure.

The pace and breadth of financial system reforms to date have been dictated in part by understandable political and social concerns among China's leaders. Most notably, they seek a transition to a market economy that avoids multiple mass layoffs from state-owned enterprises (SOEs) and massive social disruption. Ensuring a continued flow of financing from China's banks to SOEs as their role in the economy diminishes has been essential to fulfilling this aim. But as China's modern economy develops, the government will increasingly be able to separate its social goals from the operations of the financial system. Adapting the system to operate in a more market-oriented way will spur efficiency and wealth creation in the economy. That will increase the tax revenues available to government for funding social programs directly, especially programs to equip more of the workforce for jobs in the modern economy.

Moreover, legitimate social concerns only partly explain the skewed allocation of funding to state-controlled firms. This report has shown that equally important are a shortage of analytical lending skills among banks, as well as capital market regulations that effectively bar private companies from using capital markets as a source of finance. Fixing these inefficiencies is in the interest of China's economy and people.

Other factors also argue for faster implementation of further financial system reform. Social tensions are rising across the country, particularly in rural areas that feel left behind on China's journey to prosperity. In recent months, China's government has made clear that narrowing social disparities and pursuing "fair and balanced" growth are high priorities. Faster, coordinated reform of the financial system will contribute substantially to achieving these aims.

The reform agenda outlined in this report would raise the productivity of China's economy, lifting standards of living and allowing households to increase their consumption. It would also help speed economic growth and create new jobs in China's service sectors, set to play an increasingly important role in rural as well as urban areas. These outcomes suggest that further, far-reaching reform of the financial system should be one of China's highest priorities.

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Appendix: China's Financial System Reforms Since 1978

Over the past 25 years, China's financial system has undergone a remarkable transformation. While many reforms are still needed, the system has made significant progress from its origins as a funding mechanism to provide low-cost credit to state-owned companies in support of a planned economy.

Before China began to liberalize its economy in 1978, capital was intermediated through a single state-owned bank, the People's Bank of China (PBOC). This operated a branch network throughout the country that accepted deposits from households and allocated capital to state-owned companies according to their requirements and the government's economic plans. Since 1978, the Chinese government has been following a cautious, "small-steps" approach to developing a more market-based economy and creating the financial system to support it. This has entailed breaking up the PBOC into several organizations and taking steps to build equity and bond markets.

MAJOR REFORMS TO THE BANKING SECTOR

In 1979, the government spun off three specialized banks from the PBOC: the Agricultural Bank of China, the People's Construction Bank of China, and the Bank of China. Five years later, the PBOC transferred its remaining financial activities to a fourth specialized bank, the Industrial and Commercial Bank of China, and became an independent central bank. The four banks originating from the PBOC remained under tight government control and subject to government direction over their lending decisions until 1994. In that year, however, the government created three policy banks to take on the task of supporting its key economic sectors—agriculture, imports-exports, and development. Since then,

although nearly all banks have also remained under state control, they have been encouraged to operate as commercial, profit-making entities and allowed to make lending decisions free from central government direction (although questions remain about local government influence over lending).

Further reforms over the past ten years have aimed to make banks even more market-oriented. Starting in 1998, regulators have taken steps toward liberalizing interest rates, and the remaining floor on lending rates and ceiling on deposit rates are expected to be completely eliminated by 2008 and 2010, respectively. In 2004, the banking regulator started the process of making an initial public offering of shares in four of the largest banks (BoC, CCB, ICBC, and Bank of Communications). In preparation, the regulator has imposed a set of requirements on banks to improve their corporate governance. These include creating an independent board of directors and board of supervisors, adopting better risk-management practices, and completing the transition to market-oriented decision making. New rules have also encouraged banks to develop fee-based services, which almost none provided before.

