China's Emerging Domestic Debt Markets

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1. THE CONTEXT: FINANCIAL SECTOR REFORM - A BRIEF OVERVIEW

The modernization and internationalization of China's financial system is perhaps the last and in some ways, most difficult chapter in the country's economic transition from plan to market. Partly driven by China's WTO commitments, the speed of the financial sector reform has accelerated since the beginning of this century, especially since 2003. With the important exception of the Agricultural Bank of China, most commercial banks (state-owned and others) have been incorporated under China's Company Law, restructured and recapitalized. Many attracted foreign strategic minority partners. Four of the five central government-owned commercial banks (Bank of Communications, China Construction Bank, Bank of China, Industrial and Commercial Bank of China) listed successfully on the Hong Kong stock exchange and (in the case of ICBC) also on the Shanghai stock exchange. At the same time, efforts are being made to deepen and broaden domestic capital markets. Problems that seemed almost intractable only a few years ago, such as the massive overhang of non-performing loans (NPLs) and of non-tradable government shares in listed companies have been addressed and are gradually being resolved.

Popular confidence in domestic equity markets returned in 2006, a year that saw a record number of new domestic IPOs after a temporary suspension of new share issues. In the early part of 2007 authorities became very concerned about the development of potentially dangerous stock market 'bubbles'. An 8.9% drop of the Shanghai Composite Index on 27 February 2007 (after it had risen 130% in the preceding 12 months) triggered share price drops around the world the next day and much nervousness in financial markets. Shanghai's surprising global impact reflects growing awareness of (1) the significant extent to which China's economy has become "globalized", (2) the fact that China is now the fourth (almost third) largest economy and third largest trader, and (3) the enormous appetite of foreign investors for Chinese equity in spite of the fact that China's currency remains unconvertible for most capital account transactions.

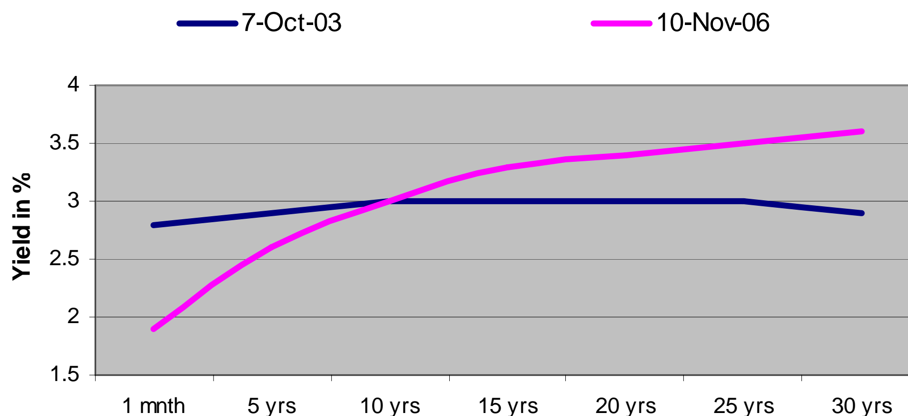
Primary and secondary debt markets – the subject of this chapter - are expanding rapidly, while the regulatory framework is being adjusted to reduce market segmentation, improve market liquidity and relax investment restrictions. The variety of tradable debt instruments has increased significantly in recent years. Apart from government bonds, policy bank bonds, non-financial corporate bonds and commercial drafts – debt instruments traded prior to 2003 - the market now also includes (1) central bank sterilization bills, (2) short-term corporate bills, (3) subordinated commercial bank debt, (4) bonds issued by other financial institutions, (5) RMB bonds issued by multilateral

financial organizations (Panda Bonds) and (6) securitized bonds and various derivatives. Of these new instruments, central bank sterilization bills are unrelated to corporate funding, but they have become a very important component of domestic capital markets.

With the growing institutional investor base, market participation in both equity and debt markets has widened significantly. For example, the number of licensed participants in the interbank market – by far the largest and most important component of China's financial markets - now runs into the thousands, up from few hundred in the mid-1990s. Possible additional debt instruments, currently under consideration include: (1) RMB-denominated bonds that may be issued by China Development Bank in Hong Kong to take advantage of the growing RMB deposit base there, (2) bonds issued by qualifying lower-level governments for the financing of local infrastructure, (3) RMB-denominated bonds issued by foreign corporations operating in China (to reduce foreign exchange inflow and thus ease upward pressure on the exchange rate, and (4) foreign currency-denominated debt issued by domestic firms in the domestic market.

China's domestic bond market is already the second largest in Asia after Japan's. Most trading takes place on the interbank market which has become the backbone for downstream financial markets and also serves as medium for open market operations by the central bank. In early January 2007, China's central bank introduced the Shanghai Interbank Offer Rate (SHIBOR) as a benchmark money market rate. These factors, together with the ongoing liberalization of interest rates and a gradual relaxation of capital account restrictions contribute to the development of market-based pricing for bonds and loans of different maturities and facilitate market-oriented monetary policy, while setting the stage for a more flexible exchange rate policy. A few years ago, yield curves for government bonds were essentially flat, reflecting market-insensitive, administrative pricing and pervasive interest controls. A more meaningful reference yield curve is emerging (See Figure 7.1).

