SECTION IV

SECTOR ASSESSMENTS

A. Financial Sector

1. Banking

In the PRC, banks account for 90% of all financial intermediation between borrowers and savers, a ratio that exceeds that found in other Asian countries. The principal source for commercial bank asset growth has been household savings.

In 1978, along with agricultural and industrial reforms, the structure of the banking system in the PRC was changed. The banking system was removed from MOF control and placed directly under the State Council. During the next 5 years, PBOC began to operate as the country's central bank and also included a commercial section that was subsequently separated from PBOC into four SOCBs. SOCBs handled commercial business within each of the sectors they represented (rural agriculture, construction, foreign exchange, urban commercial/industrial). Their clearly defined roles limited competition, which only began in 1994 when their policy function was transferred to three new policy banks (Cinar et al 2002).

At the same time, private banks as well as other financial institutions began to emerge and new commercial banks were established. Some are mutual banks of former cooperatives, and others are local credit cooperatives known as city commercial banks.

The banking system currently consists of the 4 SOCBs; 3 state-owned policy banks (State Development Bank, Export and Import Bank, and Agricultural Development Bank);[46] 10 joint stock commercial banks (other commercial banks); 111 urban credit cooperatives (known as city commercial banks); and 181 operations offices of foreign banks (PBOC 2003b) (Table 15).

The financial system continues to be almost entirely state-owned. The four SOCBs account for more than 80% of market share, more than 70% of deposits, loans and banking outlets, and almost 60% of profits (Zhang et al 2002). The PRC's priorities are to reform and restructure SOCBs to strengthen this pillar of the financial system. Their inherent weaknesses are characterized by (i) a labor force of more than 1.5 million across at least 100,000 branches (Strause 2002); (ii) many insolvent borrowers, most from the state sector; (iii) poor portfolios resulting in credit decisions influenced by political forces in local governments; and (iv) less sophisticated bank management capability.

SOCBs have largely provided state directed lending at controlled interest rates to SOEs and are burdened with an enormous buildup of nonperforming loans (NPLs) (discussed below). As many as half of the loans, held by the four large SOCBs are delinquent. SOCBs have also heavily speculated in real estate investment in massive property developments throughout the PRC whose value has significantly decreased. A recent survey by 104 senior Communist Party officials by the Central Party School found that almost two thirds said a financial crisis was the greatest danger to the PRC in the next 10 years (Bradsher 2002).

[46] Special depository institutions.

Table 15: Top 10 Domestic Banks Ranked by Assets as of End-2001
(CNY billion)

Bank	Assets	Market Share (%)	NPLs
Industrial and Commercial Bank of China	4,339.15	27.67	29.78
Bank of China	3,361.74	21.44	27.51
China Construction Bank	2,765.06	17.63	19.35
Agricultural Bank of China	2,528.08	16.12	NA
Bank of Communications	669.09	4.27	16.12
Citic Industrial Bank[48]	300.11	1.91	NA
China Merchants Bank	266.32	1.7	NA
China Everbright Bank	265.41	1.69	NA
Guangdong Development Bank	191.21	1.22	NA
Shanghai Pudong Development Bank	173.93	1.12	NA
Total (Top 10 banks)	14,860.1	94.77	NA
Others	819.33	5.22	NA
Total Market	**15,679.43**	**100.0**	**NA**

Source: People's Bank of China.
Note: "Others" in table above would account for the difference between assets of all banks in the banking industry and assets (and market share) of the top 10 banks.

The most dynamic banks are in the third category of "other" commercial banks that were set up during the mid-1990s and are relatively less burdened with NPLs. Although such banks still have a limited number of branches, they are important for PSD. These shareholder commercial banks are positioned for, and oriented toward, financing the nonstate sector of the economy, including private and collective domestic companies and FIEs, and should play a key strategic role in the PRC's development strategy (Harner 2000). In the 1990s, these banks started to raise capital by issuing shares to the public.[47] At the end of 2001, their assets reached a combined total of $291 billion, up 28% on a yearly basis (Consulate General of the PRC in New York 2002).

There are 111 city commercial banks. In contrast to the nationwide shareholding commercial banks, city commercial banks may not establish branches outside their native cities. City banks arose from approximately 2,000 former credit societies that emerged during the early reform period. For example, the Bank of Shanghai was created from the merger of 100 former credit societies and has now become one of the largest and most profitable city commercial banks.

As of March 2003, outstanding deposits of both local and foreign currencies in all financial institutions increased by 22.5% year-on-year to CNY19.5 trillion ($2.4 trillion). Local currency deposits reached CNY18.2 trillion ($2.2 trillion). Outstanding foreign currency deposits increased by 5.4% to CNY1.23 trillion ($148.8 billion). Corporate deposits stood at CNY6.2 trillion ($750 million), increasing by 25% from 2002 figures. Outstanding loans in both local and foreign currencies in all financial institutions reached CNY14.8 trillion ($1.79 trillion), increasing by 19.5% from a year earlier. New loans in the first quarter alone reached CNY851.3 billion ($102 billion), a growth of CNY502.2 billion over the same period in 2002 (PBOC 2003a).

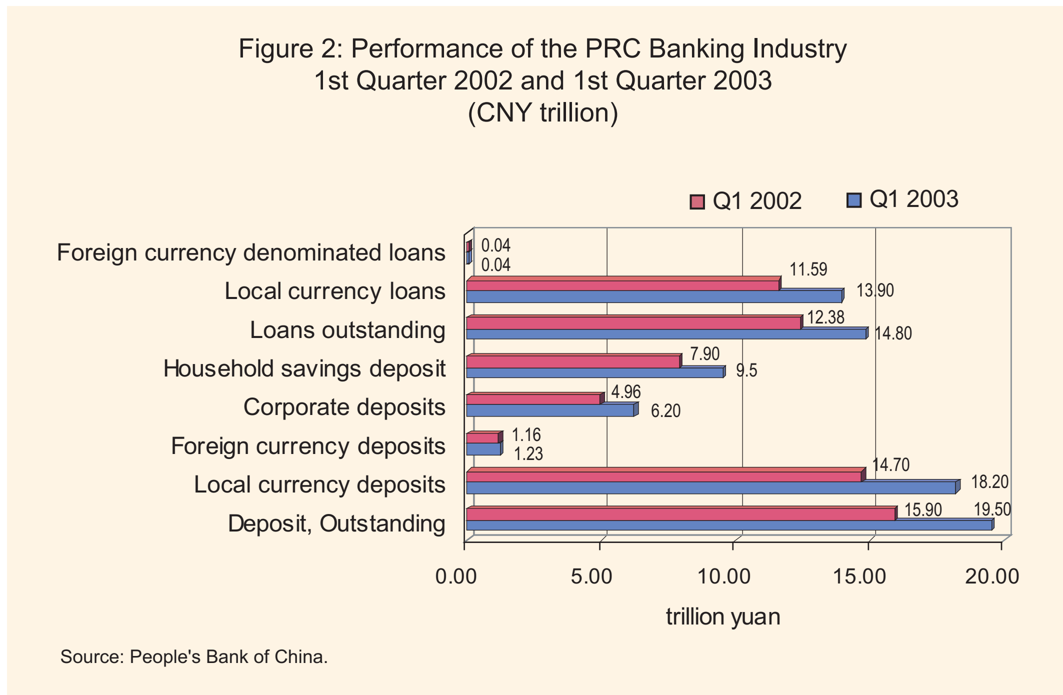
Based on various restrictions that are slowly being lifted under the WTO schedule[49] (discussed below and Box 3), foreign banks currently play only a negligible role in the banking sector, accounting for only 2% of total banking business compared with about 30% in most developing