By the late 1990s, the stock of nonperforming loans (NPLs) in China's banking sector had become a major problem that subsequent reform efforts have focused on resolving. According to official figures, NPLs reached more than 30 percent of total loan balances for the large commercial banks in 2001, and private estimates put them as high as 40 percent of total loan balances. In 1999, the government established four state-owned asset-management companies (AMCs) to purchase the NPLs from the commercial banks at book value and to handle their recovery. Banks were paid with bonds from the AMCs. As of 2004, the four AMCs had acquired more than 1 trillion renminbi of NPLs from the large commercial banks and disposed of 588 billion renminbi, with a cash recovery rate of around 20 percent. This process is set to take ten years to complete. In parallel, the government has injected $105 billion into China's large commercial banks to compensate for their losses and keep them afloat.

RE-CREATING SECURITIES MARKETS

A securities market existed in China until the 1930s, but it was completely dismantled during socialist reorganizations. Today's securities market was redeveloped in tandem with reforms to the banking system, starting with the first issuances of government debt in 1981.

A market for corporate bonds was created in 1984. In the following years, however, there were several defaults, and the government consequently put in place strict rules for qualifying issuers. Many of these rules are still in place. As a result, the corporate bond market is used almost exclusively by policy banks and large state-owned corporations.

A stock market was founded in Shanghai in 1990 and another in Shenzhen the following year. These have been used mainly for partial privatizations of state-owned enterprises (SOEs). Under the most common form of SOE privatization, one-third of the enterprise's share capital has been privatized on the stock exchange, while the remaining two-thirds have remained in the hands of various government entities as nontradable shares. The government is currently floating its entire stock of nontradable shares on the market, a process which will likely take three to five years to complete.

Progress has been made on other fronts as well. Although still very small, intermediaries are growing fast in China. Life insurance, mutual funds, and registered pension assets totaled 4.1 percent, 0.9 percent, and 1.2 percent, respectively, of GDP in 2003. Consumer credit is also gaining in popularity, with mortgages leading the way at 9.9 percent of GDP in 2004, and growing at almost 20 percent per year. Credit cards still play a marginal role in the economy, with balances at only 0.2 percent of GDP in 2004, but they are growing quickly.

ESTABLISHING A NEW REGULATORY INFRASTRUCTURE

China has put in place a regulatory infrastructure appropriate to its financial system reforms. Four entities now oversee the system: the PBOC is responsible just for monetary policy and the payments system, like central banks in most developed countries; the China Securities Regulatory Commission (CSRC), created in 1992, oversees the securities and futures market; the China Insurance Regulatory Commission (CIRC) was created in 1998 to take over the PBOC's former role in regulating the insurance industry; finally, the China Banking Regulatory Commission emerged from the PBOC in 2003 as an independent regulator for banking institutions, asset-management companies, trust and investment companies, and other depository financial institutions.

OPENING UP TO OVERSEAS INTERESTS

China's interactions with the world financial system have also changed over the past 25 years. China's capital account has been partially reopened, starting in 1978 with the "Open Door Policy" to promote foreign trade and investment. In 1979, the government set up Special Economic Zones where it allowed foreign direct investment, and in 1992 foreign investors were allowed onto the Shanghai and Shenzhen stock exchanges, through the creation of the B-share market reserved exclusively for them. Since 1994, the currency has been actively managed by the PBOC and pegged to the US dollar, although since 2005 its value has been allowed to float within fairly tight limits. China's accession to the World Trade Organization in 2001 was conditional on its pursuit of a program of further economic liberalization, including opening the local currency banking market to foreign banks at the end of 2006.

* * *

Together these reforms have begun to create the institutions required by a modern financial system. China's challenge now is to create the regulatory framework and competitive environment to enable them to perform their functions efficiently and support growth of its increasingly market-based economy.

