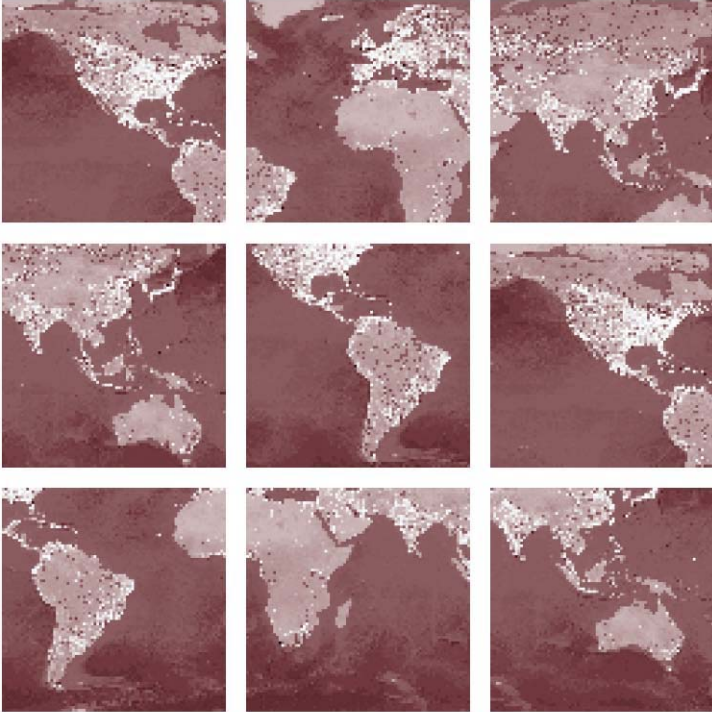


CHAPTER FIFTEEN

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**BONDING THE BRICS: THE ASCENT OF CHINA'S DEBT CAPITAL MARKET**

November 2006





## BONDING THE BRICs: THE ASCENT OF CHINA'S DEBT CAPITAL MARKET

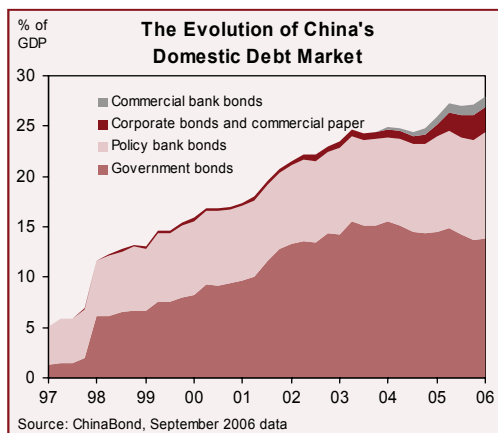
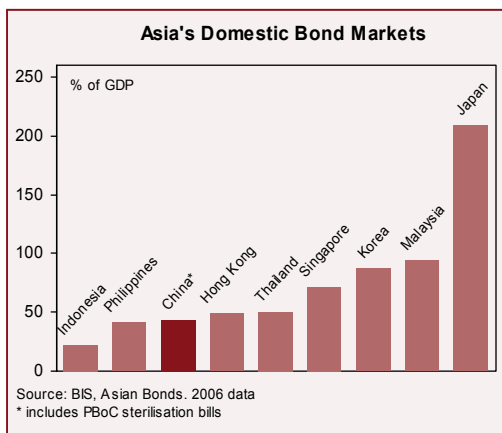
### Capital Markets Can Help Underpin China's Growth Prospects

China's remarkable economic growth—averaging around 9% each year in real terms over the past decade—is all the more striking in the context of its relatively underdeveloped capital markets. On the equity side, although a number of important former state-owned enterprises have listed on international exchanges in recent years, the domestic stock market has been weighed down by previous disappointing IPOs, a large overhang of state-owned shares and a protracted ban on domestic listings.

On the debt side, the gap between economic growth and capital markets maturation is even more pronounced. When central bank sterilisation bills are excluded, the stock of domestic bonds soared from just 5% of GDP in 1997 to around 27% at the end of September 2006. Yet the market remains overwhelmingly concentrated in securities issued either by the government directly or by publicly-controlled 'policy banks', while the fast-growing small and medium enterprises, which account for nearly 60% of China's GDP, are severely under-represented. The limited domestic debt market has led to a lost opportunity on the demand side as well, failing to provide attractive investments for China's extremely high level of private savings. Most of these savings are languishing in low-yielding bank deposits.

Two factors have hampered the development of China's debt capital market (DCM) thus far, and could remain impediments limiting its maturation unless they are addressed at the macro policy level:

- First, the government has leaned on banks to assist in the pursuit of its own policy objectives. This is evident in the stringent 'merit-based' approval procedures for issuing corporate bonds, which tend to steer credit on the basis of government priorities. China's extensive network of intra-public-sector lending and borrowing has hindered improvements in corporate governance, increased 'moral hazard' by fostering expectations of government-led bailouts, and ultimately stunted the development of a credit culture and risk-control systems.



- Second, the use of direct quantity and price controls in the conduct of monetary policy. Issues surrounding China's exchange rate system have made this even more complex. To prevent soaring liquidity from fuelling excessive credit creation and economic overheating, the monetary authorities have frequently resorted to direct financial controls rather than more market-oriented instruments, such as interest rates.

In light of these policy preferences and their limitations, China's policymakers have hewed to a cautious and incremental approach to reform in the financial sector. This strategy is probably also influenced by fear of a repeat of the unpropitious experience of the 1980s and early 1990s, when a weak institutional framework, poor understanding of market mechanisms and a focus on retail investors led the nascent corporate debt market to collapse.

Yet the pace of change now appears to be accelerating. Over just the past 18 months, China has introduced greater potential for exchange rate flexibility; instituted a relatively free market for short-term corporate financing; approved a long-overdue new bankruptcy law; begun discussions on streamlining the regulatory framework; and allowed financial institutions and the state pension scheme some scope to invest abroad. In many of these areas, China enjoys the advantage of late-mover status, which should allow it to tap into an increasingly rich vein of international experiences and aim to establish best practices.

We believe that China's DCM has the potential to expand significantly in the years ahead. China's economic size (nominal GDP is estimated at \$2.6trn and is set to surpass Germany's soon, at current exchange rates), well-diversified production base and large pool of private-sector savings all argue for a deep domestic debt market capacity.

The benefits from a well-functioning domestic capital market can be significant. By fostering a more efficient allocation of resources both across sectors and along the time dimension, a more robust DCM could facilitate the conduct of monetary policy and underpin the sustainability of the long-running economic boom. Moreover, a strong DCM could help to channel funds into institutional investments, reduce the need for precautionary household and corporate savings, and in turn prove instrumental in reducing the financial imbalances that loom over the global economy.