[47] China Merchants Bank became the fourth bank to go public after Shenzhen Development Bank (1988), Shanghai Pudong Development Bank (1999), and Minsheng Banking Corp. (2000), when it sold 1.5 billion shares in the PRC's second largest initial public offering on 27 March 2002, raising CNY11 billion.

[48] Special policy bank (Table 16).

[49] See the new Rules on the Administration of Foreign-Funded Financial Institutions (PBOC No. 1 Decree of 2002), which came into effect on 1 February 2002 and included detailed requirements governing the establishment and registration of foreign financial institutions, their business scope including foreign exchange business, capital adequacy ratio requirements, and management and professional qualifications.

countries and 54% in transitional economies. The Xiamen International Bank, in which ADB has an equity stake, was the first foreign-funded financial institution to obtain a license to engage in foreign exchange business for PRC domestic residents (Chinese Securities Journal 2002).[50] Subsequently, Citibank was the first wholly foreign-owned bank that gained direct access to domestic clients for foreign exchange business (Consulate General of the PRC in New York 2002).



Since its accession to WTO, the PRC has taken significant steps to open up its banking system to foreign competition. By end–October 2002, foreign banks had established 181 operations offices in the PRC, of which 155 were branches and subbranches of foreign banks and 19 were incorporated in the PRC, with up to 7 branches. These foreign banks had $38 billion in assets and $33.8 billion in liabilities. Since the domestic currency business was introduced on a pilot basis for foreign-funded banks in Shanghai and Shenzhen in 1996, 53 foreign funded banks have been licensed to engage in this business (Consulate General of the PRC in New York 2002).

Increased interest by international financial institutions and investors in city commercial banks has also led to structural changes. In December 2001, the Hong Kong and Shanghai Banking Corporation, Ltd. (founding and principal member of the HSBC Group) became the first foreign commercial bank to buy a stake (8%) in the Bank of Shanghai, a city commercial bank. The Hong Kong-based Shanghai Commercial Bank (3%) and IFC (7%) also acquired stakes in this bank. IFC subsequently invested in the Nanjing City Commercial Bank and made a loan to Orient Group Industries, Ltd., which was used to acquire shares of the China Minsheng Banking Co., the PRC's first and only national commercial bank that has majority private sector ownership. Further changes in the ownership structure of the PRC's banking sector are expected, following the Government's recent policy pronouncement to allow foreign investors to own up to 15% of city commercial banks.

In July 2002, the Bank of China listed its Hong Kong, China subsidiary and floated 25% of its shares. The listing followed the restructuring of the bank's operations and raised $2.8 billion for its subsidiary. The bank's retail allocation was 25 times oversubscribed and the corporate tranche was three times oversubscribed. In the near future, the Government plans to publicly offer other shares of SOCBs, after substantial restructuring, to raise funds.

[50] New foreign exchange business includes individual foreign currency deposits by domestic residents and individual foreign exchange purchasing and selling.

Table 16: Top 10 Foreign Banks
Ranked by Number of Branches, 4th Quarter 2002

Bank	Origin	Branches	Rep. Offices
HSBC	United Kingdom	9	2
Bank of East Asia[a]	Hong Kong, China	7	7
Standard Chartered Bank[a]	United Kingdom	7	6
Nanyang Commercial Bank	Hong Kong, China	6	0
Sumitomo Mitsui Banking Corp	Japan	5	4
Bank of Tokyo Mitsubishi	Japan	5	3
BNP-Paribas	France	5	0
Societe Generale	France	5	1
OCBC[a]	Singapore	4	2
JP Morgan Chase	United States	4	1

[a] Banks with one sub-branch each
Source: Economist Intelligence Unit research, end–2002.

In September 2002, Shenzhen Development Bank announced that it would sell a 20% stake to US-based Newbridge Capital. Newbridge's bid is considered a breakthrough agreement, as it would mark the first time a foreign institution would gain control of a PRC bank (72% of the bank's shares are held by the public) (Business Week 2002). In November 2002, German bank Bausparkasse Schwabisch Hall and China Construction Bank received approval to form the PRC's first ever JV bank. The bank, which will be located in Tianjin, is expected to be operational in early 2003, and will be limited to mortgage business. In January 2003, Citigroup (US) announced the purchase of a 5% stake in Shanghai Pudong Development Bank.

a. Regulatory Framework

Banks in the PRC are regulated under the Central Bank Law, Commercial Banking Law, Negotiable Instruments Law, Trust Law, and subordinate legislation such as regulations, decrees, provisions, and opinions issued by PBOC.[51] The Commercial Banking Law standardized the commercial behavior of banks that were mostly stated owned. Under the law, commercial banks are required to be established under the Company Law of 1994. Banks are required to be formed as limited liability companies and acquire the status of a legal person responsible for their own liabilities and debts to the extent of their assets. The Commercial Banking Law sets out the framework for lending, personnel management, and depositor protection. PBOC has developed an outline of a banking manual to be distributed to commercial banks, which includes all relevant PBOC laws and regulations and will be updated regularly.

The Commercial Banking Law also put an end to universal banking practice by mandating a strict legal separation between commercial banking activities and nonbank financial intermediation. The only securities business that commercial banks may be engaged in is underwriting and trading government securities. This law also prohibits commercial banks from investing in real estate or trust and investment companies, or indirectly investing in any nonbank financial institution. As a result, many commercial banks have been required to divest ownership interests in nonbank financial institutions or devolve functions within the banks that are noncore commercial banking activities. The slow speed at which this process has occurred to date suggests that many banks are reluctant to do so in an environment where government policy is constantly under review and nonbank financial activities provide a better basis for revenue in the face of NPLs.