Technical Appendix

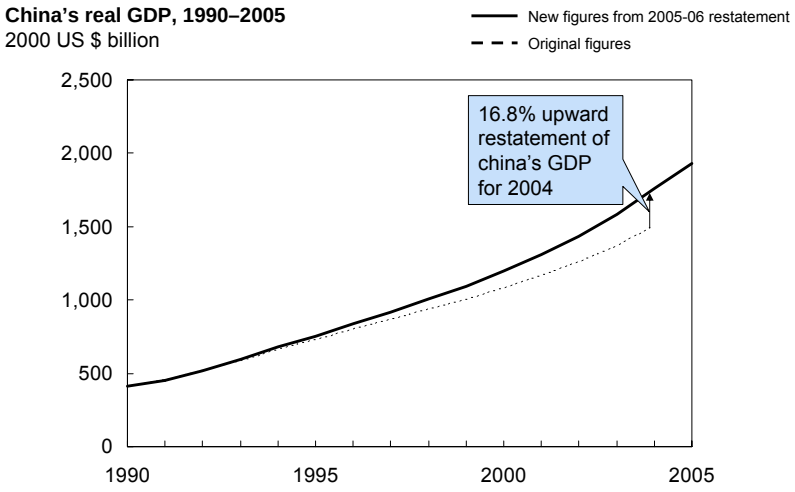
The following section provides background information on seven technical approaches used extensively in this report and discusses their potential limitations. They are: 1. the way we treated China's recently restated GDP figures; 2. the approach we used to determine China's financial stock; 3. the methodology used to calculate the cost of financial intermediation; 4. how we calculated the real return on Chinese household financial assets; 5. our approach to quantifying China's opportunity to reduce its capital intensity; 6. our calculations of China's incremental capital-output ratio (ICOR); and 7. how to determine state versus private ownership among companies.

1. CHINA'S RESTATED GDP

In December 2005, based on results from a nationwide survey of its service sector, China restated its official figure for the 2004 GDP, increasing it by 16.8 percent (Exhibit A). In this report, we are using the restated GDP figure for 2004 when we are comparing China to other countries on GDP-relative metrics. We are, however, using the original numbers when using GDP-relative metrics to look at the evolution of China's economy over time when restated statistics for historical years are not available. As the understatement of GDP uncovered in December 2005 was built over many years, we believe that the long-term trends observed using the original data are still valid.

Exhibit A

CHINA RECENTLY RESTATED ITS GDP FIGURES FOR 1993-2004



Note: The 2005 GDP is a National Bureau of Statistics estimate.
Source: Global Insights; National Bureau of Statistics of China; McKinsey Global Institute analysis

2. DETERMINING CHINA'S STOCK OF FINANCIAL ASSETS

All the figures on financial system assets presented in this report come from the McKinsey Global Institute Global Financial Stock database. This database, updated annually, maintains a record of the total amount of capital formally intermediated by financial systems in more than 100 countries. This includes the value of bank deposits, savings accounts, and currency; government debt securities; corporate debt securities; and equity securities. For debt and equity, we include the value of both domestic and international issues by companies. Together, these form the financial assets of a given country. Exhibit B shows the breakdown of China's financial stock at the end of 2004.