Figure 7.1: Typical yield curves for government bonds on two arbitrary dates: 7 October 2003 and 10 November 2006



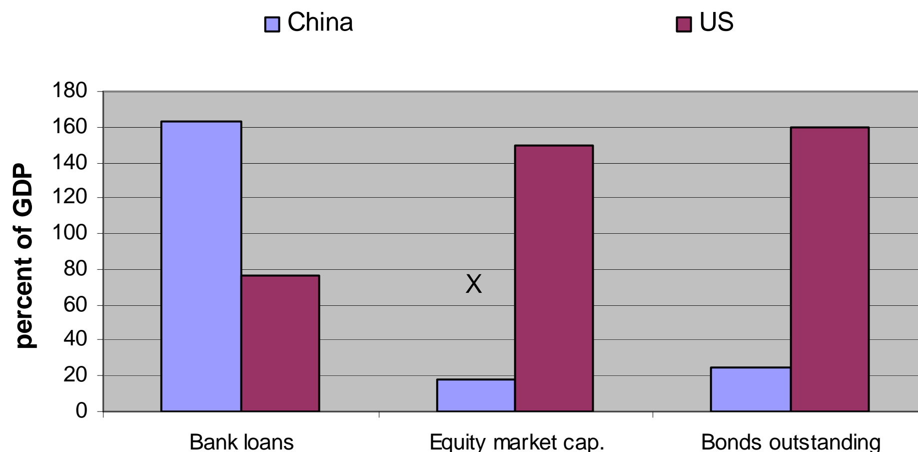
Reliance on the banking system for corporate financing has diminished somewhat in recent years due to high corporate profits and China's tradition to allow state-owned enterprises to reinvest profits without paying dividends. (This policy is now being changed – see below.) Corporate reliance on the banking system for *intermediated* funds, however, remains extremely high (close to 90% in recent years). China's financial markets remain bank-dominated, but the relative importance of equity funding is bound to increase and, as explained below, it is likely that corporate bonds will also become more important in the years ahead. The revival of China's stock markets and resumption of domestic IPOs in June 2006 (after a 12 months suspension of new issues, pending solutions for the non-tradable share problem) marks an important change. The non-financial corporate bond market has remained very small and restricted to a small number of large state-owned enterprises. This is likely to change in the years ahead as a result of the recent approval by the National Peoples Congress of a new Bankruptcy Law (2006), China's first ever Property Rights Law (March 2007) and the following two decisions by the National Financial Working Conference of January 2007 (namely (i) that state-owned corporations should start paying dividends to the state and (ii) to shift part of the responsibility for authorizing corporate bond issues from NDRC to CSRS), it seems likely that China's non-financial corporate bond market will widen and deepen significantly in the coming years.

Most recent measures aimed at developing China's capital markets are based on *"Opinions of the State Council on Promoting the Reform, Opening and Steady Growth of Capital Markets"*, a long-term perspective plan approved in January 2004. The least satisfactory aspects of China's financial markets at this time are: (1) highly speculative share buying practices on the stock exchanges, (2) inadequate access of private companies to state bank loans and capital markets, (3) a lack of transparency in the operations of the asset management companies that were created in 1998/9 to recycle NPLs, (4) excessive dependence of corporations on bank loans for domestically intermediated funds, (5) inadequate corporate governance standards, (6) still weak supervision by the regulatory agencies, and (7) overly restrictive investment regulations for pension funds and other institutional investors.

2. TRENDS IN FINANCIAL INTERMEDIATION

Banks continue to dominate financial intermediation in China (for a comparison with the US see Figure 7.2), but their relative importance is slowly diminishing, as the role of capital markets expands. The efficiency of domestic intermediation is improving, but too much capital is still allocated to low return or overly risky projects.[2] Part of China's abundant national savings continues to be intermediated through international capital

Figure 7.2: Structure of Financial System Assets: China and the US end of 2005



Source: IMF

markets at considerable cost to the national economy[3] – i.e. China attracts expensive FDI while investing in low-return foreign exchange reserves. The share of new corporate finance mobilized from capital markets – typically below 10 percent – rose to above 20 percent in 2006. This is mainly the result of the recent revival of China's domestic equity markets (boosted by reforms associated with the new Company Law and the new Securities Law which both became effective in 2006), large Chinese IPOs in Hong Kong, and the development of a rapidly growing market for short-term corporate debt since May 2005. A further opening of the domestic A-share market to qualified foreign institutional investors (QFII) and successful efforts to make non-tradable shares in listed companies tradable (after a lock-up period of up to 3 years) contributed to stock market revival.

After 5 years of malaise and anxiety about the future of non-tradable shares, China's stock exchanges seem to have entered a new phase of rapid expansion and institutional development which will eventually almost certainly include the integration of A and B share markets. Share prices recovered from their long slump since 2001 and there has been a veritable flood of domestic IPOs since the market was reopened for new share issues in June 2006. Speculative share purchases by individual shareholders[4] and public agencies, often irresponsibly financed, remain a major concern. It would be a major bonus for China's financial reforms if the short-term speculative behavior of numerous investors could be curbed and if domestic stock markets could begin to contribute to higher corporate governance standards through strict supervision of the markets and shareholder scrutiny of listed companies. This will require larger market participation by institutional investors (including qualified foreign institutional investors - QFIIs), mutual funds and the introduction of short selling and stock-index futures.[5]

3. GOVERNMENT RECOGNITION OF THE IMPORTANCE OF HEALTHY DEBT MARKETS

Especially since 2003, China's government has made great efforts to develop, integrate and better regulate domestic debt markets. Large, diversified and sound debt markets are needed to:

1. Reduce the dependence of corporations on banks for their funding needs.
2. Assist lower level governments in the financing of local infrastructure.
3. Satisfy the need of institutional investors for a broader range of financial instruments.
4. Permit market-oriented monetary policies by the central bank.
5. Facilitate the recycling and ultimate disposal of non-performing loans (NPLs) through capital markets.
6. Facilitate the gradual opening of China's capital account and flexibilization of the exchange rate.