[51] Based on the establishment of CBRC, a new Banking Supervision Law is being prepared along with amendments to the Central Bank Law and Commercial Banking Law.

Regulatory segregation has not stopped conglomeration of financial services in the PRC. A number of holding companies (e.g., China International Trust and Investment Company, China Everbright Group, and China Merchant Group) are engaged in banking, insurance, and securities businesses.[52]

To further promote transparency in banking operations and enable depositors, borrowers, and investors to better protect their interests, PBOC promulgated interim guidelines on information disclosure by commercial banks on 21 May 2002. Information required to be disclosed includes financial and accounting reports, risk management, corporate governance, and important matters that occur during the fiscal year. The guidelines are applicable to all commercial banks except for city commercial banks, which have to adopt these guidelines fully by 1 January 2006 (China Daily 2002j).

b. PBOC and CBRC

When PBOC was established, it was responsible for regulating the financial sector. Concern about excessive stock market speculation and systemic risks resulted in the separation of the banking, securities, and insurance sectors. As noted above, the Commercial Banking Law, which was adopted in 1995, prohibits commercial banks from any kind of securities business. In 1998, the Government transferred oversight of the securities and insurance sectors to separate supervisory authorities to deepen financial reforms, minimize financial risks, and promote the fledgling financial services industry. Authority to regulate the insurance industry was transferred to CIRC, while authority to regulate capital markets was transferred to CSRC (Korner 2002).

The State Council appoints the governor and vice governor of PBOC. In 1999, PBOC underwent a major restructuring modeled after the Federal Reserve Board in the US. All provincial and local branches were abolished and PBOC opened 9 regional branches whose boundaries did not correspond to local administrative boundaries. The restructuring was intended to reduce the influence that local officials had on PBOC policy making. Although PBOC's role is currently being redefined, it has been responsible for formulating and implementing monetary policy, exercising supervision and administration of the financial industry, and examining and approving the establishment of PRC financial institutions, including those with foreign investment and branch offices of foreign banks. With assistance from ADB, PBOC developed an effective prudential supervision system with effective early warning and risk mitigation to monitor and control the liquidity of financial institutions, using Shanghai as a pilot (ADB 1998a). At the 10th NPC, the Government announced plans to create a new banking regulator, CBRC, in charge of banking supervision, to enable PBOC to concentrate on developing and implementing monetary policy.

The Government is currently in the process of defining the role and organization of CBRC and its relationship with PBOC in monitoring the financial stability of this sector.

c. Regulation of Interest Rates

PBOC sets interest rates on domestic currency and the spread between deposit and lending rates. Currently banks are permitted to float up to 10% of the official rate for SOEs, up to 30% for SMEs, and up to 50% for rural credit cooperatives (RCCs) (Yang 2002). PBOC has submitted to the State Council a plan permitting commercial banks to float their lending rates for all enterprises and expand the band. Although financial authorities have said they will eventually liberalize interest rates, a timetable has not been set.

Interest rates for foreign currency and foreign currency deposits of $3 million or more have been fully liberalized. Interest rates on deposits of less than $3 million are set by the China Association of Banks, a national organization established in May 2000 to promote self-discipline and cooperation in the banking sector (Shirai 2002).

[52] Amendments to the current legal framework are currently being prepared with ADB assistance to, among others, address the regulation of financial conglomerates.

d. Nonperforming Loans

SOCBs have accumulated large portfolios of NPLs based on imprudent lending to SOEs encouraged by the Government. Under banking regulations, banks may not restructure loans or transfer creditor rights to other investors. Thus borrowers have only two options: fully repay their debts or repay their debts through liquidation when they are completely insolvent (Asia Society 2002).

In 1998 and 1999, a major step was taken to address the NPL issues of the four SOCBs. For each bank an AMC was established.[53] AMCs acquire and manage NPLs transferred from each of the SOCBs. The purpose was to reduce the NPLs of the four banks from 35% of their portfolio to 25% in 2000.[54]

AMCs, which have an operational period of 10 years, are fully state–owned institutions with a paid–up capital of CNY10 billion ($1.2 billion) and are funded by issuing bonds supported by government guarantees. NPLs in the SOCBs' balance sheets are replaced by these bonds. AMCs handle debt collection and asset replacement, transfer, and sale. To support the restructuring of insolvent borrowers, AMCs may engage in direct investment, debt-equity swaps, asset securitization, and issuance, listing, and underwriting of bonds and shares within the scope of asset management and commercial lending.

In 1999, total NPLs in the PRC banking system were officially estimated at 25% of total loans ($540 billion). In 2000, the Government transferred close to CNY1.4 trillion ($169 billion) of the SOCBs' NPLs to AMCs. In 2001, AMCs were allowed to write down the value of NPLs, which SOCBs were not able to do (Oxford Analytical Asia Pacific Daily Brief 2001).

At the Government's request, ADB provided TA to Cinda Asset Management Company (Cinda), which was established to support the resolution of bad debts to the China Construction Bank and serve as a role model for other AMCs (ADB 2002e). Since April 1999, Cinda has acquired NPLs worth $52 billion (as of August 2001). The TA was designed to assist Cinda in developing its capacity to deal effectively with restructuring and disposing its NPLs based on international best practice standards. Although the TA assisted in capacity building of Cinda and in strengthening its operations, it was not able to help adequately address larger constraints that limit the ability of Cinda, as well as other AMCs, to operate effectively based upon an inadequate legal framework.[55]

Cinda became the first of the four AMCs to securitize bad loans and sell them overseas. Under a deal with Deustche Bank. Cinda agreed to create an asset pool of operations totaling CNY1.5 billion ($181.2 million), and Deustche Bank was subcontracted to dispose of the loans overseas in 3–5 years. Great Wall is in negotiations to sell CNY3.4 billion ($410.8 million) of NPLs to foreign investors, while Orient is in talks to sell NPL packages to Taipei,China investors (Hong Kong Standard 2003).

In November 2001, a consortium led by Morgan Stanley (Lehman Brothers, Salomon Smith Barney, and KTH Capital), negotiated the purchase of approximately $1.3 billion of assets from Huarong Asset Management Corporation (Huarong) for $117 billion, with the provision that they share future profits once the consortium makes a stipulated "preferred return" (20–25%) on the initial investment in 24 months (Zhang et. al 2002). In December 2002, MOFTEC approved two Sino-foreign JVs charged with selling a total of CNY12.8 billion ($1.54 billion) of bad loans. The larger of the two JVs, First United Asset Management (FUAM), is 35% owned by Huarong.