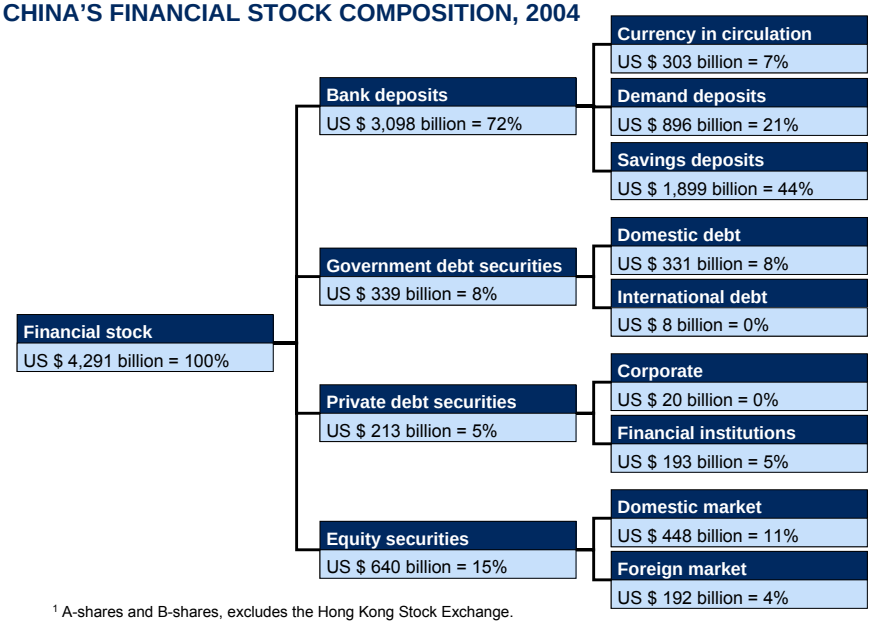
Several other financial instruments play a crucial role in modern financial markets, including derivatives and products offered by mutual funds and insurance companies. These have been excluded from the Global Financial Stock database, however, because they are not final investments. In other words, capital invested in derivatives or placed with insurance companies or mutual funds will be in turn invested in equity or bonds or deposited in a bank.

An alternative method of measuring financial system assets is by adding up the assets of all financial intermediaries in a country—banks, insurance companies, pensions, mutual funds, and others. We prefer the approach used here because it allows us to analyze the size and depth of specific markets: equities, bonds, and banking system. It also allows us to include the foreign securities issued by domestic companies and to exclude domestic holdings of securities from foreign companies.

There are several potential limitations to our approach. One is that we account for bonds outstanding at their face value instead of market value, which is difficult to measure, especially for over-the-counter traded securities. In addition, we do not consider private equity or venture capital, which are also forms of capital intermediation, albeit very small. In China, private equity and venture capital are estimated to be just $13 billion, or 0.3 percent of its financial stock. These factors thus have a limited impact on the total financial stock size and therefore do not affect our conclusions.

Exhibit B

CHINA'S FINANCIAL STOCK COMPOSITION, 2004



[1] A-shares and B-shares, excludes the Hong Kong Stock Exchange.
Source: McKinsey Global Institute analysis

3. CALCULATING THE COST OF FINANCIAL INTERMEDIATION

In general, the cost of financial intermediation is the difference between the cost of capital to the borrower and the risk-adjusted return for the saver (Exhibit C). This is the amount that the financial system takes to cover the cost of its operations. For each instrument (bank loans, bonds, equity), the return to the saver is adjusted for risk in order to make returns from all instruments comparable, even if they have a completely different risk profile.

Exhibit C

CALCULATING THE COST OF INTERMEDIATION

	A Cost to borrower	B Return to saver	C Risk-adjusted return to saver	A - C Cost of intermediation
Banking sector	Borrowing interest rate	Savings interest rate	Savings interest rate ⊖ Government capital injections in banks[2]	Interest rate spread ⊕ Government capital injections in banks[2]
Bond market	Bond interest coupon rate ⊕ Issuance cost[1]	Bond interest coupon rate ⊖ Trading commission[1]	Bond interest coupon rate ⊖ Default rate ⊖ Trading commission	Default rate ⊕ Issuance cost[1] ⊕ Trading commission[1]
Informal lending	Borrowing interest rate	Lending interest rate	Lending interest rate ⊖ Risk of private bank bankruptcy/closure	Interest rate spread ⊕ Risk of private bank bankruptcy/closure
Equity market	Share of profits ⊕ Issuance cost[1]	Share of profits ⊖ Trading commission[1]	Share of profits ⊖ Bankruptcy risk ⊖ Trading commission	Bankruptcy risk ⊕ Issuance cost[1] ⊕ Trading commission[1]

[1] Relatively small.
[2] As government guarantees bank deposits, capital injected to keep the banking system afloat needs to be considered as a cost to the general population, i.e., savers.
Source: McKinsey Global Institute analysis

Bank deposits are typically risk free to savers. The cost of bank intermediation can therefore be considered as the difference between the average lending interest rate and the average deposit interest rate. In China, however, the government has had to inject a significant amount of capital into the banking system in recent years ($105 billion to date since 1998, and an estimated $110 billion soon to come for the Agricultural Bank of China). Government capital injections in banks ultimately represent a cost to all the population, and thus to the savers, as almost all Chinese taxpayers have a bank account. Over the past ten years, these injections of capital have represented a cost of 1 percent per year on the bank loan balances. Added to the 3.3 percent interest rate spread, this produces a cost of bank intermediation of 4.3 percent.