In recent years the government has actively promoted the development of new debt instruments such as: (1) subordinated bonds issued by commercial banks (June 2004), (2) bonds issued by banks other than the three Policy Banks, e.g. Shanghai Pudong Development Bank, China Merchant Bank and Industrial Bank (the former Fujian Industrial Bank) (April 2005), (3) asset-backed securities, including mortgage loans and other financial assets such as NPLs (April 2005), (4) short-term corporate bills (May 2005) and (5) RMB-denominated 'Panda Bonds' issued by the Asian Development Bank and the International Finance Corporation (October 2005). Additional instruments planned or under consideration include: (1) RBM-denominated bonds issued by mainland banks (e.g. China Development Bank) in Hong Kong to take advantage of the rapidly growing RMB deposit base in the territory, (2) bonds issued by qualifying municipalities and provinces for the financing of local infrastructure and (3) RMB-denominated bonds issued by foreign corporations operating in China (to reduce foreign exchange inflows and upward pressure on the exchange rate), foreign currency-denominated debt issued by domestic firms in the domestic market.

Perhaps the most important recent development concerning domestic debt markets is a decision by the National Financial Working Commission meeting of 19-20 January 2007 to shift part of the responsibility for the regulation and supervision of non-financial corporate bonds from the National Development and Reform Commission (NDRC) to the China Securities Regulatory Commission (CSRC). Details of this decision remain to be worked out. It seems likely that NDRC will continue to handle bond issues by unincorporated state enterprises implementing state investment plans and that CSRC will be asked to develop a more conventional market-driven corporate bond market, essentially from scratch. Since 1993 the non-financial corporate bond market has been restricted to a few dozen large state-owned corporations (such as e.g. the Three Gorges Development Corporation, Baosteel, China Mobile, Petrochina and China Grid). The total amount of registered and tradable corporate bonds at the end of 2006 was only about US$31 billion. Each new issue had to be part of the national development plan and

guaranteed by one of the large state commercial banks. Consequently, almost all non-financial corporate bonds were rated 'triple A' by China's domestic rating agencies. CSRC is expected to adopt a more market-oriented approach to the approval of corporate bonds issues and is unlikely to require special guarantees. China's non-financial corporate bond market may be expected to start expanding very rapidly in the near-term future and, since the quality of future corporate bonds is likely to vary greatly, China's rating agencies will face significant new challenges and responsibilities.

To improve risk management by traders and the liquidity of bond markets, the regulatory authority (PBoC) introduced new hedging tools such as outright repurchase agreements and forward bond transactions on the interbank market (April 2005).[6]

4. SIZE AND COMPOSITION OF CHINA'S DEBT MARKETS

China's domestic debt markets have expanded vary rapidly since the late 1990s in terms of new issues, amounts outstanding and market turnover. The amount of outstanding tradable debt (excluding central bank sterilization bills, NPLs and short-term drafts, but including short-term corporate bills) grew from only 5 percent of GDP in 1997 to 37 percent at the end of 2006.[7] Comparable ratios for other Asian countries are: 24 percent for Indonesia, 43 percent for Philippines and 75 percent for South Korea.[8] The composition of both long- and short-term tradable domestic debt in China (excluding NPLs) at the end of 2006 was approximately as shown in Table 7.1.

Table 7.1: Volume of tradable long-term and short-term debt outstanding end 2006

Debt instrument	Amount in US$ billion equivalent end 2006	Percent of tradable debt outstanding	Percent of 2006 GDP
Long-term maturities:		**(long-term only)**	
Government bonds	372	48	15
Policy bank bonds	293	38	12
Non-financial corporate bonds	31	4.2	3
Other bank bonds	30	4	1
Asset-backed securities	2.4	0.3	0.1
Panda Bonds	0.4	0.04	0.01
Total long-term maturities	728.8		31
Short term maturities:		**(short-term only)**	
Central bank sterilization bills	414	45	17

Short-term corporate bills	225	24	9
Commercial paper (drafts)	280	30	11
Total short-term maturities	919		37
Total all tradable debt	1,648		67

Sources: China Monetary Policy Report Q4 2006 and author estimated (for short-term corporate bills and drafts).

At the end of 2006 the amount of all tradable domestic debt outstanding (excluding NPLs) was about double the market capitalization of tradable A and B shares, but only a little more than 50% of the amount of outstanding bank loans. These numbers illustrate the extent to which domestic financial intermediation in China remains dominated by bank loans in spite of the phenomenal growth of debt markets in recent years.

The largest component of domestic tradable debt at present consists of central bank sterilization bills. This is an unusual and potentially troublesome situation. It has nothing to do with the funding of corporations or government expenditures. It reflects central bank efforts to suppress domestic inflation that would otherwise result from foreign exchange purchases aimed at preventing or slowing exchange rate appreciation. When the central bank ran out of government bonds for open market operations aimed at the sterilization of excess money supply in the second half of 2003, it began to issue its own bills for that purpose. In the first half of 2006 the amount of outstanding central bank sterilization bills began to exceed the amount of outstanding government bonds. PBoC is now trying to reduce reserve accumulation through a variety of means and for a variety of reasons, including the wish to avoid the need for further large scale sterilization though the sale of central bank bills.

5. THE HISTORY OF DEBT MARKETS IN THE PEOPLE'S REPUBLIC OF CHINA

For students of China's market economic reforms, the emergence and development of domestic debt markets is of special interest. When the reforms started in the late 1970s, the financial system was essentially limited to one bank, the People's Bank of China (PBoC) which served as cash agent for the state, bank for state enterprises and the public, foreign exchange bank, and de-facto central bank. There was no need for insurance companies, institutional investors or financial markets. Financial system reform did not become a priority until the early 1990s when the liberalization of markets for goods and services had already advanced quite far. The first four state-owned commercial banks[9], created in 1979 and 1984 (the year PBoC officially became China's central bank), continued to act as agents of the state, implementing the national development and credit plans, until the mid-1990s. The government's annual "credit plan" wasn't officially abolished until 1998.