[53] China Huarong Asset Management Corp. (Huarong) for Industrial and Commercial Bank of China (ICBC); China Orient Asset Management Corp. (Orient) for Bank of China (BOC): Cinda Asset Management Corp. (Cinda) for China Construction Bank (CCB); and Great Wall Asset Management Corp. (Great Wall) for Agricultural Bank of China (ABC).

[54] In addition, to promote the need to ensure the creditworthiness of borrowers, a five-classification loan structure (pass, special mention, substandard, doubtful, and loss) was standardized (Zhang et al 2002).

[55] The current legal framework limits AMC powers to collect debt, obtain speedy justice, control shares obtained in the debt-equity swap process, supervise management, enforce bankruptcy and liquidation, end unfair or burdensome contracts between the borrower and the bank, implement disposition strategies, safeguard against fraud and corruption, or set up special purpose vehicles that can buy loan receivables and restructure them to be retailed as bonds and other commercial papers.

The remaining shares are owned by a consortium consisting of US investors Morgan Stanley, Lehman Brothers, Salomon Smith Barney, and KTH Investments. FUAM will be responsible for disposing of CNY10.8 billion ($1.3 billion) in bad loans owed by 254 PRC companies. The smaller of the two ventures, Rongsheng Asset Management, is a JV between Huarong and Goldman Sachs (US) and is charged with the disposal of CNY2 billion ($241 million) in bad loans owed by 44 companies.

The Government has instructed banks to reduce the ratio of NPLs to 15% over a 5-year period through recovery of existing NPLs and improved quality of new lending. The ratio of NPLs to total loans fell to 23.4% in June 2002 (Table 17). Although NPLs of other commercial banks are lower due to their shorter operational history and less exposure to SOEs, rural and urban credit cooperatives have NPLs that could be as high as or higher than those of the four SOCBs. In March 2002, PBOC Governor Dai Xiangliong publicly admitted that bad loans of SOCBs could be as high as 30% of total lending. Foreign analysts estimate that the figure can be high as 30–50%.[56]

Table 17: Ratio of NPLs on the Books of the Four Large SOCBs
(1999-2nd Quarter 2002)

Year	1999	2000	2001	2002
NPL Ratio	25	29	25.4	23.4%

Sources: *Asian Development Outlook 2003* and Development Research Center.

As of end–March 2003, the four AMCs had collectively disposed of more than CNY343.45 ($41.38 billion) billion of NPLs. Of this amount, CNY71.5 billion ($8.64 billion) was recovered in cash, a recovery rate of 21.82% (Table 18).

Table 18: Assets Status of Four AMCs as of End 1st Quarter 2003
(CNY billion)

Company	NPLs	Disposed	Recovered	Recovery Rate
Huarong	500.0	96.4	12.4	21.8
Great Wall	346.0	76.0	6.6	10.1
Cinda	373.0	63.5	19	25.4
Orient	350.0	32.0	7.4	30.6

Sources: *China Daily*, 2 November 2001; and PBOC web site.

Table 19 shows that the NPL ratio is higher in the PRC than in many Asian countries. However, a simple country comparison could be misleading. The large proportion of NPLs in the PRC is part of the cost of the transition from a centrally planned to a market economy, particularly SOE reforms. A complex long-term strategy is needed to solve the NPL problem.

[56] In September of 2001, the Government penalized 1,240 banks that failed to reach the reduction targets on NPLs. (Zhang 2002 and International Herald Tribune 2002).

Table 19: Comparison of NPLs between the PRC and Other Asian Developing Countries in 2001 (2002) (%)

Item	PRC	Indonesia	Republic of Korea	Malaysia	Philippines	Thailand
NPLs	26.6[a]	18.0 (10.2)	4.1 (2.4)	10.3 (7)	17.0 (16.4)	12.6
NPLs including Transfers to AMCs	37.0	55.2	19.2	16.6	NA	25.1

NA = not available.
a This percentage differs from Table 17 and reflects the difficulty in obtaining reliable statistical information.
Sources: *Asian Recovery Report*. September 2001; and *Asian Development Outlook 2003*.

2. Capital Markets

a. Background

Although the development of the stock market in the early 1990s was one of the driving forces of recent economic development, it has not functioned as a source of capital for private enterprises. Instead, it has functioned as a key instrument to provide needed capital for large SOEs.

Funds raised on the Exchanges started with CNY0.9 billion ($108.7 million) in 1991, growing at a 75% compound annual growth rate to CNY142 billion ($17.2 billion) in 2000. However in 2001, the amount of funds raised decreased by one third from 2000 to CNY100 billion ($12.08 billion) and further decreased by 4% in 2002 to CNY96 billion ($11.6 billion).

Although capital raised through initial public offerings (IPOs) increased by 3% from 2001 to 2002, from CNY45 billion to CNY46.2 billion ($5.4 billion to $5.6 billion, respectively), amounts raised were less than one third the amount raised in 2000 and one half of the amount raised in 1997 (Figure 3) (Asia Society 2002).

The number of listed companies has increased significantly from 14 in 1991 to 1,160 by 2001, and 1,224 in 2002 (Figure 3). Market capitalization has steadily increased from $2 billion (World Bank 2003a) (CNY241 million) in 1991 to CNY4.3 trillion ($525.8 billion) in 2001, but declined by nearly 12% to CNY3.8 trillion ($463.1 billion) in 2002.

The private sector has had a negligible role in the securities industry that is largely stated-owned. It includes two stock exchanges—the Shanghai Securities Exchange (SSE) and the Shenzhen Securities Exchange (SZE) (collectively Exchanges)—124 securities companies (brokerage firms) mostly owned by state-owned financial or other institutions,[57] more than 200 securities trading units controlled by trust and investment companies, 54 closed-end mutual funds and 17 open-end mutual funds managed by 17 fund management companies, 35 insurance companies, and a few leasing and financing companies.[58]

Shares are classified by reference to the status of the shareholder. State shares are purchased with state assets by government departments and usually constitute more than half of all issued shares. Legal person shares are owned by entities such as companies and institutions, generally other state enterprises. Individual shares are held by employees or individual investors from the general public. Only individual shares of listed companies can be traded on the Exchanges. Until recently, state shares and legal person shares were not transferable.[59] Based on the segregation of shares, there has been no market for corporate control.