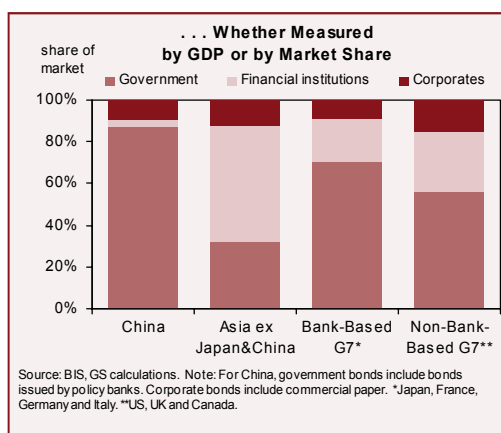
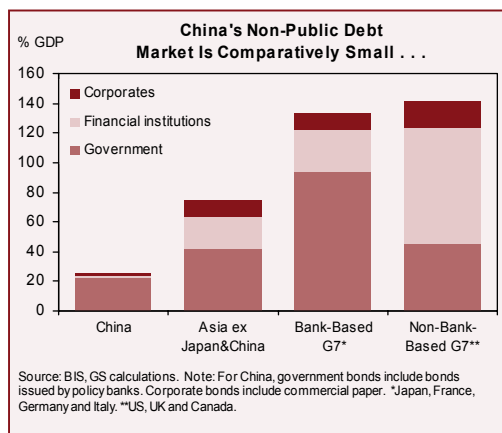
As we stress below, the size of China's DCM should not be the ultimate measure of China's progress towards a more efficient market. Nonetheless, if our growth projections (based on our BRICs framework and the analysis presented in this paper) are anywhere close to the mark, China's public and private debt markets have scope to become a key part of the international fixed income arena over the next decade. Provided further progress is made towards domestic financial liberalisation and capital account convertibility, China's bond market capitalisation could double, from 27% of GDP currently to around 60% by 2016, and could represent between 4% and 10% of G7 fixed income markets at that point—comparable to the share held by the German and French bond markets combined today.

## The Current State of Play in China's DCM

In headline terms, China's debt capital market has experienced remarkable growth over the past decade. From just RMB466bn (\$59bn) in 1997, the market has expanded twelve-fold to RMB5.6trn (\$707bn) at end Q3 2006. As a share of GDP, it has increased more than four times, from 5% to 27%. Yet this impressive headline growth has not been matched by a comparable process of maturation. The market is overwhelmingly populated by government bonds, which account for around half of the total outstanding debt securities, with the state-owned 'policy banks' representing a further 37%. Non-financial corporate debt of all maturities makes up just 9% of the total. The fastest-growing slice of the market is the commercial paper market, which the People's Bank of China (PBoC) established in mid-2005 in an effort to jump-start corporate debt borrowing.

Turnover is light, with commercial banks and credit cooperatives—who together own close to 75% of outstanding bonds—holding most securities to maturity. 95% of the secondary trading takes place in the inter-bank market, but the term 'inter-bank' is in fact misleading: among the market's roughly 6,000 registered participants are end-users such as mutual funds, insurance companies and some large non-financial corporations, along with the traditional commercial banks and broker-dealers. The other two markets for secondary debt trading (the Shanghai and Shenzhen exchanges and the tiny OTC market) play only a limited role.

To deepen liquidity, the government allowed 'title-transfer' repurchase trading in 2004 ('pledge' repo had already been available for several years) and has since introduced outright forward trading. From end-November 2006, inter-bank market participants will be able to borrow and lend securities against their inventories, in addition to cash collateral. Provided that the accompanying rules on tax and accounting implications are supportive, the short-selling of bonds should be facilitated by this pilot initiative.



### China's 'Hybrid' Approach to Monetary Policy

Until the late 1990s, monetary policy in China was conducted through binding credit controls, with the People's Bank of China (PBoC) setting quantitative limits on credit expansion. From 1998, it has operated under a more 'hybrid' framework, in which the PBoC must adjust its own balance sheet to manage the monetary base and to achieve its twin inflation and growth targets. The PBoC influences both the quantity of money and its price by acting on five inter-related levers:

- **The CNY managed 'crawling peg':** Although greater flexibility has been gradually introduced since mid-2005, and the authorities now make reference to movements against an undisclosed basket of currencies, the CNY is still *de facto* anchored to the US Dollar. The ability to steer interest rate policy autonomously relies on the fact that the country's capital account, albeit porous, is closed. In the current setup, China's changes in money supply are to a large extent determined by the amount of foreign capital inflows, the tolerated pace of CNY appreciation, and the rigidity and breadth of restrictions on the free cross-border movement of capital. They also depend on the extent and effectiveness of the Central Bank's 'FX inflow sterilisation' through open-market operations.
- **Open-market operations (OMOs):** OMOs currently represent the main instrument of monetary policy. Since mid-2003 the PBoC has also held weekly auctions for tradable Central Bank Bills. The stock of outstanding Bills, currently totalling around \$400bn, has soared since the end of 2004, mirroring the dramatic increase in FX reserves.
- **The discount rate/administered lending and borrowing rates:** Given that the big banks are flush with cash (loan-to-deposit ratios average 65%), most institutions do not need to access central bank refunding and are therefore relatively insensitive to changes in discount policy. Of greater relevance are the benchmark rates for lending and deposit, also set by the PBoC. By setting a ceiling on deposit and a floor on lending rates, the PBoC implicitly guarantees a minimum customer spread, protecting banks' profitability and shielding incumbents. The PBoC also sets coupon rates on corporate bonds.
- **Reserve requirements:** Faced with increasing liquidity in the system, the Chinese authorities have tightened the reserve requirement by a cumulative 300bp from August 2003 to 9.0% currently. Still, institutions hold voluntary 'excess' reserves worth around 3% of deposits, highlighting the fact that changes in mandatory requirements are not particularly binding. Mandatory reserves currently accrue interest at 1.89% p.a., while excess reserves are remunerated at 0.99% p.a.—setting the floor for money market rates. Changes in these rates contribute to overall liquidity conditions.
- **Administrative measures:** While credit quotas have been officially scrapped, both the PBoC and the China Banking Regulatory Commission (CBRC) resort to 'moral suasion' to persuade financial institutions to comply with official lending guidelines. This 'window guidance' is modelled on a system in place in Japan from after WWII until the early 1990s. In light of the difficulties associated with mopping up liquidity generated by the enormous FX inflows, such a strategy of 'benevolent compulsion' has become one of China's most actively used instruments of monetary policy in recent years.

### Highly concentrated supply of domestic debt

An overview of the **supply side of the debt capital market** reveals that it is highly concentrated:

- Since the 1990s, the authorities have moved away from borrowing from the Central Bank for fiscal purposes and have instead financed budget deficits through the domestic capital markets. As a result, the stock of **public-sector debt** has risen sharply over the past decade, reaching RMB2.8trn (\$349bn or 13.5% of GDP) at end-September 2006. Government securities currently account for 49% of China's total debt stock (we deliberately exclude the PBoC sterilization bills, which have accumulated at a rate of \$15bn per month in the year-to-date). The Ministry of Finance manages an auction-based issuance process, but much of the supply is mandated for compulsory take-up by primary dealers.
- **Financial bonds** issued by the three state-owned and government-directed policy banks are worth RMB2.1trn (\$264bn, or 10% of GDP) and account for 37% of total bond market capitalization. Funds raised through policy-bank debt are earmarked for state-mandated infrastructure and development projects. Liquidity in these securities on the inter-bank market is comparable to that of government bonds—that is to say, limited.