Some local, unofficial and unregulated markets for bonds and equity shares emerged spontaneously in the 1980s.[10] It wasn't until after the opening of stock exchanges in Shanghai and Shenzhen (December 1990 and January 1991 respectively) that the Government began to pay serious attention to the regulation and supervision of such

markets. By initially keeping the financial sector fully under state control and using state-owned commercial banks as fiscal agents, China was able to maintain fast growth with social stability and full (urban) employment during the initial phases of transition. In this way, China bought time so that people could adjust to market realities while new institutions developed. Delayed reform of state-owned enterprises and delayed liberalization of the financial sector were central to this cautious, gradualist approach.

Things began to change in the early 1990s when China once again experienced high inflation due to excessive credit expansion. This time, however, the economy was already semi-marketized. New policy instruments were needed to deal effectively with the macroeconomic instability of those days. The introduction of formal central government regulatory controls over the two stock exchanges[11] was combined with the beginning of financial market liberalization and state bank reform. The government also subjected itself to stronger market discipline by denying itself the option (from 1994) to borrow from the central bank for fiscal purposes. This measure was part of a complex set of financial sector reforms that included, *inter alia,* exchange rate unification, formal establishment and regulation of the interbank market for short-term loans and foreign exchange market, three specialized Policy Banks, and the start of open market operations by PBoC. A Central Bank Law and a Commercial Bank Law, under preparation since 1993, were passed by the National People's Congress and became effective in 1995.

Altogether, the measures of 1994/95 gave a powerful boost to the development of a domestic market for government bonds which was then still in its infancy. Government bonds were initially traded on the stock exchanges and later (from August 1997) also on the interbank market.

Financial sector reform moved center stage after the Asian financial crisis of 1997/98. The crisis in neighboring countries made China's leaders more keenly aware of the vulnerability of the country's financial system, in particular the state-owned commercial banks, which had accumulated huge volumes of (unrecognized) non-performing loans (NPLs) during the years they served primarily as fiscal agents of the state. Four state-owned asset management companies (AMCs) were established in 1998/9 to assist in the NPL clean up, which started in 1999. This marked the emergence of a market for non-bond debt, focused initially on NPLs. The AMCs were given a license for ten years, the same period as the maturity of bonds they issued to pay for (most of) the initial bunch of NPLs they acquired at face value.

Non-financial corporate bonds have been issued since the mid-1980s, initially without a regulatory framework. Since formal regulations were introduced in the early 1990s, the primary market for corporate bonds has been reserved for a few selected state-owned enterprises carrying out investment plans for the state. The primary and secondary markets for corporate bonds remained very small. As is recognized by the government, there is now an urgent need to broaden the domestic funding base of China's corporations, both state-owned and others, to reduce their current dependence on bank loans and reinvested profits. The rapidly growing ranks of institutional investors also need larger and more diversified debt markets for portfolio investment and balancing.[12]

5.1. Government Bonds

In most market economies government bonds are the foundation for broader domestic debt markets. The government bond market offers pricing benchmarks for other types of debt instruments such as corporate and municipal bonds and it serves as the arena for open market operations by the central bank. Until the first quarter of 2006[13] government bonds dominated China's debt markets. In 2002 they still accounted for about 95 percent of all traded long-term debt (excluding NPLs). The total amount of government bonds issued and traded grew very rapidly since 1998 when China started a fiscal stimulus program aimed at preventing a sharp economic slow-down in response to the Asian financial crisis of 1997/98.

Domestic borrowing by the Chinese government between 1949 and 1979 was sporadic and the amounts involved were small. The aggregate amount borrowed during this 32-year period (in 1950, and during the period 1954-58) was only RMB3.85 billion.[14] During the Mao period, the government typically borrowed from PBoC for fiscal purposes; there was no trading in government debt. Following the initiation of market reforms, the government issued bonds every year, beginning in 1981. In the 1980s, issues were small and in essence a form of taxation; they were part of the national credit plan. Government bonds were force-placed on the basis of administrative quotas, and payments for bonds were often deducted from payrolls or withdrawn from bank accounts.[15] State banks were not allowed to trade in government bonds, but individuals and non-bank agencies spontaneously began to trade government paper in unofficial curb markets. Thus, much like the informal equity markets of that time, largely unregulated secondary bond markets started in China in the 1980s.

In response to market pressures for government-led institutional development, bond markets were gradually legalized in the late 1980s and began to tailor new issues to market preferences; maturities were reduced and coupon rates increased to make bonds competitive with bank deposits. The secondary bond market developed more quickly after the opening of stock exchanges (which also listed bonds) in Shanghai and Shenzhen. The first voluntary placement of government bonds (through the stock exchanges) occurred in 1991. The now defunct Wuhan Securities Exchange Center, established in 1992, was for some years China's largest bond trading center, until the stock exchanges in Shanghai and Shenzhen absorbed this function. The next major development was the government's decision in 1993 to stop borrowing from PBoC for fiscal purposes. From 1994, the government funded all budget deficits through borrowing in capital markets. Domestic government bond issues jumped from RMB31.5 billion in 1993 to RMB102.9 billion in 1994 and rose steeply thereafter, especially during the period 1998 – 2002 when China applied fiscal stimulus policies. The rate of new government bond issues fell after 2002 when the economy no longer needed fiscal stimulus and the fiscal deficit shrank.