For debt securities, the only direct costs of intermediation are the cost of issuance on the borrower side and trading commissions on the saver side. Most of the time, these relatively small costs are outweighed by the default risk that the saver takes on. We therefore estimate the cost of debt securities intermediation as the default rate. We use an average rate calculated over several years, as the default rate tends to vary significantly over economic cycles.

A cost of intermediation can be calculated in a similar way for informal lending. Informal borrowing and lending interest rates are not public, however, and vary by region. The risk to savers—namely, the risk of the private bank with which they save going bankrupt or being shut down—is material but also difficult to quantify precisely. We therefore relied on interviews with academics and small-business owners close to the private lending market to estimate the cost of intermediation for this vehicle in China.

A similar methodology can be used to calculate the cost of intermediation for equity capital. We know that there are several inefficiencies that raise the cost of equity intermediation. One is poor selection of companies for IPO and inadequate supervision and oversight of listed companies. These problems are compounded by the sometimes-unreliable financial information released by listed companies. Being aware of these problems, investors demand a higher risk premium than they would on a more efficient stock exchange, although we cannot measure this. One way we can measure the cost of equity market intermediation is through commissions on trades, the approach we use here.

One of the main limitations of the methodology described here is that the cost of intermediation measured for a given financial vehicle is significantly influenced by the mix of companies using it. For instance, the average bond default rate (and therefore, by our definition, the cost of bond intermediation) is slightly lower in China than it is in the United States. This is due in large part to the fact that the US bond market includes a lot of relatively smaller enterprises, more subject to default. But at an aggregate level, when all the financial vehicles of a given country's financial system are analyzed together and a cost of intermediation is calculated for the overall system, such differences cancel each other out. For instance, small US enterprises that increase the cost of bond intermediation in that country would represent an additional cost to the banking system if they used more bank loans instead of bonds. By analyzing both the efficiency of each

vehicle and the mix of vehicles, our calculations are subject to very little mix effect—in fact, only to the difference in the economic mix between China and the countries we use for comparison.

4. THE REAL RETURN ON HOUSEHOLD FINANCIAL ASSETS

We calculated the real return on household financial assets in China by factoring the relative size of each instrument in Chinese households' financial portfolios by their respective past ten-year performance, net of inflation. We used ten years of data to capture the performance of each vehicle over various stages of the economic cycle.

Exhibit D describes the assumptions that we made in order to calculate the return provided by each savings vehicle in China and in the three comparison countries. Returns information shows that most differences in real returns to households in the four countries derive from the mix of savings vehicles used in each country rather than the relative performance of each individual savings vehicle, which plays a less important role.