**The other segments of China's DCM are currently small**, jointly amounting to \$91bn or 13% of market capitalisation. Nonetheless, they are the areas with significant growth potential—if China can undertake the policy and regulatory reforms needed to support them.

- **Commercial banks**, which have been allowed to issue subordinated debt since 2004 and financial bonds since 2005, account for just 4% of the total fixed income market. The majority of the bonds outstanding in this category, which amounts to RMB207bn (\$26bn) as of end Q3:06, are issued by the 'Big Four' banks. As long as the level (and growth) of deposits remains as high as currently is the case, commercial banks will have limited incentives to issue financial bonds.
- China's non-financial **corporate bonds** represented just 1.2% of GDP at the end of 3Q2006 (RMB239bn, or \$30bn), or just 4% of total outstanding bonds. This is an extremely low figure even when compared with other bank-based economies, such as Japan (around 15% of GDP, according to BIS data) or Germany (close to 5% of GDP). A range of regulations—including issuance quotas, a 'merit-based' approval process and the need for credit guarantees from the major banks—restricts access to the largest firms, leaving private firms and smaller or weaker state-owned firms with virtually no access to the capital markets. Not surprisingly, debt issuance accounts for a mere 1.4% of China's external corporate financing needs, with bank loans providing close to 85% and equities 14%, according to figures published by the PBoC.

**China's Bond Market Capitalisation**

As of end September 2006	RMB bn	USD bn	% of total
<b>Government bonds</b>	2,771	349	49.6
<b>Policy bank bonds</b>	2,093	264	37.5
<b>Commercial paper</b>	263	33	4.7
<b>Corporate bonds</b>	239	30	4.3
<b>Commercial bank bonds</b>	207	26	3.7
<b>ABS</b>	13	1.6	0.2
<b>'Panda' bonds</b>	2	0.3	0.04
<b>Total</b>	<b>5,588</b>	<b>705</b>	<b>100</b>
<i>pro memoria: PBoC Bills</i>	3,260	411	

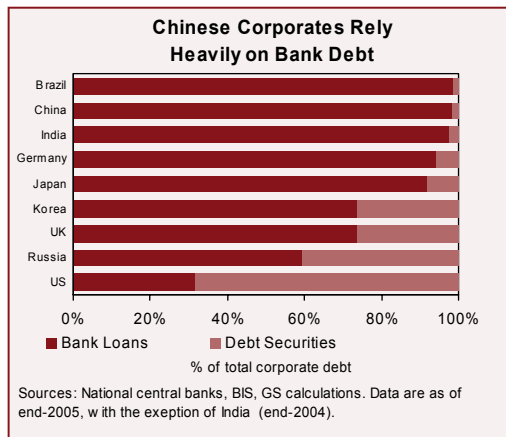
Source: ChinaBond

- One of the most meaningful innovations in China's DCM in recent years has been the establishment of a **commercial paper** (CP) market in mid-2005. At end-September 2006, this segment of the market was already worth RMB263bn (\$33bn, or 1.3% of GDP), representing just over half of all non-bank corporate interest-bearing liabilities and nearly 5% of the total market. The attractiveness of the CP market lies mostly in the fact that it provides a cheaper source of funding than corresponding maturity loans. Since commercial paper is largely taken down by banks and mutual funds, credit risk still ends up warehoused mostly by the domestic banking industry. Nonetheless, the CP market offers a forum in which participants can begin to understand and price risk, helping to build a 'credit culture' in China.
- Established in 2005 to help resolve the banking sector's non-performing loans (NPLs) problem, the **structured product** market currently represents only a tiny portion (0.2%) of the market, amounting to RMB13bn (\$1.6bn). Future growth is likely to be supported by three factors: the rapid growth in the mortgage market, ongoing housing reforms and the officially-acknowledged RMB1.1trn (\$139bn) overhang of NPLs in the banking sector. Legal and regulatory reforms will be needed to improve the governance framework and to increase demand for the equity 'tranche' of securitised assets.
- Lastly, '**panda bonds**' issued by foreign institutions. Since these were authorised in early 2005, the IFC (World Bank) and the Asian Development Bank have issued a total of RMB2bn (\$270mn) in RMB-denominated bonds in the domestic market. The government regulates the issue size, the interest rate and even the use of proceeds, which must be used exclusively in China. We see this as the early stages of an effort to open up to a broader range of international issuers. This could help mop up excess liquidity without having to resort to expanding the size of the PBoC's balance sheet.

What is **missing from this list** are the '**small and medium-sized enterprises**' (SMEs), which are the engines of economic growth and job creation. SMEs account for some 60% of China's GDP and industrial output and nearly 50% of total tax revenues. They also provide significant employment opportunities, especially in the less-developed regions. At the township level, for example, more than 75% of new jobs are created by SMEs. Yet, despite their critical role in the economy, SMEs have comparatively little access to bank loans and no access at all to the corporate debt market. Instead they are forced to rely on retained earnings and informal private financing channels, including funding from Hong Kong and Taiwan. The World Bank estimates that the 'kerb market' accounts for nearly 8% of China's total financing market, compared with just 1.5% in the OECD.

**Policy constrains the demand side too**

As with the supply side, government policy has constrained the growth of the **demand side** of China's debt capital market. This is not for lack of funds. The resources available through China's household savings are enormous, with the national household saving rate at 24% of disposable income—more than three times the OECD average. Most of these





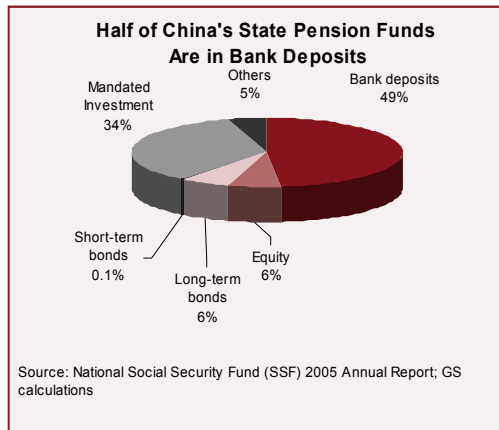
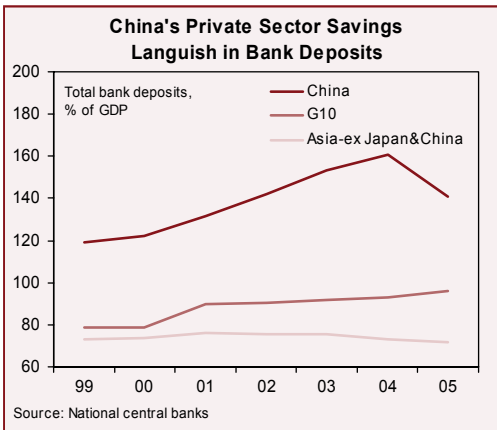
savings are 'precautionary' in nature, reflecting the low penetration of pensions and health and life insurance, minimal access to a consumer credit system and the lack of formal deposit insurance.