5.2. Policy Bank Bonds

The second largest issuer of tradable domestic bonds (other than central bank bills) is the China Development Bank (CDB), one of the three Policy Banks created in 1994[16] to facilitate the commercialization of state commercial banks. CDB specializes in the financing infrastructure projects with long gestation periods. Very large projects such as e.g. the Three Gorges project are financed directly by CDB or through the purchase by CDB of bonds issued by the Three Gorges Development Corporation. CDB also finances

urban infrastructure through loans to local government-owned corporations. According to CDB's annual report for 2005, the amount of CDB bonds outstanding at the end of that year was RMB1,541.5 (about $190 billion). Since the government does not formally guarantee CDB bonds, they are excluded from official government debt statistics.[17] For the analysis of China's public finances, however, CDB bonds should be regarded as semi-official government debt.[18]

Yield differences between comparable CDB and government bonds in the secondary market tend to be small, which suggests that the market expects CDB securities to be backed by the central government. CDB's published NPL ratio is currently below 1 percent and its capital adequacy ratio is above 9 percent. These favorable numbers mask the risk of default on unsecured CDB loans to municipal corporations for the financing of local infrastructure. An estimated 33 percent of CDB assets represents lending to corporations owned by lower-level governments and is potentially vulnerable to local financial problems. In September 2003, CDB successfully issued US$500 million worth of bonds in the domestic market. It was the first US$-denominated bond issued by a public agency in China. The only other Policy Bank that has issued bonds in the domestic market is the Eximbank. Its domestic bond debt outstanding at the end of September 2006 stood at the equivalent of about $60 billion.

5.3. Bonds Issued by Asset Management Companies to pay for NPLs

The third largest issuer of domestic bonds (other than the central bank) is the group of four state-owned asset management companies (AMCs) established in 1998/9 to help recycle the NPLs they took over from state commercial banks and CDB. The estimated face value of AMC bonds issued is RMB1,162 billion yuan (about $150 billion at the January 2007 exchange rate). These bonds, which are held by the banks that sold NPLs to the AMCs, carry a below-market interest rate and are not officially guaranteed by the government.[19] They are not traded and not included in official statistics on government debt. Since AMC bonds held by state-owned commercial banks are counted as part of the banks' capital they carry an implicit government guarantee. Most AMC bonds will mature in the next few years. A conversion of some of the AMCs into multi-function profit-oriented financial institutions is under active consideration. Since it is impossible for the AMCs to break even (let alone earn a profit) on the recycling of NPLs they acquired at par (or above market value), the conversion of AMCs into commercial entities may reduce the ultimate burden on the Ministry of Finance as final (implicit) guarantor of the original AMC bonds.

5.4. Non-financial Corporate Bonds

China's corporate bond market remains small and less developed than the markets for government bonds or stocks. At the end of 2006 the total amount of registered and tradable non-financial corporate bonds was only about US$31 billion (1.2 percent of tradable long-term debt). From 1984, selected non-financial state-owned enterprises were allowed to issue corporate bonds with the permission of PBoC. Initially the coupon rate was set 40 percent higher than the rate for 1-year deposits in state banks. Since the public regarded corporate bonds almost as secure as treasury bonds, this led to reduced demand

for government bonds and a drain on saving deposits. To correct these problems, the government lowered the interest premium and set annual quotas for corporate bonds under the credit plan.[20] Like the informal equity markets that developed in the mid-1980s, local corporate bond markets remained largely unregulated and unsupervised until the early 1990s. After the opening of the Shanghai and Shenzhen stock exchanges new corporate bond issues soon began to decline relative to share issues. However, in 1992 the amount of funds raised through corporate bonds was still considerably larger than through share issues. After 1996, the balance shifted decisively in favor of share issues. Enterprises preferred to issue shares rather than bonds, as equity was perceived to be a less expensive way of raising funds in China.

The all time record amount of corporate bonds issued in 1992 (RMB69 billion) was part of the uncontrolled credit expansion of that time that contributed to high inflation. In 1993, as part of a package of macro-stabilization measures, the responsibility for controlling corporate bond issues was shifted from PBoC to the State Planning Commission (SPC) while the central bank governor (Li Guixian) was replaced. SPC introduced a quota system and reserved this instrument for large, central government-owned enterprises operating under the plan. The coupon rate, set by SPC at 150-250 basis points above the 1-year deposit rate, was unrelated to the maturity of the issue (ranging from 3 to 20 years). All issues had to be guaranteed by one of the large state-owned commercial banks. It is therefore not surprising that corporate bonds in China are typically rated AAA.[21] The challenges facing China's rating agencies will increase when non-guaranteed corporate bonds (and later municipal and provincial bonds) appear on the market.

In January 2007, the responsibility for authorizing corporate bond issues was split between the National Development and Reform Commission (NDRC, successor to SPC) to the China Securities Regulator Commission (CSRC). Although the details remain to be worked out, this institutional change signals an important policy shift regarding corporate bond market development. Other factors that will help push the emergence of a more conventional, market-driven corporate bond market are: (1) the decision of January 2007 to require profit-making state-owned corporations to start paying dividend to their owner(s), (2) the new Bankruptcy Law of 2006, and (3) China's first ever Property Rights Law (approved by the NPC in March 2007). Since CSRC is unlikely to require bank guarantees for corporate bond issues authorized by it, the secondary market is also expected to become more diversified and more interesting for institutional investors. Trading in corporate bonds is largely concentrated on the Shanghai stock exchange, but some corporate bonds are also listed on the Shenzhen stock exchange. Turnover is very low.

5.5. Panda Bonds

The International Finance Corporation (the private sector financing arm of the World Bank) and the Asian Development Bank both issued RBM denominated 10-year bonds in China's interbank market in October 2005. The amounts and coupon rates were RMB1.13 billion, RMB1 billion and 3.40 percent, 3.34 percent respectively. Both issues were sold at par. This was the first time that multilateral agencies were permitted to issue local currency bonds in China. The proceeds were to be used for the financing of IFC-

and ADB-financed projects in China. The Panda Bonds helped to soak up excess liquidity in the economy and contributed to a further diversification of bond instruments available for trading on the secondary market. It is likely that more Panda Bond issues will follow.