Exhibit D

ASSUMPTIONS–REAL RETURN FOR EACH VEHICLE

	China		South Korea		United States	
Bank deposits and cash	0.3	Based on current split of 15% of cash (-2.7% real return), 15% of demand deposits (-2.7% real return), and 70% of saving deposits (assuming 1-yr rate of 1.6% real)	1.2	Based on current split of 50% of cash, demand deposits and direct-access savings deposits (-3.0% real return) and 50% of savings deposits (assuming 1-yr deposits with real return of 4.23% (Bank of Korea))	0.3	Assumes 50% of deposits bear no interest (0% nominal) and the remaining par bear the 1-yr deposit average interest rate (3.9% nominal), adjusted for an average GDP deflator of 1.7% between 1995 and 2005
Pension and life insurance	1.6	Assuming 1-yr deposit rate	3.1	No information available–assumes 70% bonds, 30% equity	4.5	Assuming 75% bonds and 25% equity
Fixed income	1.6	Assuming 1-yr deposit rate	2.9	Average interest rate of 5-yr government bonds and AAA corporate bonds (5.9%) reduced by inflation (3.0%)	4.9	Real Moody's AAA bonds yield for 1995–2005 adjusted with a 1.7% GDP deflator
Equity	2.5	Real 1995–2005 Shanghai Stock Exchange index performance	3.4	Equity return (6.45%) adjusted for inflation (3.0%)	3.4	Real S&P 500 return index adjusted with a 1.7% GDP deflator
Mutual funds	1.0	Real 1995–2005 Shanghai Stock Exchange index performance less 1.5% for management fees	1.7	Mutual funds approximately 65% equity, 35% fixed income minus 1.5% management fees	1.9	Real S&P 500 less 1.5% for management fees

Source: PBOC; RBI; Bank of Korea; US Federal Reserve; CSRC; Moody's; S&P; McKinsey Global Institute analysis

5. CALCULATING THE IMPACT OF REDUCING CAPITAL INTENSITY IN CHINA

In its 2005 economic survey of China, the OECD carried out an extensive analysis of Chinese industrial companies' productivity by type of ownership. We can infer from their data that the total factor productivity (TFP) of privately controlled companies (companies in which the state has a minority or no ownership) is on average 39 percent higher than the productivity of companies controlled by the state. In the sample used by the OECD, 48 percent of the companies were categorized as state controlled, the remainder being privately controlled. Using this data, we can show that if state-controlled companies could reach the average level of productivity of private companies, capital and labor productivity for the economy as a whole would increase by up to 15.6 percent, equivalent to an increase of $259 billion in GDP.[1]

This analysis could have several limitations. First, part of the difference in productivity might be attributable to the industries in which the private companies are active. These may, on average, lend themselves to higher levels of productivity. However, we show in Chapter 3 of the report that even within sectors where private and state-controlled companies compete directly, namely in consumer electronics and in the automotive industries, the difference in productivity between the two types of companies is even greater than the average difference.

Second, the analysis performed for the OECD addressed only industrial companies with more than 5 million renminbi in sales per year, representing only one-third of China's economy. No information is available on the productivity of smaller companies or on that of services companies. However, several factors suggest that these areas also offer significant opportunities for productivity improvement. Restricted access to capital for small companies probably causes them to have a suboptimal balance of capital and labor, which in turn will reduce their TFP. China's lack of competitiveness in international service markets indicates that the productivity of Chinese companies in these areas is also probably far from global standards.

Taking these limitations into account, the productivity improvement opportunity we identify should be recognized for what it is: an estimate. However, for the reasons stated previously, we strongly believe that there is an opportunity to improve overall levels of productivity in China by 15.6 percent.

1 Based on official figures prior to restatement; opportunity has not yet applied to the recent increase in GDP because limited data is available on its source and composition. The $259 billion is equivalent to 13.4 percent of the new GDP figure.

6. CALCULATING THE INCREMENTAL CAPITAL-OUTPUT RATIO

The incremental capital-output ratio (ICOR) is a common metric used to measure the capital intensity of growth in an economy. The ICOR compares the growth in a country's capital stock to the growth in GDP. A ratio of 1 would mean that one new dollar of investment is required for each new dollar of GDP, a ratio of 2 would mean that two dollars need to be invested in the capital stock to grow the GDP by one dollar, and so on.

The ICOR ratio should usually be calculated on the basis of net capital stock in order not to consider the effect of existing capital base renewal. Net capital stock figures are, however, not publicly available for China, as for many other countries. As a result, the ICOR is most of the time calculated using the gross capital formation. Although imperfect, this method is widely accepted and introduces bias in comparisons only when the GDP growth rate or the average capital stock life for the periods or countries compared are vastly different. To avoid these biases, we compare China's ICOR with that of other countries when they experienced a similar economic growth and when they were at a similar stage of economic development.