China has not yet been able to channel this deep pool of funds into the capital markets. A prime reason is simply the lack of sufficient investment vehicles to carry funds outside the banking sector. As of end-2005, **bank deposits** were a remarkably high 141% of GDP in China—despite the low rate of return these deposits offer (1-yr deposit rates are presently capped by the PBoC at 2.52%).

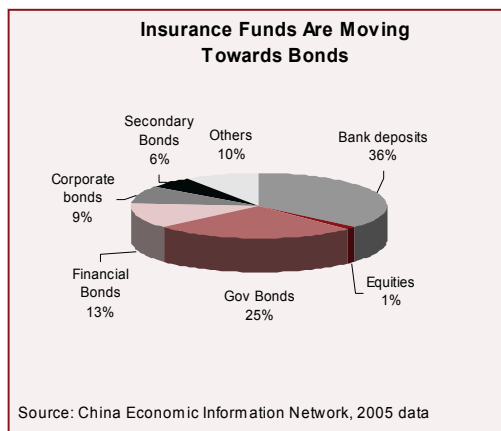
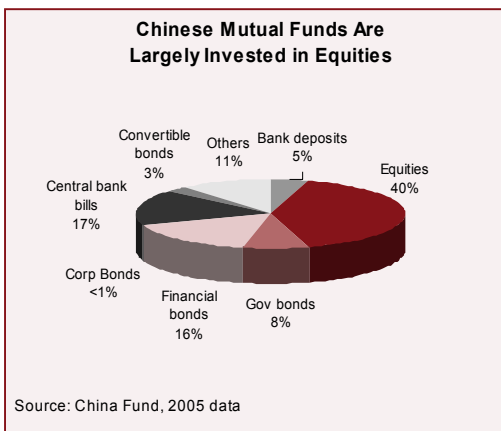
Deepening the institutional investor pool will be critical for the development of China's domestic debt market. Numerous empirical studies conclude that the presence of institutional investors is associated with greater liquidity, transparency and efficiency in the secondary market. The latter cannot function properly unless it includes a range of institutions whose differing characteristics lead them to have differing buying and selling interests.

The nascent institutional investor community in China currently consists of several sets of institutions that are emerging to replace the extensive social welfare programmes (which were funded and administered by SOEs) that marked the Maoist period. China formally adopted a 'three-pillar' system of state, occupational and private voluntary pensions in 1997, in line with general practice in developed countries.

■ **The 'pillar 1' state pension** is designed to provide a basic minimum pension that is not tied to wages. Its structure is complicated, but the key feature from the standpoint of DCM development is its reserve fund (the National Social Security Fund, or SSF). The SSF's assets have grown substantially since its establishment in 2000, reaching RMB255bn (\$32bn) at the end of 3Q2006. Government funding rather than investment returns has driven much of the growth. In addition to direct fiscal allocations, the SSF is by law entitled to up to 10% of the proceeds of sales of government shares in state-owned assets, including the recent listings of three of the 'Big Four' banks. The SSF can invest in a range of domestic assets, including equities and investment-grade corporate bonds; has taken strategic stakes in domestic firms; and has recently been given approval to invest in overseas assets. This investment flexibility is limited, however, by the fact that half its funds must—by law—be invested in bank deposits and Treasury bonds. Tighter investment restrictions have also recently been implemented in response to a pension funding scandal. Given China's worsening demographic position, there is enormous scope for the SSF to expand over time.



- **Occupational pensions** ('pillar 2'). China's first attempts at building occupational retirement schemes dates back to the early 1990s. The current legislation, effective from May 2004, allows for voluntary private pensions (or 'enterprise annuities'), which are co-funded by employers and employees. Although the enterprise annuity market is tightly regulated, the growing popularity of these vehicles, which are increasingly seen as instrumental for employee retention, has pushed their total assets under management to RMB79bn (\$10bn) as of mid-2006, with an estimated 10mn participants. The potential for further growth is extremely high, as long as the regulatory environment remains favourable. According to projections by China's Insurance Regulatory Commission, the 'pillar 2' market could reach RMB 1trn (\$125bn) by the next decade.
- The **insurance** sector, part of the private 'pillar 3' savings, is the most important institutional investor in the domestic market today. Having posted 30% average annual growth in premiums over the past 25 years, according to the China Insurance Regulatory Commission, assets under management reached RMB1.6trn (\$200bn) at the end of August 2006. This is roughly six times the size of the SSF. Penetration rates for both life and non-life insurance remain low by international standards, and Chinese households' focus on precautionary savings points to continued significant growth ahead. The insurance sector is taking a leading role in moving away from the banking sector: more than half of insurance assets are now invested in the domestic bond market, with nearly one-quarter in financial and corporate bonds, according to official data. Less than 40% is currently in bank deposits, compared with half of the SSF's assets.
- A further component of the private 'pillar 3' savings, **mutual funds**, are also pioneers in the move away from bank deposits. These funds, in the form of collective investment funds and securities companies, have been in existence for several years but have only taken off since commercial banks were authorised to offer them in early 2005. Assets under management, estimated at RMB470bn (\$60bn), are expected to grow further in coming years as middle-class incomes expand. A remarkable 40% of mutual fund assets are in equities, and we would expect mutual funds to boost their investments in corporate bonds (currently less than 1% of the total) as the credit culture deepens and the market matures.
- **Foreign institutional investors** are, as yet, limited to two channels. The Qualified Foreign Institutional Investor (QFII) programme, established in 2002, currently gives qualified foreign institutions access to domestic Treasury, convertible and corporate bonds, as well as



### A New Kid on the Block: China's Commercial Paper Market

In an effort to promote the direct funding of corporations, improve the liquidity of the short-end of the interest rate market and foster a more responsive pricing of credit risk, in May 2005 the PBoC allowed non-financial firms to issue commercial paper (CP).

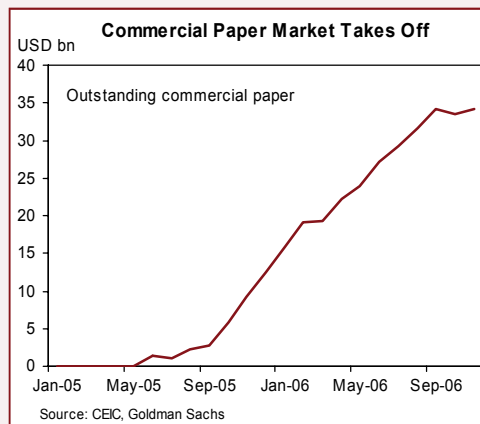
The requirements for tapping this market are notably more lenient than those for accessing the corporate bond market. Issuing firms must have legal status in China, have made a profit over the past fiscal year, and have shown a solid credit history for the previous three years. Moreover, issues need to be rated by at least two of China's five officially registered rating agencies. While the size of issuance is subject to a quantity approval by the PBoC on a firm-by-firm basis, the cost of funds is set by the marketplace. Book-building is managed by a commercial bank, which enters a 'hard' underwriting agreement in exchange for a fee.