[57] The PRC's largest brokerage firm is China Galaxy Securities. Other leading brokers include Haitong Securities, China Southern Securities, China Guotai, and Jun An Securities. CITIC Securities, which went public on the SSE in January 2003, is the second listed brokerage firm in the PRC. The first was Shenzhen-based Xinjiang Securities, which listed in 1999 under its former status as a trust and investment corporation.

[58] Figures are from December 2002, except for mutual funds (January 2003) and for insurance companies (2001).

[59] But see discussion in Section II.A.2.b. Restructuring of State-Owned Enterprises) on recent decision to allow QFIIs to purchase non-trackable shares.

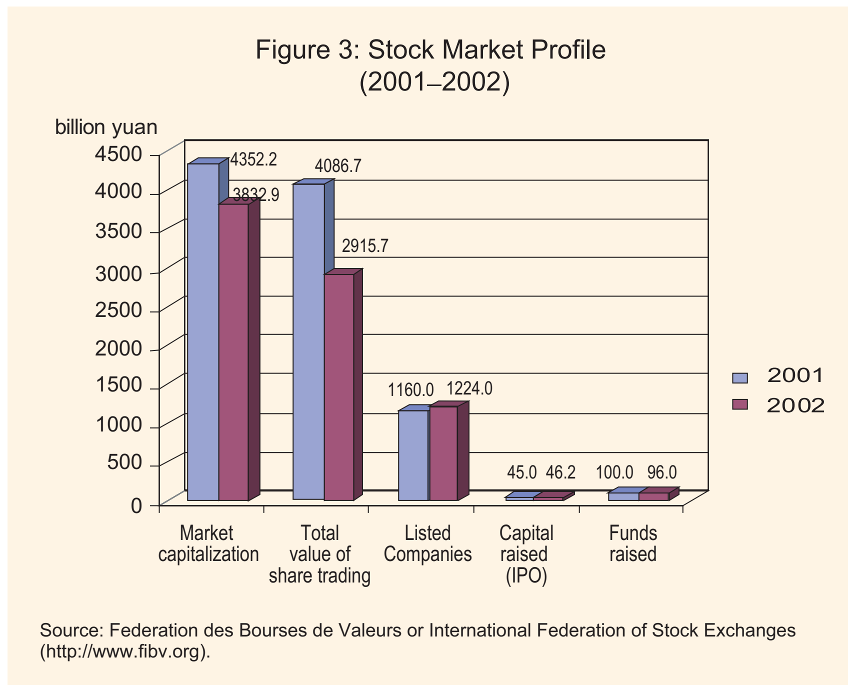


Figure 3: Stock Market Profile (2001–2002)

Source: Federation des Bourses de Valeurs or International Federation of Stock Exchanges (http://www.fibv.org).

Only shareholding companies may apply for an exchange listing. Cross–listings between the Exchanges are not permitted and CSRC determines on which exchange a company will list. Listed firms are evenly distributed between the Exchanges, with 52% listed on the SSE and the rest on the SZE. More than 95% of companies listed on the Exchanges are SOEs and more than 70% of shares issued by listed issuers are state and legal person shares.[60]

State control of a majority of listed companies has contributed to poor corporate governance. Concentration of shares in the hands of the Government enables the state to influence the composition of boards of directors and managers at the expense of small investors. The Government ends up managing and operating the company and driving and endorsing major decisions. The public, as ultimate owners of SOEs, who bear the ultimate risks, have no say in the governance of SOEs or in monitoring them. This situation contradicts the principle of separation between the Government and enterprises endorsed since the beginning of SOE reforms.[61]

Managers and boards of directors of former SOEs often continue to hold such positions even when the company has been converted to a joint stock company (JSC). Listed companies generally have about 10 members of the board of directors, of which between 70 and 99% are drawn from the original SOE. One person generally serves as both the general manager and the chairman of the board of directors of listed companies. Managers are appointed through the political system and often lack sufficient training (Cooper 2001).

To address concerns about the volatility of private capital flows, the domestic securities market is divided into two categories of shares: A shares, which are only available to PRC investors and QFIIs, and B shares which are available to both foreign investors and PRC investors with foreign currency. H shares, shares of mainland registered companies listed in Hong Kong, China and Red Chips, shares of companies registered overseas and listed abroad with having substantial mainland interests and controlled by affiliates or departments of the PRC Government, may also be purchased. A shares account for 73.3% of market capitalization, B shares account for 8.8%, and H and other shares listed on foreign exchanges account for 17.9%.[62] Once a share is issued in a certain category, it may not be converted to another share type.

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[60] Ibid.

[61] See discussion in Section II.A.3. Ambiguous Private Property Rights on establishment of the SASAC, which should help address governance concerns, and Box 7.

[62] One reason that A shares dominate the market is the legal requirement that A shares account for not less than 25% of total shares issued when a company applies for listing (Shirai 2002).

An over-the-counter trading market operated by the Securities Association of China, a self-regulatory organization (SRO), provides a venue for trading unlisted securities with a positive net asset value.

Securities companies operating in the domestic securities industry take one of the following types of licenses: (i) broker/dealer, with minimum capital of CNY50 million ($6 million); (ii) "comprehensive" covering brokerage, dealer activities, and discretionary funds management with a minimum capital of CNY200 million ($24 million); and (iii) underwriting, with a minimum capital of CNY500 million ($60 million). As of October 2001, there were 16 comprehensive securities companies with CNY250 billion ($30.12 billion) in total assets and 694 branch offices, and 17 broker securities companies with CNY11 billion ($1.33 billion) of total assets and 109 branch offices. All securities companies are members of the Exchanges and the China Securities Depository and Clearing Corporation. Minsheng Securities, which has the same shareholders as Minsheng Bank, is the first securities company in the PRC with a majority of its capital from private sources (Gang 2002).

The PRC's accession to WTO enables foreign securities firms to participate in the PRC market through partnerships with domestic securities firms that will benefit from the transfer of new technology and managerial skills. New rules adopted by CSRC, which became effective in July 2002, permit foreign companies to own up to one third of domestic securities firms although the PRC party must maintain control. The new rules require CNY300 million ($36.25 million) of paid-in capital for foreign partners in fund management JVs.