5.6. Asset-backed Securities (ABS)

This is the newest category of debt instruments available in China (on an experimental basis). In April 2005 PBoC and China Banking Regulatory Commission (CBRC) jointly issued regulations on pilot credit asset-securitization, setting the stage for trial issues of mortgage-backed securities and other ABS. China Development Bank was the first Chinese bank to make use of this new facility by issuing (December 2005) RMB2.9 billion (about US$360 million equivalent) residential mortgage-backed securities and $4.2 billion (about US$525 million equivalent) non-secured infrastructure loans-backed securities in the interbank market on an experimental basis. This was followed by two issues for a total of RMB5.45 billion (almost US$700 million equivalent) of NPL-backed securities by two asset management companies (Cinda and China Orient) in December 2006 and January 2007.[22] All ABS issues so far were readily absorbed on the interbank markets and now trading on that market.

The development of mortgage-backed securities followed the privatization of urban housing that started around 1998[23] and the associated commercialization of urban housing construction. Since that time mortgage loans grew very rapidly as a share of state bank assets (to about 16% at the end of 2005, from less than 1% in 1997). Consumer loans, mostly for car financing, also expanded rapidly as a share of bank portfolios. Mortgage-backed securities have great potential in China as instruments to standardize mortgage contracts across financial institutions and to deepen domestic capital markets.

5.7. Central Bank Sterilization Bills

In the course of 2002 a significant, unexpected change occurred on the capital account of China's balance of payments. Before 2002 there had been annual capital outflows of US$15-30 billion per annum on the 'errors and omissions' account for many years. These unaccounted for capital outflows probably represented 'capital flight' from China. The flow reversed direction in the course of 2002 and turned into a large 'errors and omissions' inflow representing mostly speculative capital flows triggered by the expectation of a revaluation of the RMB and by rapidly rising real estate prices in Shanghai and other big cities. Given China's de-facto fixed exchange rate policy, which had been in effect since 1995 (and was tightened in December 1997 in the wake of the Asian financial crisis), this structural balance of payments shift, amounting to some US$80-120 billion per annum between 2002 and 2006, triggered large purchases of foreign exchange by PBoC aimed at preventing currency appreciation. Irregular capital inflows, much more than the current account surplus, accounted for China's rapid build-up of foreign exchange reserves between 2002 and 2005.

A large part of the increased domestic money supply resulting from PBoC's foreign exchange purchases had to be sterilized to avoid excessive expansion of the domestic money supply. PBoC responded to this challenge by selling its stock of government bonds in open market operations on the interbank market and by introducing central bank

bills for the same purpose when its stock of government bonds was depleted. From April 2003 PBoC has issued large amounts of central bank bills on the interbank market for sterilization purposes. These are short-term instruments with a maturity up to one year. The total amount outstanding at the end of 2006 was about US$414 billion equivalent, 45 percent of all short-term tradable debt at that time.[24] Since they only traded on the interbank market and owned exclusively operators on that market, central bank bills are sometimes (erroneously) excluded from debt market surveys. An interesting side effect of domestic sterilization efforts is the 'profit' earned by PBoC on account of the fact that the interest paid on domestic sterilization bills has generally been lower than the interest earned on foreign exchange reserves. PBoC is now trying to reduce the need for additional domestic sterilization through various efforts aimed at reducing foreign exchange reserve accumulation.

5.8. Short-term Corporate Bills

This new instrument was introduced in May 2005 under the sponsorship of PBoC to compensate (in part) for the lack of access to the corporate bond market by the large majority of firms in China.[25] The maturity of these new corporate bills is usually one year. They quickly became popular and are actively traded in the secondary market. Since the discount rate tends to be well below the prime lending rate for bank loans, short-term corporate bills lower the cost of borrowing for the issuer. The total amount outstanding at the end of 2006 was about US$225 billion equivalent, representing about 24 percent of all tradable short-term domestic debt at that time.[26]

5.9. Commercial Paper (drafts)

Commercial paper (commercial-accepted and bank-accepted drafts) have been issued and traded in China since the early 1980s,[27] but the relative importance of this instrument in short-term financial markets has greatly increased in recent years. Like short-term corporate bills, drafts are usually discounted below bank lending rates and even below PBoCs official discount rate for this instrument. Therefore, commercial paper represents another opportunity for firms in China to lower their cost of borrowing, provided, of course, the market is liquid enough to permit de-facto roll-over of drafts. The total amount of drafts outstanding at the end of 2006 was about US$278 billion equivalent, representing about 30 percent of all tradable short-term domestic debt at that time.

Since both short term-term corporate bills and drafts are freely tradable at market-determined discounts, these instruments have contributed significantly to the liberalization of China's interest rate regime in recent years.

6. TRADING GOVERNMENT BONDS AND POLICY BANK BONDS

In the primary market, the government began to experiment with market-based distribution systems through specialized underwriters and primary dealers in 1994. This

has gradually become the rule. An over-the-counter (OTC) market for bearer bonds has existed since the late 1980s.[28] There is another, more recently established interbank OTC market for the trade in book-entry bonds and Policy Bank bonds between banks, institutional investors and others licensed to trade on the interbank market.

About 95 percent of all domestic bond trading in China is conducted on the interbank market and the remainder takes place on the stock exchanges (mostly Shanghai).[29] Until the end of 2002, almost all bond trading in China was in the form of repurchase (repo) transactions which is an indication of an "illiquid" market. Since the beginning of 2003, the share of spot-transactions has gradually increased to about one-third of total turnover on the interbank bond market in 2006. The reduced share of repo transactions is an indication that China's domestic bond market has become more "liquid".

In August 1997, the market for government bonds was split between the interbank market and the stock market. This was the result of a PBoC decision to ban commercial bank trading on the stock exchanges and lending to securities firms (usually on the basis of repos) in an effort to curb speculative stock trading. Short selling by securities firms has been a recurrent problem in China. In February 1995, the futures market for government bonds essentially collapsed when Shanghai Wanguo, then a leading securities firm, sold short RMB211 billion worth of government bonds without collateral.[30] Short selling on the bond market was officially prohibited in June 1997.