Importantly, the underwriter has no legal obligation in the event of default. Should a credit event occur, however, 'moral suasion' exerted on the underwriting bank (backed by the threat of withdrawal of the license to conduct an underwriting business) is understood to act as a 'safety net.' At the time of writing, a decision on the first defaulted CP issue is pending; a bailout would have important negative signalling effects.

CP issuance has literally exploded in the months since its introduction, and as of end-October 2006 was worth RMB263bn (\$33bn), already more than the amount of outstanding corporate bonds. There have been 280 issues, with an average size of RMB1.4bn (\$170mn).

This dramatic growth trajectory is easy to explain. The CP market gives firms access to cheaper funding. CP also gives commercial banks—the largest buyers—access to a liquid tradable asset with the same regulatory risk-weighting as a corresponding maturity loan (100%), as well as a stream of underwriting fees.

The introduction of the CP market is a welcome development. It has improved liquidity at the front-end of the yield curve (though trading securities from the short side can be a painful experience) and is proving to be a good testing ground for dealers to price credit risk. Its major shortcoming is the legal framework. Absent a tested process for bankruptcy, credit risk will continue to flow from the corporate to the banking sector, with the government acting as lender-of-last-resort. This could potentially amplify, rather than reduce, systemic risks—a fact the monetary authorities acknowledge.



listed A-shares and non-tradable shares (subject to a \$10bn quota ceiling). Most of the QFII funds are invested in equities; foreign institutions gained direct access to China's inter-bank market for the first time in 2005, when two components of the Asia Bond Fund initiative made sizeable investments.

- The new **Qualified Domestic Institutional Investor** (QDII) programme allows accredited institutional investors to pool domestic funds and invest them overseas. While these funds will not invest directly in the domestic market, analysts expect that a meaningful portion will be managed in Hong Kong, and that they will ultimately be invested in China-related equity or fixed-income assets. The emergence of another type of institutional investor should, on its own, also strengthen the domestic market.

### **The Goal for Policy: Moving From Quantities to Prices**

International experience suggests that higher per-capita income and an ageing population should fuel the organic growth of China's debt market in the coming decades. We draw a tentative trajectory for China's bond market capitalisation below. It is important to recognise, however, that size is not the only indicator of the success of a debt capital market. In China's case, capitalisation alone may prove to be a particularly deceiving metric. Given the extent of the government's control over the economy, it would be relatively easy for the authorities to boost the corporate slice of the market by persuading state-owned and state-influenced companies to issue debt rather than take out bank loans. This would move China up in the bond league tables but, under the current regulatory framework, it would not deepen the market. Credit risk would still be transferred from the corporate sector to the banking sector, and at a regulated price. Secondary trading would also likely remain limited.

The key to a successful DCM, in our eyes, lies more in the efficiency of price disclosure and the transfer of risk across time and throughout the economy. Meeting these objectives will require extensive and deep changes to both the policy and the current regulatory framework. In this respect, the government's typically incremental approach to reform has clear benefits—but it also risks creating further distortions if macro policies (e.g., more active use of interest rates in the conduct of monetary policy) are not matched with actions at the more micro level (involving the regulatory regime and the legal framework). Certainly, capital market reforms should be measured, giving institutions and market participants time to adapt. But liberalising only one segment of the market—particularly against a backdrop of large capital inflows—may exacerbate existing imbalances. The booming commercial paper market is one example of this type of risk.

Chinese policy-makers appear to be aware of these issues. The steps they have taken in the past few years have been in the right direction, introducing changes both on the external side (the new FX framework does allow for greater exchange rate flexibility, for example) and on the internal front (the removal of the ceiling on lending rates, for instance, allows banks to better discriminate between borrowers). But this is not enough to put DCM development on a self-sustaining footing.

### Giving Pensions a Pivotal Role in China's DCM

One facet of 'moving from quantity to prices' involves addressing China's pensions problem head-on. During the 1990s, pensions were a key obstacle to SOE restructuring, as older workers resisted layoffs from the companies that were the only source of their PAYGO-funded retirement income. Over the past decade, China has slowly adopted a 'three-pillar' pension system, structured around a combination of a basic state pension, occupational pensions (called enterprise annuities) and private savings, in line with established practice in some industrialised countries.

The 'first pillar' programme is a defined-benefit programme of sorts, providing a standard pension payment that is not linked to individuals' wages. The programme contains both a PAYGO component and individual accounts, which are nominally funded. This programme is back-stopped by a reserve fund, the National Social Security Fund (SSF), which is also meant to help ease the transition to the new system for older workers whose pensions suffered from the SOE restructuring. Estimates of the cost of this transition range widely; the SSF Chairman has quoted a figure of RMB2trn (\$250bn).

Despite rapid growth since its establishment in 2000, **the SSF remains significantly under-funded**. Its assets of RMB255bn (\$32bn) as of 3Q2006 hardly make a dent in the estimates of the transitional costs alone. This under-funding translates into small payouts and limited coverage, even in urban areas. As China's demographic position worsens in coming decades, the funding needs will intensify.

Given the Fund's focus on preservation of capital, investment returns alone are unlikely to suffice. By law, **at least half of the Fund's assets must be invested in bank deposits and Treasury bonds**, while corporate and financial bonds are capped at 10% of the portfolio. As of end-September, nearly one-quarter of the fund was in equities, which has helped to boost returns on the fund to 6% in the year-to-date, compared with a meagre 3% in 2005. The Fund is also allowed to take stakes in domestic companies and has recently been given the go-ahead to invest overseas. But significant growth will likely depend on further central government allocations, or on the SSF's entitlement to 10% of privatisation proceeds.

One way for the government to accelerate the pace of SOE restructuring, separate social responsibilities from banks' commercial objectives more clearly, and put the 'three-pillar' system on a stronger footing would be to **explicitly assume the outstanding pension liabilities of the state-owned sector**. The cost and details of this type of fiscal transfer would depend on a number of policy choices, but a plausible route would be to fill the 'transitional' shortfall in the SSF's funding. As stated above, a rough figure for this transfer would be in the region of RMB2trn (\$250bn), or nearly 10% of GDP.

**A transfer of such magnitude is well within China's means.** To put this in context, it would be less than the \$300bn that China has already spent to recapitalise the banking sector. It would also be just one-quarter of China's vast pool of foreign exchange reserves (which have risen at an astounding average pace of \$19bn per month since the start of the year and now stand in the region of \$1trn). China has already tapped its FX reserves to inject \$60bn into three of the 'Big Four' banks, so reserves are clearly not 'off limits.' Given our estimate that the 'optimal' level of Chinese FX reserves is about \$200bn, an inter-generational transfer of this kind would seem a sensible option.

**Giving Pensions a Pivotal Role in China's DCM** *(continued)*

Formally funding the SSF—rather than simply shifting its unfunded liabilities to the government's balance sheet—would have the benefit of segregating these pension funds, thereby helping to ensure that investment income is not diverted to other government priorities, and potentially boosting individuals' confidence in the system. Greater confidence could in turn **help to reduce the level of precautionary savings and shift more funds into the domestic capital markets**. Capitalising the SSF, and adopting less conservative investment guidelines using the example of countries such as the Netherlands and Japan, also offers China an opportunity to build a key pillar of demand for domestic securities, and ultimately to channel savings into more productive uses. The experiences of Mexico and Chile show that pension innovation can be an important catalyst for the maturation of domestic capital markets.