As of end-January 2003, CSRC officially accepted three applications of foreign securities firms to set up a JV with a PRC partner. Credit Lyonnais Securities Asia (CLSA) and Xiangcai Securities recently became the third JV securities firm to be approved by CSRC. Morgan Stanley International Incorporated has been granted a license to form a JV with a PRC partner, the Construction Bank, and the Government of Singapore Investment Corporation and has been operating in the domestic market under the name of the China International Capital Corporation, Ltd. (CICL) for the past 6 years.[63] CICL has been used by major SOEs when they restructure and issue shares overseas and was recently appointed the lead adviser for the sale of shares of five SOEs in Shenzhen (Section II.A.2.b. Restructuring of State-Owned Enterprises). Another JV securities company, BOCI Securities Company, established in March 2002, is 49% owned by BOC International Holdings Co. Ltd. and the Hong Kong, China-based investment arm of the Bank of China. Other applications are currently under review (China Law and Practice 2003e) (Box 3 and Section IV.A.7 on Impact of WTO Accession on the Financial Sector).

The PRC securities market is retail driven. The number of retail investors with a brokerage account at securities companies has grown from 2.2 million in 1992 to 64 million at the end of 2001. Individual investors dominate the A share market. Institutional investors represent only 0.48% of all investors (Asia Society 2002). To address the retail investor bias, CSRC has embarked on the following reforms, which have been welcomed by foreign investors:

(i) creating securities investment management companies (SIMCs) that can manage securities investment funds (10 SIMCs and 33 funds were established as of March 2001);
(ii) allowing securities companies to diversify their operations into in-house private portfolio management services for their corporate clients;
(iii) allowing life insurers to invest in securities markets through SIMCs; and
(iv) introducing the QFII scheme to allow foreign investment in the domestic A share market.

[63] According to the *China Securities Journal*, the Wuhan-based Changjiang Securities Company also signed a deal with the French-based BNP Paribas to establish a JV securities firm on 7 March 2002.

b. Regulatory Framework

Four tiers of regulations govern the PRC securities market. Tier one includes relevant legislation—the Company Law, Securities Law, Trust Law, and two laws on administrative sanctions and review (Administrative Sanctions Law and Administrative Review Law)—that apply to all government agencies.[64] The second tier includes Administrative Regulations adopted by the State Council in respect of a particular area of regulation. As of February 2002, there were three regulations governing the conduct of the capital market: Regulation of Stock Offerings and Trading, Regulation on Convertible Corporate Bonds, and Regulation on Stock Investment Funds. Tier three consists of subordinate rules and orders adopted by CSRC. As of February 2002, CSRC administered 280 regulations, rules, and orders under the Securities and Companies Law. CSRC administers part of the Company Law insofar as it applies to listed issuers. All CSRC rules and orders are adopted by decision of the chairman and commissioners meeting as a collegiate body. In important cases, CSRC consults with other agencies or the State Council before adopting a particular rule. The fourth level includes rules adopted by market institutions and SROs (stock exchanges, commodity futures exchanges, Securities Association of China, Futures Association of China, and China Securities Depository and Clearing Corporation), with CSRC approval.

One of the areas in which CSRC has been actively promoting reforms is the corporate governance of listed companies. CSRC has adopted numerous regulations, codes, and guidelines in this area (Box 7). For example in 2001, CSRC adopted Interim Procedures for Former SOEs that are being Corporatized and Raising Funds through an IPO. These procedures require directors, managers and persons who own more than 5% of company shares to undergo 1 year of training prior to IPO approval to ensure that they understand their regulatory duties, including corporate governance standards. The lead underwriter for the IPO is required to provide such training, culminating in an exam to confirm such understanding. Although this may delay the IPO process, it helps ensure that control persons are aware of their regulatory duties.

To address concerns about the quality and accuracy of information disclosed by listed issuers, CSRC recently issued new disclosure requirements that include more effective sanctions and penalties for noncompliance. On 27 December 2002, CSRC issued revised guidelines on the content of annual reports that require additional disclosures concerning the definition of senior management personnel, salary distribution of senior personnel, and investment of major assets to third parties (China Law and Practice 2003d). On 6 January 2003, CSRC issued revised guidelines governing the content of annual reports that require persons at listed companies in charge of accounting work and the company's accounting firm to guarantee the truthfulness and completeness of the financial information contained in the annual report. As discussed in more detail in Box 8, as a further deterrent to fraudulent disclosure, the Government has also taken recent measures to provide for a civil compensation scheme for investors.

c. China Securities Regulatory Commission

Under the Securities Law, the securities industry is regulated by CSRC, which enfolded all provincial and local agencies dealing with securities issues. CSRC is a quasi-government agency under the State Council, with a degree of independence with respect to its budget. As a result, the salary structure of CSRC is higher than that of the regular civil service but may not be adequate to supervise the post-WTO securities and investment industry. Two CSRC vice chairmen were educated in the US, and one, who is also a US-trained lawyer, served as the former deputy chairman and executive director of the Hong Kong Securities Commission.

[64] The Government expects to release a new law on Investment Funds next year (Beijing Times 2002).

Box 7:

Regulation of Corporate Governance in the PRC

In January 2001, the China Securities Regulatory Commission (CSRC) issued a Code of Corporate Governance for Listed Companies in the PRC incorporating requirements under the Company Law, Securities Law, other relevant laws and regulations, and international best practice standards (the "Code"). Among other things, the Code requires listed companies to establish fair and transparent standards and procedures to assess the performance of directors and managers (Assessment). The board is required to report to shareholders the performance of directors and the results of the Assessment. The Code encourages listed companies to hire professional management and prohibits any individual or institution from interfering with the company's normal recruiting procedures.

The Code also requires listed companies to introduce independent directors to their board in accordance with relevant regulations, and clarifies a listed company's continuous obligation to timely disclose required information truthfully, accurately, and completely in a reasonably comprehensible way. Disclosed information is required to include, among other things (i) the attendance of independent directors at board meetings, their issuance of independent opinions and their opinions regarding related party transactions and appointment and removal of directors and senior management; (ii) the actual state of corporate governance of the company, the gap between the company's corporate governance and the Code, and the reasons for the gap; and (iii) specific plans and measures to improve corporate governance. Under the Code, the secretary of the board of directors is in charge of information disclosure, including formulating rules for information disclosure, contacting shareholders, and providing disclosure to investors. The board of directors and management are required to actively support the secretary's work and no person is allowed to interfere with such disclosure.

In August 2001, CSRC issued *Guidelines for Introducing Independent Directors to the Board of Directors of Listed Companies* ("Guidelines"). Among other things, the Guidelines require that at least one of the independent directors be an accounting professional. By 30 June 2002, at least two members of the board are required to be independent directors and by 30 June 2003, at least one third of the board is required to include independent directors. All independent directors and nominees for independent directors are required to take part in related training organized by CSRC and its authorized institutions in accordance with CSRC requirements. The Guidelines clarify the "independence" requirement and provide CSRC with the power, after notification, to object to the classification of a director as "independent." Independent directors are responsible for, among others, expressing an independent opinion to the board of directors on major events occurring in the listed company. The requirement for independent directors created a demand for qualified directors for listed issuers. By offering training courses on the role and responsibilities of directors, CSRC hopes to create a pool of qualified candidates. The training of such directors intensified in 2001 with ADB assistance.