A fourth market[31] for government bonds was created in February 2002 when PBoC allowed the trading of certificate bonds (also called savings bonds or saving certificates) held by individuals and institutions. Such bonds had been non-tradable until then and carried a higher interest rate than tradable bonds for that reason. They used to be held by the buyer until maturity. Certificate bonds issued prior to February 2002 are still not tradable, at least not officially. When newly issued certificate bonds were made tradable the premium interest over long-term deposit rates was removed.

The negative consequences for China's government bond market resulting from market fragmentation and unequal standards have been the subject of much government attention and corrective policy action in recent years. The World Bank Group has provided technical assistance to China in these matters. In summary, the development of China's government bond market and the parallel emergence of a regulatory framework occupied five distinct periods:

1981-86: The government issued all government bonds through mandatory placement with agencies of the state. All bonds had a zero-coupon structure and were non-tradable. The term was usually five years. Total annual issues were small; redemption started in 1986.

1986-93: The Ministry of Finance began to issue tradable bearer bonds, which gradually became accepted by the public and traded in the OTC market. Special financial agencies were set up in provinces to facilitate the initial sale and trading of government bonds throughout the country.

1993-97: After the introduction of a self-imposed ban on government borrowing for fiscal purposes from the central bank in 1994, the primary and secondary markets for government bonds took off while new bond instruments, including certificate bonds,

were introduced. Book-entry bonds could be traded on the stock exchanges, but certificate bonds were non-tradable (until February 2002, when newly issued certificate bonds were made tradable for the first time). From 1993, underwriting syndicates and auctions were used to sell new issues at a market price.

1997-02: Trading of government bonds among banks was shifted to the interbank market in an effort to curb harmful speculation on the stock exchanges by securities firms and others who obtained loans from the banks on the basis of repos. To reverse the negative effects of reduced liquidity and transparency resulting from market fragmentation, the government broadened access of non-bank financial institutions to the interbank market for government bonds. Between 1997 and 1999, the government did not issue any government bonds through the stock exchanges. During those two years, most issues were in the form of non-tradable certificate bonds. Issuance of tradable book-entry bonds was resumed in late 1999. Since that time, the government has typically sold about 25 percent of new issues though the stock market and the remainder through the interbank market. There were no bearer bond issues from 1998 through the first half of 2002. The total amount of new government bond issues increased rapidly after 1998 when China started a multi-year fiscal stimulus program.

2003–present: This period is marked by intensified financial market reforms, including the introduction of several new debt instruments, improved debt and equity market regulation, accelerated interest rate liberalization, efforts to improve the liquidity of bond markets and reduce market segmentation and some measures to reduce restrictions on capital account transactions. The introduction of short-term central bank bills in April 2003 and the increased availability of short-term government bonds (combined with gradual interest rate liberalization) have greatly improved the liquidity of bond markets and the usefulness of yield curves for government bonds for the pricing of other debt.[32] Guidelines laid down in an official document called "*Opinions of the State Council on Promoting the Reform, Opening and Steady Growth of Capital Markets*" will provide the framework for capital market development in China for years to come.

7. OPEN MARKET OPERATIONS (OMO)

PBoC conducts OMO through primary dealers. It uses government bonds, bonds issued by Policy Banks and central bank bills for this purpose. Repos and reverse repo transactions (using securities as collateral) are an integral part of OMO and represented about two-thirds percent of interbank turnover in 2006. All OMO instruments used are tradable and transactions are voluntary. The range of government bond maturities has been gradually increased from 3 months to 30 years[33]. Until a few years ago, government bonds had long maturities only, which complicated the construction of a yield curve for such securities. Recently the Ministry of Finance introduced three-month and six-month bonds, which makes the range of maturities for official paper complete. The maturity of central bank bills is usually one year or less. PBoC has recently begun to experiment with the issue of somewhat longer maturity bills (up the 3 years). The maturities of repos and

reverse repos range from 7 days to a year, with a concentration around 14-day transactions.

8. BORROWING BY LOWER-LEVEL GOVERNMENTS

Lower-level governments in China are officially required to balance their budget without borrowing, except for selected, government-approved external bond issues (usually revenue-backed) for infrastructure financing, and for indirect borrowing (through the Ministry of Finance) from multinational development agencies such as the World Bank and the Asian Development Bank. However, many local governments also borrow elsewhere, usually indirectly, through corporations or agencies they own. Some of those corporations, such as for example the Shanghai City Construction & Investment Development Corporation, have placed infrastructure bonds in recent years. Mostly, however, local governments borrow (indirectly) from domestic banks, including China Development Bank. Some local governments borrow unofficially also from workers, pensioners and suppliers in the form of arrears in wages, pensions, and/or bill payments. There is no reliable information available on direct and indirect borrowing by lower level governments. The aggregate outstanding is believed to have grown very rapidly in recent years and part of the extraordinarily rapid domestic credit expansion from 2002 - 2005 was due to borrowing by local governments, usually through their corporations.[34]

There is clearly a need for the development of (non-sovereign) municipal and provincial bonds. The current restriction on such instruments increasingly conflicts with the need of sub-national governments to finance infrastructure in transparent ways and with sound financial sector development. The introduction of municipal and provincial bonds will require a legal and regulatory environment, which does not exist at present. Local government access to domestic capital markets could be regulated such that the system promotes and rewards fiscal responsibility.[35] On the demand side, institutional investors need access to a broader range of bonds and yields than are currently available in the domestic market.

Once the bond market includes non-guaranteed corporate bonds and infrastructure bonds issued by local governments, the function of rating agencies in China will become more important and their task more challenging.