At the level of macro policy, we see at least **three inter-related priorities**, which should—ideally—be addressed simultaneously:

**Allowing greater exchange rate flexibility and progressively removing interest rate controls**

This is an over-arching issue and will have important consequences for the economy as a whole, not just for the capital markets. China's current exchange rate regime constrains the use of market-oriented instruments—interest rates chief among them—in the conduct of monetary policy. This has the unfortunate side-effect of curtailing the pace of local debt market development.

Faced with limited investment alternatives outside deposits, strong speculative capital inflows are compounding large domestic saving accumulation, channeling liquidity into the banking sector and, in turn, fuelling credit expansion. Against this backdrop, raising policy rates would appear appropriate to prevent the economy from overheating and sparking inflationary pressures. But this solution could lead to its own set of difficulties by spurring even higher capital inflows from abroad.

The PBoC has instead issued vast amounts of sterilisation bills and repeatedly increased reserve requirements. Thus far, such wholesale liquidity mop-up operations have not been costly, since the rates paid on Central Bank Bills have been on average below those on the medium- and long-term foreign securities in which FX reserves are for the most part held. This favourable situation could change, however, if domestic price inflation were to accelerate, and/or if monetary policy abroad, particularly in the US, were to be eased.

With these operational constraints in mind, it is easier to understand why the monetary authorities still need to resort to various direct price and quantity credit controls, in spite of their declared ambition to progressively abandon administrative measures. This creates a vicious circle, inhibiting market forces from pricing and determining the quantity of credit, and ultimately impairing the transmission mechanism of monetary policy. The benefits of being able to steer monetary policy autonomously through market instruments are already becoming increasingly apparent as China integrates further with the global economy and becomes more exposed to potential external 'shocks'. For this reason, the greater scope for

exchange rate flexibility in place since the currency arrangement reform in 2005, the removal of ceilings on lending rates and the opening of the commercial paper market are all very welcome developments, which can work best if they are allowed to reinforce one another.

### **Drawing a clearer separation between fiscal policy and the banking industry**

A second area of policy change involves the public sector pulling back further from the financial industry, allowing banks to allocate their assets on the basis of economic targets and bear the full risks associated with those decisions. This is likely to be a difficult ‘divorce’.

Despite China’s remarkable transformation over the past quarter-century, the legacies of state control, extensive social welfare programmes and the desire for social stability remain strong. The role of the banking sector as an arm of the state is at times explicit, as policy-driven lending is allocated or withheld to support government priorities. More worrisome from our perspective is the fact that lending is often used as an indirect means of social support for uncompetitive industries. In many cases, large firms are not allowed to go out of business for fear of the associated unemployment and social dislocation. This strategy has been expensive, because the government has addressed the resulting non-performing loans problem by carving out nearly RMB2.4trn (\$300bn) from the ‘Big Four’ banks. We do not see it as a sustainable solution to the problem of uncompetitive state-owned enterprises.

A better solution, in our view, would be to re-categorise public-welfare concerns explicitly as fiscal obligations of the central government. Pensions for retirees, unemployment relief for those cast out of work and social relief for unemployable workers are typically—and rightly—seen around the world as government responsibilities. In China the case for this is even stronger, since the ‘firms’ that originally assumed these obligations were unambiguously arms of the government. Although some of these obligations may be within the jurisdiction of the provincial governments, the country’s fiscal dynamics suggest that only the central government would be able to assume them. Many observers regard these obligations as ‘quasi-sovereign’ in any case; making this official would eliminate one of the overhangs on both the banking sector and the major corporates. The size and nature of these sorts of transfers would depend on a number of policy choices. Whatever the specifics of the ultimate plan, shifting these obligations onto the central government’s balance sheet would be well within China’s financial means. It would be an extremely helpful step toward both a more robust banking sector and stronger capital markets.

### **Promoting a diversified base of non-bank institutional investors**

One means of creating viable substitutes to bank deposits would be to take steps to establish a broad base of institutional investors. Building up such a base will require proper incentives and safeguards for savers, as well as a more flexible regulatory structure for investors. From the standpoint of savers, China could use fiscal levers to encourage a shift of funds out of bank deposits and into mutual funds, voluntary insurance and pension schemes. The experiences of Germany, France and Japan—where households held a vast percentage of their financial assets in bank deposits at the start of the 1980s—suggests that these incentives can go a long way in reallocating saving flows.

The fiscal lever can also be used to influence the composition of institutional demand, in line with government preferences. For example, fiscal incentives promoted life insurance companies



in Germany, corporate pension schemes in Japan and mutual funds (SICAV) in France. Importantly, the increase in the share of institutional investors in the debt capital markets does not need to come at the expense of the banking industry, which frequently controls the new enterprises.

### **The Rules of the Game: Strengthening the Regulatory Landscape**

Drilling down to specifics, it is clear that China has made notable progress over the past 18 months in strengthening the regulatory framework governing the domestic capital market. More work is still needed, however, particularly in order to translate the macro policy objectives described above into an efficient marketplace. We group these specific issues into **three broad categories**: first, relaxing the administrative controls; second, fostering a credit culture; and third, strengthening the market infrastructure.

#### **Relaxing administrative controls on corporate borrowing**

A variety of regulatory constraints interact to discourage corporates from seeking funding in the debt market. For one, the regulatory regime is cumbersome and opaque, with four agencies sharing responsibilities for the issuance approval. Shifting primary oversight from the National Development Reform Commission (NDRC) to the China Securities Regulatory Commission (CSRC), a move China is reportedly considering, would be helpful. Thanks to its position as the lead regulator of the domestic equity markets, the CSRC has extensive experience with approval, disclosure and listing standards. It is seen as one of the more 'activist' market regulators in China, with a focus on professional staffing and standards.

Beyond the re-allocation of responsibilities, the conceptual framework behind regulation of the corporate debt market also needs to be reworked. For the reasons of monetary and social policy that we have discussed, regulators exercise tight control over the entire debt issuance process. Approval is 'merit-based' rather than 'disclosure-based' and is subject to quotas. These two requirements interact in a particularly troublesome way, often steering funds into uncompetitive SOEs. Even the PBoC Governor has openly described the quota system as 'a relief measure for financially distressed enterprises'.

Two further restrictions limit the market's ability to price risk. First, corporate bonds require credit guarantees (usually from the major banks), meaning that investors ultimately bear the credit risk of the bank rather than of the issuer. This leaves them with little incentive to do real due diligence or to price corporate risk appropriately. (The first issuance of a corporate bond without a guarantee earlier this year suggests, encouragingly, that China is beginning to phase out this requirement.) Finally, the PBoC determines the coupon rate on corporate bonds, further undermining the market mechanism in the allocation of credit.