On 28 April 2003, CSRC helped develop and launch the China Corporate Governance Index (CCGINX) for public companies. The CCGINX was codeveloped by Nanka University Corporate Governance Research Center, Exchanges, financial institutions, and public companies.

CSRC has 3–level regulatory structure consisting of CSRC headquarters at the top, 9 regional offices, 25 special inspection offices (local offices), and 2 other offices under the direct supervision of CSRC headquarters. An enforcement bureau has been set up in each of the 9 regional offices.

Under the current legal framework, CSRC does not appear to have adequate enforcement powers. For example, CSRC may not be able to compel cooperation from suspects or witnesses or inspect bank accounts of individuals or registration documents of companies and other enterprises that are overseen by another government institution. CSRC's task in overseeing the securities market is also influenced by the fact that in many instances central and local government units are

major shareholders of listed companies and owners of securities intermediaries. Many do not know how to act as a majority shareholder and often confuse their role as stockowner and regulator, leading to heavy interference.

Box 8:

Development of a Civil Compensation System for Investors

Significant progress has been made to establish a civil compensation system to enable investors to bring to court listed companies that have been judged by the China Securities Regulatory Commission (CSRC) to have committed fraud in their disclosure of information for listing. Earlier CSRC efforts to sanction such actions did not address shareholder issues. For example, in the case of PT Chengdu Hongguang (PTCH), the first public company in the PRC that showed a loss within 6 months after listing, a CSRC investigation found that PTCH had falsely disclosed more than CNY540 million ($65.24 million) in profits for prior years to qualify for listing when in fact the company had suffered huge losses. After listing, the company used more than 80% of the proceeds raised to pay off its debts rather than in accordance with the stated purpose as disclosed in the prospectus. In another case against Yinguangxia, CSRC found that this company had provided manufactured sales revenues in its export business of nearly CNY1.5 billion ($181.2 million) from 1998 to 2001 in order to receive a listing.

These two cases gave rise to unsuccessful shareholder suits in 1998 after plummeting sale prices made investments in these companies almost worthless. Based on difficulties in proving fraud, the absence of procedures for bringing such cases to court, and the unfamiliarity of judges in this area, these cases were not successfully resolved. To clarify procedural issues, in January 2002, the Supreme People's Court (SPC) issued the "Questions Concerning the Acceptance of Civil Tort Dispute Cases Arising from Misrepresentation in the Securities Market" Circular. As a result of such circular, more than 900 shareholder suits were filed in 2002. However, based on failure of this Circular to resolve key issues (elements of proof, loss calculation), only two of these cases were resolved by way of settlement. Subsequently, to address these key issues, SPC issued a new circular on 9 January 2003 entitled "Trial of Civil Damage Cases Arising from Misrepresentation in the Securities Market Several Provisions" that became effective in February (China Law and Practice 2003d).

d. Major Impediments to Capital Market Growth

As discussed, several fundamental structural problems exist, that impede development of the capital market, including the segregation of the A and B share markets, the state's domination in market capitalization and nontradability of its SOE shares, and retail investor bias. Weakness in regulation and market compliance and surveillance, and the perception of widespread manipulation and insider trading, have encouraged a high degree of volatility and market segmentation. Market intermediaries do not have access to financing and operate without adequate safeguards and internal risk management systems. Prior to settlement, clients are exposed to risks including broker insolvency, fraud within the broker's office, and funds and securities being illegally used for other activities. Settlement systems for equity securities are not sufficiently flexible to assist the future development of markets. The Exchanges do not play a critical role in listing, surveillance, and enforcement. ADB provided TA to CSRC in 2001, which culminated in recommendations to address these concerns.[65]

[65] ADB has provided six TAs to help support capital market development (ADB 1991, 1992, 1993, 1995b, 1998b, 1999d).

e. Bond Market

Although the PRC bond market has grown enormously from about $70 billion in 1994 to $261 billion in 2000 (Fabella and Madhur 2003), bonds are the least developed part of the PRC capital market.[66] In terms of regulatory framework, market infrastructure, secondary market liquidity and the government bond market yield curve, the PRC bond market has a long way to go.

Currently, government bonds (treasury and policy bonds) account for about 96% of outstanding debt. Although the PRC raises capital in the international debt market from time to time, it lacks an integrated domestic government securities market. A regular issuance program would help establish a reliable US dollar benchmark yield curve for the PRC and help other potential bond issuers, including enterprises, raise funds at a lower cost domestically. Bonds have been issued in recent years to finance infrastructure projects, pump priming, social welfare programs, and cover budgetary shortfalls (Green and Wall 2000). Domestic government bond issuance grew from CNY291 billion ($35 billion) in 1996 to CNY747 billion in 2001 ($90 billion)[67] (Figure 5).

The market for corporate bonds is very small. While equity market capitalization was about 37.4% of GDP in 2002 (FIBV 2003), corporate bonds outstanding amount to less than 1% of GDP. During 1993–2000, annual proceeds for corporate bonds averaged CNY16.93 billion ($2.45 billion). The CNY14.7 billion ($1.21 billion) issued in bonds in 2001 was insignificant compared with the CNY100 billion ($12.08 billion) raised through equities. Thirteen corporate bonds are currently listed on the Exchanges with a market capitalization of CNY22.85 billion ($2.76 billion). The total trading volume of corporate bonds in 2001 was CNY41.45 billion ($1.38 billion) compared with CNY3.32 trillion ($40.35 billion) traded in the A share market (Kaiguo 2002).