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[2] See for example David Dollar & Shang-Jin Wei, *Das (wasted) Kapital: Firm Ownership and Investment Efficiency in China.* IMF Working Paper No.07/9, January 2007.
[3] A cost that may well be justified by benefits such as the transfer of technology, management experience and market access.
[4] China is reported to have some 80 million individual shareholder accounts. A large, but unknown number of these are inactive and/or duplicative.
[5] For a more detailed discussion of stock exchange reform needs see Xinghai Fang, *Taking Stock in China*, Wall Street Journal, 6 March 2007.
[6] Mu Huaipeng, *The development of China's bond market.* BIS paper No. 26, 2006.
[7] Goldman Sachs, Global Economics Paper No: 149, November 20, 2006.
[8] Ibid.
[9] Bank of China, China Construction Bank, Agricultural Bank of China (all three in 1979), and Industrial and Commercial Bank of China (1984).
[10] Stephen Green, *China's Stock market. A Guide to Its Progress, Players and Prospects*. The Economist 2003.
[11] The China Securities Regulatory Commission (CSRC) wasn't established until late 1992, about two years after the stock exchanges of Shanghai and Shenzhen started operations under local government supervision, the former with the official blessing of the central government, the latter initially without (Stephen Green *op. cit*.).
[12] Yongbeom Kim e.a. *Developing Institutional Investors in People's Republic of China.* World Bank Country Study Paper, September 2003.
[13] This was the year when the volume of outstanding central bank sterilization bills began to exceed the volume of outstanding government bonds.
[14] Shuanglin Lin*, China's Government Debt: How Serious?* In China: An International Journal, Vol. 1, No. 1, March 2003
[15] A. Kumar *et.al*. *China's Emerging Capital Markets.* FT Financial Publishing Asia Pacific, 1997.
[16] The other two are the Agricultural Development Bank of China and China Eximbank.
[17] CDB was the first public bank in China to issue long-term floating rate debentures, subordinated debt, strip bonds, US$ denominated bonds for the domestic market and asset-backed securities. It is in many ways a pioneer development bank.
[18] Before 1998, CDB bonds were guaranteed by the China International Trust and Investment Corporation (CITIC), another state-owned financial institution. No such guarantees were extended in later years. The earlier CITIC guarantees appear to have been discontinued; they are no longer mentioned in official reports.
[19] Under Chinese law, the state (represented by the Ministry of Finance) cannot guarantee debt issued by state corporations or agencies of the state since 1994.
[20] Hassanali Mehran e.a., *Monetary and Exchange Rate Systems in China: an Experiment in Gradualism.* IMF Occasional Paper, No. 141. 1996.
[21] Source: China Chengxin International Credit Rating Co., Ltd.
[22] The Cinda issue of RMB4.75 billion was backed by RMB21 billion nominal value NPLs (a backing ratio of 4.4 to 1). The Orient issue of RMB700 million was backed by RMB9.16 billion nominal value NPLs (a backing ratio of 13 to 1).
[23] The privatization of about 80 percent of China's urban housing stock, completed around 2003, was inspired, in part, by the wish to avoid a deep recession in the wake of the Asian financial crisis of 1997/8 and thus complemented the government's fiscal stimulus program. Because cash wages in the public sector were still very low, the transfer price of urban houses (almost all apartments) was on average only about one-third of market value. For that reason, resale rights of the new owners were restricted for the first 5 years. The total market value of urban housing privatized in the period 1998-2003 is estimated by this author at around $2.5 trillion equivalent. The associated wealth transfer from public sector agencies to private owners was of the order of $1.7 trillion. It was the largest privatization and wealth transfer program in history.

[24] A small amount of central bank sterilization bills (about 2 percent of the amount outstanding at the end of September 2006) is not tradable; these represent forced bill purchases to compensate for insufficient reserve ratios at PBoC by some banks.
[25] Stephen Green, *China's All New Corporate Paper Market*. Standard Chartered, On The Ground (OTG) – Asia, 1 November 2005. See also OTG dated 17 November 2006.
[26] There are conflicting reports on the amount of short-term commercial bills outstanding at the end. Both Goldman Sachs (in its Global Economics Paper No. 149 of 20 November 2006) and Standard Chartered (in its Special Report on China's Bond Markets, 6 March 2007) put the amount below US$40 billion equivalent while PBoC's Quarterly Monetary Report put the amount at well over US$200 billion equivalent.
[27] Stephen Green, *PBoC Backs Re-Introduction of the Draft*, Standard Chartered, On the Ground (OTG) – Asia, 13 March 2006.
[28] For example, the Ministry of Finance (MOF) announced on 18 August 2003 that it would issue RMB 46 billion worth of book-entry bonds between August 20 and 26. Of this amount, RMB 36 billion was to be sold through the interbank and the stock market, while RMB 10 billion was reserved for OTC sales to individual investors through banks around the country.
[29] Mu Huaipeng*, op. cit.*
[30] This is referred to in China as "Incident No. 327."
[31] The other three are the stock market (for bond trading), the interbank market and the OTC market.
[32] The first four of these five periods are identified in David H. Scott & Irene S.M. Ho, *China's Corporate Bond Market*. The World Bank, November 2004.
[33] Maturities offered by the Ministry if Finance now include 3-months, 6-months, 1, 2, 3, 5, 7, 10, 15, 20 and 30 years.
[34] Shuanglin Lin estimates the non-arrears portion of unrecorded local government debt in 2001 at 2.3 percent of GDP in *China's Government Debt: How Serious?* China. An International Journal, Vol. 1 No. 1, March 2003. In a CLSA publication of May 2005 (Speaker Series, *China's banking reform*), Nicholas Lardy estimates that total local government debt at the end of 2003 amounted to about 19 percent of GDP.
[35] Australia offers an interesting example of a well regulated and highly developed market for local government bonds that might be of interest for China.