#### **Fostering the growth of a credit culture and lowering expectations of bailouts**

A critical facet of any credit culture is the bankruptcy system. Until recently, the lack of an effective, timely and relatively inexpensive bankruptcy and foreclosure system in China had discouraged creditors from lending to all but the best-connected firms, and had prevented the credit markets from pricing risk effectively. By passing a new bankruptcy law in August 2006,



### **China's Bankruptcy Law: A Long and Winding Road**

With the passage of a new bankruptcy law in August 2006, China has taken an important step in offering creditors a timely, affordable and effective means of pursuing claims. The new law is designed to streamline the bankruptcy process and to unify the procedures for SOEs and private firms, replacing a patchwork of overlapping and outdated structures and regulations. Under the previous system, successful bankruptcy proceedings had been relatively rare, time-consuming and expensive, with average cases lasting two and a half years, costing 22% of the estate value, or three times the OECD average, and yielding a recovery rate of just 31.5 cents on the \$, less than half the OECD average, according to the World Bank. In addition to streamlining the procedure and unifying the processes for both state and private companies, the new law is notable for its willingness to subjugate workers' claims to those of creditors—though how this will play out in practice is not yet clear.

Implementation of the new law, beginning in mid-2007, will be a critical challenge. Arguably, the Chinese judicial system is not well-equipped to handle a large number of bankruptcy cases. There is only one specialised bankruptcy court in the country, and few judges will have expertise in bankruptcy law. Substantive knowledge and experience will need to be built over time, perhaps with assistance from overseas.

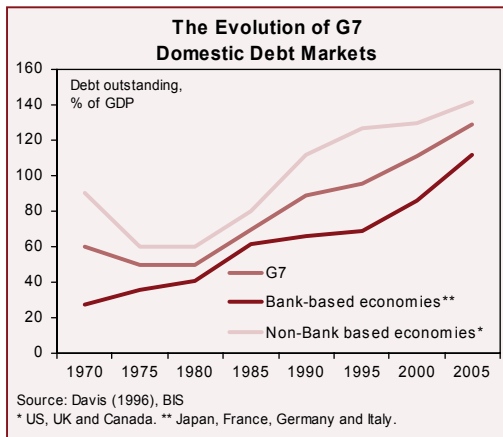
Creditors will need to embrace the new system if it is to be effective. Here, uncertainty and a lack of transparency and precedents may weigh against a rapid uptick in the number of cases filed. As yet, few listed companies have filed for bankruptcy, and none has ever formally completed the process. Though big banks' balance sheets are burdened with non-performing loans (NPLs), banks have an incentive to keep these loans on the books rather than write down their assets. The government's willingness to recapitalise some RMB2.4trn (\$300bn) of the largest banks' NPLs in recent years has proven this to be a fairly profitable strategy.

China has taken an important step to streamline the process and to enhance creditors' standing. Although there may be questions as to how well the legal system can handle any flood of bankruptcy cases once the law becomes effective in mid-2007, we see it as a clear signal that China is serious about improving the investment climate.

China can also promote a vibrant credit culture in other ways: fostering improved corporate governance standards, insisting on more rigorous disclosure, and moving towards international accounting standards. If and when credit guarantees are fully eliminated, these issues will quickly take on a far greater importance. Support for domestic ratings agencies will help to improve the quality and quantity of information available to investors. Critically, the government will need to give regulators free rein to enforce strict standards without concern for any political fallout.

### **Strengthening the market infrastructure**

Given the low liquidity in the secondary market, it will be important to make a clearer distinction between the wholesale market, where a short-list of primary dealers who have access to the primary market operate, and the market for end-users, such as institutional investors and corporates, who should not participate in the inter-bank market. This would establish the



appropriate economic incentives for dealers to offer liquidity and, in turn, increase the depth of secondary trading. An additional priority should be to further improve the functioning of the repo and securities lending markets, and to clarify the related tax and accounting issues, in order to facilitate the short-sale of bonds and to increase the relevance of market pricing.

China does appear to be moving forward on many of these initiatives. The new bankruptcy law, the creation of the commercial paper market, the inaugural issuance of debt without a bank guarantee,

reports of plans to abolish the quota system and, most recently, the introduction of pilot plans to support short-selling of bonds, all point to a high-level commitment to improving the regulatory landscape. As with many reforms, change is likely to involve test cases and *ad hoc* waivers; we would see these as encouraging harbingers of future policy shifts.

## The Outlook for China's DCM

Notwithstanding our emphasis on efficiency rather than size, China's ageing population, strong economic growth and the prospects of future financial liberalisation would all seem to point toward a much larger domestic debt market. The key questions for investors are of course 'how large?' and 'by when?' In attempting an answer, we need to acknowledge the absence of a consensual theoretical framework to determine the size of a local debt market, not to mention the limitations of empirical analysis in this area. To illustrate our point, it is often argued that economic development and corporate governance *are affected by* capital market development, rather than the other way around.

We turn to international experience for guidance. In the early 1970s, the G7 bond markets were roughly in a similar shape to those of China today, and the key drivers behind their growth between then and the mid-1990s could serve as a template for things to come:

- G7 markets embarked upon a wide-ranging process of **financial deregulation** starting in the early 1970s. Key steps included the abolition of interest rate and FX controls, and the liberalisation of fees and commissions. China is beginning to take similar steps now. Although this process has only begun, we believe it will eventually promote greater debt-security financing.
- **Demographics** have worsened considerably since 1970 in developed countries, with most (except the US) moving out of the 'demographic window' that is most conducive to economic growth. China's population is also ageing rapidly amid gains in life expectancy and the preservation of the one-child policy. As a result, China's demographic window is expected to close in about 20 years, at which time 14% of the population will be 65 or older, up from just 8% today. Ageing could promote the development of the pension and life insurance markets, increasing the demand for bonds. The supply of fixed income

### The Future Size of China's Bond Market

Our statistical analysis relies on a panel of data for all G7 countries spanning 1970-1995. Due to the low frequency nature of evolution in bond markets, we look at the data in five-year snapshots. This gives a time series of six observations across the seven countries. In line with this, we estimate the following equation:

$$\text{SIZE}(i,t) = \text{GDPC}(i,t) + \text{DRTIO}(i,t) + \text{FINLIB}(i,t-5) + e(i,t)$$

where the index *i* stands for each of the G7 countries, *t* is time, and the variables are defined as follows:

- SIZE is the capitalisation of the bond market as a share of nominal GDP.
- GDPC is per-capita GDP (in \$ terms).
- DRTIO is the 'dependency ratio', defined as the share of the 65+ age cohort to the working age cohort (15-64). Data comes from the UN population statistics.
- FINLIB takes the values (1, 2 or 3) that represent the degree of financial liberalisation. For details, see Kaminsky and Schmukler, *Short-Run Pain, Long-Run Gain: The Effects of Financial Liberalisation*, World Bank, 2002.

The coefficient estimates of the pooled regression are reported in the table, alongside standard statistics. Other linear specifications were also used, with the results roughly consistent with those reported here.