The ICOR for a multiyear period can be calculated either by taking the direct ratio of investment over absolute GDP increase over the period or by taking the ratio of yearly average of investments and economic growth relative to GDP (Exhibit E). As we are calculating ICOR ratios for relatively long time periods (up to ten years), we preferred the second method to the first because it gives an equal weighting to each year in the series. The first method gives more weight to the years where GDP is higher—usually the last years of a period for a country that is growing.

7. DETERMINING COMPANY OWNERSHIP IN CHINA

Determining the mix of company ownership in China is not an easy task. The official categorization of registered enterprises comprises more than ten types of companies. Within each category, some companies are directly or indirectly controlled by the government, others are partly owned by the government, and others are private.

In 2005, the OECD conducted an Economic Survey of China where it mapped each enterprise registration status for Chinese industrial companies above a designated size to the type of controlling shareholder they had. It concluded

that, among these companies, 23 percent were directly state controlled, 19 percent were indirectly state controlled (through other state-owned enterprises), 6 percent were controlled by collectives, and the remaining 52 percent were controlled by private interests (Exhibit F).

Exhibit E

POTENTIAL METHODOLOGY FOR THE CALCULATION OF THE ICOR BASED ON GROSS CAPITAL FORMATION ON A MULTIYEAR BASIS

Absolute

$$ICOR_{Y_1\text{-}Y_N} = \frac{\sum_{(i = 1..n)} GFC_i}{GDP_n - GDP_0}$$

GDP-relative

$$ICOR_{Y_1\text{-}Y_N} = \frac{\left[\sum_{(i = 1..n)} \frac{GCF_i}{GDP_i}\right]}{n} \Bigg/ \left[\frac{GDP_n}{GDP_0}\right]^{1/n} - 1$$

$ICOR_{Y_1\text{-}Y_n}$: Incremental capital-output ratio between year 1 and year n.
GDP_i: Real gross domestic product for year i.
CCF_i: Real gross capital formation for year i.
Source: McKinsey Global Institute analysis

Exhibit F

OWNERSHIP STRUCTURE OF CHINESE FIRMS

Mapping of registration status to controlling shareholder
Percent of value added among industrial firms in 2003

	State controlled					
Registered type of ownership[1]	Direct	Indirect	Collective controlled	Private controlled	All	Share of total
State-owned enterprise	73.6	26.4	0	0	100	13.8
Collective-owned enterprise	0.1	1.3	61.6	36.9	100	6.3
Joint ownership enterprise	45.9	15.9	12.7	25.5	100	0.7
Solely state-funded corporation	80.3	19.7	0	0	100	5.0
Other limited liability corporation	19.7	19.7	6.2	54.4	100	14.1
Shareholding corporation	26.4	47.4	2.0	24.3	100	15.0
Cooperative enterprise	1.2	2.8	15.6	80.3	100	2.2
Private firm[2]	0	0.2	2.7	97.1	100	13.3
Other domestic-funded firm	1.6	2.0	12.7	83.7	100	0.1
Non-mainland joint venture[3]	9.1	20.6	3.0	67.3	100	17.6
Solely non-mainland firm[3]	0	0.7	0.1	99.2	100	12.0
All types	22.9	18.5	6.4	52.3	100	100.0

[1] At present, companies may be set up under a number of separate laws, or sections of the same law. Their registration status depends on how they were set up and is not necessarily a guide to the sector from which their shareholders are drawn. See OECD (2000) and ADBI (2004) for a more detailed list of the legal basis for each enterprise type.
[2] Domestic private firms registered with the government.
[3] Non-mainland is an aggregation covering investors from: Hong Kong, China; Macao, China; Chinese Taipei and all other economies.
Source: Natural Bureau of Statistics industrial microdata with joint NBS-OECD analysis (From OECD; economic survey: China, 2005

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