Impact on Debt-to-GDP Ratio of Different Factors

Factor	% of GDP Change*
A 10% increase in per-capita GDP	2.5 (8.6)
A full financial liberalisation	12.2 (1.7)
A 1 point increase in the 'dependency ratio'	1.8 (4.7)
R-Square	0.41
Durbin-Watson	2.03

Source: GS calculations

\* t-statistics are reported in brackets.

instruments should increase as the fiscal position worsens due to slower tax revenue growth as well as to rising health care and social security expenses.

- G7 bond markets have grown in tandem with the countries' **economic development**. From a supply-side perspective, economic development in these markets has usually been associated with a gradual reduction in state ownership of the corporate and banking sectors, and with improving corporate governance. These processes have enhanced the reliance on debt-security financing. On the demand side, growth in per capita GDP in G7 economies—a reflection of significant wealth creation—has been accompanied by a greater role for institutional investors. China's economic development is unfolding rapidly, and the same process seen in these markets is likely to occur in China as well.

Our cross-sectional regression analysis for G7 countries examines the interplay between debt market capitalisation, economic development (as proxied by GDP per capita), financial liberalisation and population ageing. Between 1970 and 1995, the bond markets of Europe and Japan increased, on average, by the equivalent of 70% of GDP. Just over two-thirds of this growth can be attributed to the expansion in income per capita.

## Bonding the BRICs: The Ascent of China's Debt Capital Market

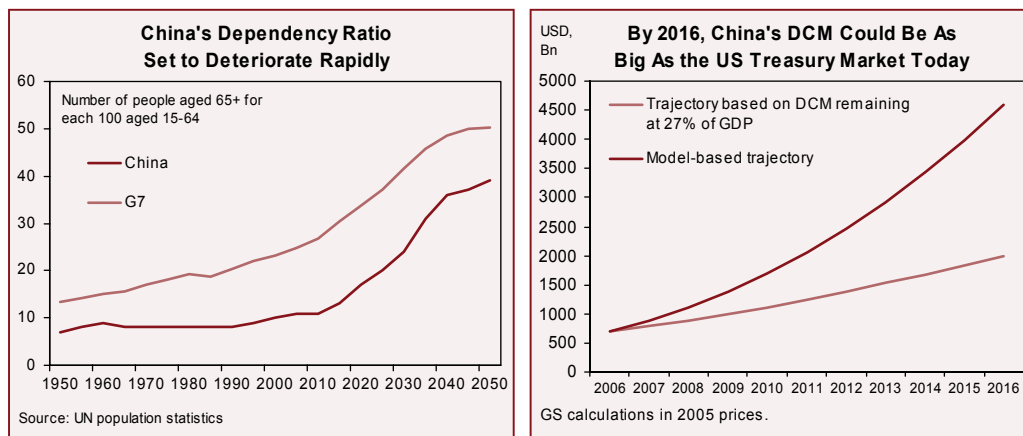
Assuming average annual GDP per capita growth of around 6%, consistent with our BRICs framework, a gradual move towards further domestic financial liberalisation and capital account convertibility, and a deteriorating demographic picture (using the UN's demographic projections), we calculate that the Chinese bond market capitalisation could reach just over 60% of GDP by 2016, from 27% currently. Around half of this growth (or 16% of GDP) is related to economic development. An additional one-third (12% of GDP) is linked to the expected financial sector reforms.

The remainder is associated with deteriorating demographics, as captured by China's rising 'dependency ratio' (the ratio of people over age 65 as a share of the working-age population). This latter factor has scope to become even more prominent in the following decades, considering that the ratio is predicted to increase from 11 to around 14 by 2016, and then to rise even more rapidly until 2040.

Based on our BRICs baseline projections, a Chinese debt market worth close to 60% of GDP in 10 years would be in the vicinity of \$4.5trn in today's prices, roughly equal to the current size of the US Treasury market. In US Dollar terms, this central projection implies an annual real growth rate of 20%, compared with the 34% rate observed over the past decade. The slower growth pace is to be expected as the market matures, and as the focus of growth shifts away from government securities to corporate debt.

On the assumption that debt-to-GDP ratios in the G7 markets remain stable at their current level over the coming decade (though the debt composition may change, this does not look like a completely unrealistic scenario), China's DCM could represent 10% of G7 debt market capitalisation in 10 years' time—up from just under 2% currently. In today's prices, this corresponds to the relative size of the German and French bond markets combined today. Even under the much more conservative assumption that China's DCM stays constant as a share of GDP at the current ratio of 27%, our BRICs GDP growth projections suggest that it could reach a level comparable to 4% of the combined G7 fixed income markets by 2016.

Whether China can expand its local debt market will depend to a large extent on its ability and willingness to embrace regulatory flexibility and a 'market-oriented' mindset, to manage its exchange rate policy in a more flexible manner, and to find an equitable yet effective solution to the pensions problem. This is a tall order, and implementation is bound to be rocky at times.



But the payoff—in terms of a robust banking system, strong state-owned enterprises, a thriving private sector and perhaps even an improved sense of social stability—could be enormous. Developing the domestic debt market will be a key step to the ‘BRICs dream’ playing out in China.

### **Conclusions: China's DCM to Fulfill Its Potential**

Since the economic reform programme accelerated in the early 1990s, and particularly with WTO entry five years ago, China has become deeply integrated in the global economic system, as evidenced by its growing export shares across the industrialised economies. Yet, viewed from the perspective of the maturity of its financial market, China's weight in the global scene is comparably much smaller and likely below its potential. A growing gap between the real economy and its financial underpinnings could create increasing challenges for the conduct of monetary policy (which has already had to revert to using direct controls in recent years to slow money and credit creation), potentially expose systemic risk in the banking sector and, eventually, undermine the sustainability of economic growth itself.

Well aware of these issues, the Chinese authorities have set out to gradually reform their banking and financial infrastructure, particularly since the start of the decade. A ample war-chest of hard currency reserves should allow for a smooth transition period, increasing the chances of success. Over time, Chinese households could benefit from the ability to shift resources across time (both on a forward-basis, through pension and insurance accumulation plans, and in reverse, thanks to mortgage and consumer credit markets). Domestic financial institutions are best placed to take advantages of these profitable businesses, which will allow them to reduce the resources devoted to traditional corporate lending functions, as has been the case in most industrialised economies. Finally, corporates will enjoy a wider range of financing alternatives.

The reform road is long and winding, but the destination—resource allocation based on price signals rather than quantity controls—is worth the journey. International observers attempting to monitor the pace of Chinese domestic capital market reforms should focus on a few key signposts, namely: the implementation of the new bankruptcy law; measures to bolster the role of institutional investors; and a gradual removal of deposit and lending rate controls, which would expose banking institutions to greater competitive pressures. On the external side, progress on currency flexibility and, eventually, capital account convertibility remain key to watch.

**Francesco Garzarelli, Sandra Lawson, Michael Vaknin, Zhong Sheng\* and TengTeng Xu\***  
**November 20, 2006**

\* Zhong Sheng and TengTeng Xu were summer interns in the Economics Department and are now at Cambridge and Oxford Universities, respectively.