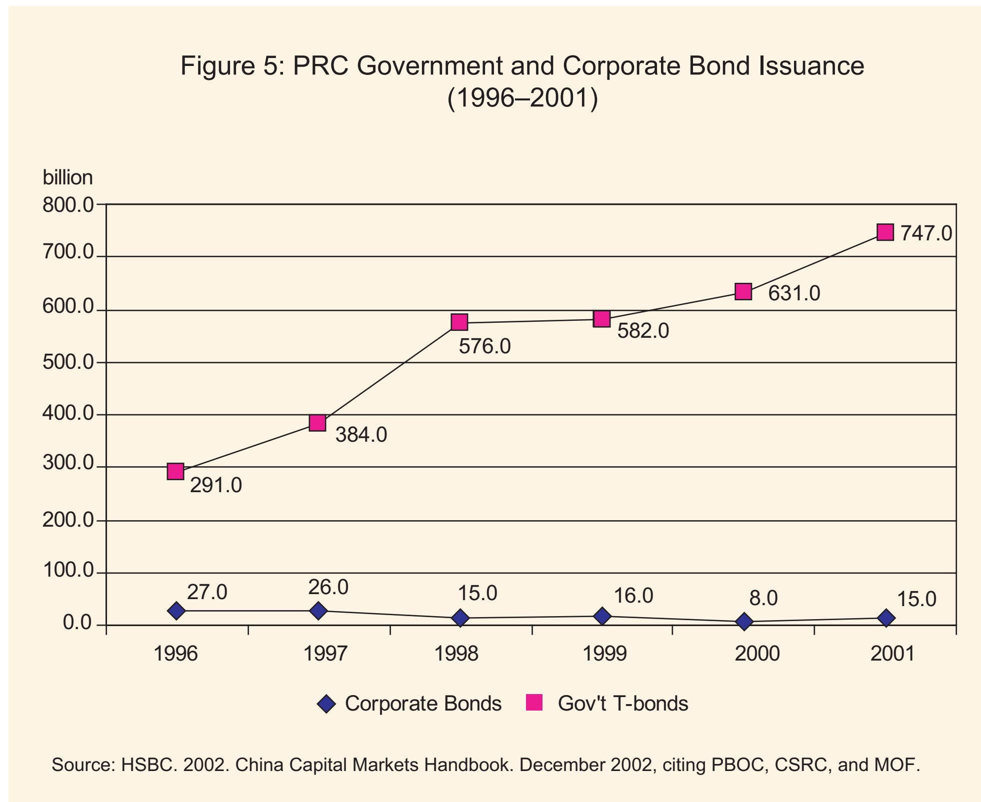
In the first 11 months of 2002, corporate bond issuance reached CNY23.5 billion, an increase of 60% over 2001. The largest corporate bond issue of the year, and a historical record in the PRC,

[66] Disaggregated data not available for 1994. In 1995, government bonds and corporate bonds comprised CNY491 billion ($59 billion) and CNY64.7billion ($8 billion), respectively, of outstanding domestic debt. In 2000, government bonds and corporate bonds accounted for CNY2040.3 billion ($246 billion) and CNY86.2 ($10 billion), respectively, of outstanding domestic debt (Figure 4).

[67] Preliminary data on Treasury bond issuance for 2002 is estimated at Y606 billion ($73 billion).

was a bond sale by telecommunications company, China Mobile (Hong Kong) in November 2002 worth CNY8 billion ($ 966.5 million). The Export-Import Bank of China sold CNY5.5 billion ($664.4 million) in 10-year bonds in the same month. In June 2002, the State Power Corp. raised CNY4 billion ($483.3 million) in an issue on the SZE, and Shenzhen Wanke raised CNY1.5 billion ($181.2 million) in convertible bonds. Some companies are also tapping the overseas debt market.

Figure 5: PRC Government and Corporate Bond Issuance (1996–2001)



Source: HSBC. 2002. China Capital Markets Handbook. December 2002, citing PBOC, CSRC, and MOF.

There are two secondary bond markets in the PRC: the exchange bond market and the interbank bond market. Up and until August 1997, when banks were prohibited from trading on the Exchanges and the interbank bond market developed, commercial banks traded repurchase contracts (repos). Trading in repos provided a way for securities firms to obtain long-term loans from banks, while formal loans were prohibited. The interbank market became the largest issuance and trading market for government bonds, as well as financial and policy bonds. In 1999, PBOC allowed qualified securities companies and incumbent management companies to participate in the interbank market. These markets currently compete with each other and are regulated by different government bodies. PBOC has been overseeing the financial bond market and the interbank bond market, the Treasury manages the treasury bond market and corporate bonds, and CSRC manages convertible bonds and exchange traded bonds.[68]

Developing the bond market is crucial to tapping into the PRC's massive domestic savings and matching savings to its large infrastructure needs (World Bank 1997). A developed corporate bond market will help mitigate currency and savings mismatches, reduce borrowing costs, and promote development of a derivatives market. In many Asian developing countries, bank loans and corporate bonds are likely to be complementary to each other for financing economic development (Yoshitomi and Shirai 2001).

[68] See discussion in Section IV.A.1.a on changes in the regulatory framework for the banking sector.

Several constraints impede development of this market. First, preferential treatment is given to the treasury bond and equity markets. The process of issuing corporate and enterprise bonds is merit based and the issuance of such bonds is closely tied to the credit allocation system previously administered by SDPC.[69] To ensure the successful issuance of treasury bonds, the Government allows only corporate bonds to be issued after the issuance of treasury bonds. Under the Regulations on Corporate Bonds adopted in 1993, SDPC worked out the annual issuance quota for corporate bonds according to the situation of the macro economy, fiscal and monetary policy, sector development, and securities market development. The quota is allocated to different ministries, local governments, and different sectors under administration and monitoring by PBOC. Since all corporate bond issuers are large key enterprises with support from the Government, which assumes the risk of default, the Government imposes rigorous restrictions on the issuer, bond rate, and quota.

Based on the multiplicity of regulators, the issuance procedures for corporate bonds are overly complex. Potential issuers are faced with a segmented regulatory structure requiring multiple approvals at the local and national levels of government. These multiple approvals may significantly delay (up to 1 year) the issuance of corporate bonds, which is not conducive to the development of a vibrant bond market.

There is no reliable credit rating system, the industry is overconcentrated, there is a weak connection between ratings and interest rates, and there is a lack of independence. Credit rating agencies are affiliated with government institutions or PBOC, making it difficult for them to provide an adequate picture of the corporate credit status and potential risks or the quality of the corporate bond. An effective rating system needs to be developed and regulation needs to be strengthened to ensure investor protection and promote the development of the bond market.

The pricing mechanism does not work well. There is no benchmark yield curve in treasury bills and government bonds. A majority of corporate bonds are priced based on treasury bonds according to different maturities. MOF issues bonds at a fixed spread above interest rates on bank deposits of similar maturity, rather than at market-determined interest rates. Credit rating, operating conditions, and debt paying ability are not reflected. Moreover, as discussed in Section IV.A.1.c, interest rates are still subject to administrative control.

There is no effective security mechanism for debt repayment in the PRC. The collateral mechanism is ineffective because most enterprises pledge fixed assets as collateral, which are illiquid. The supervisory system for the corporate bond market also needs to be strengthened. Better information disclosure by issuers, a risk alarm system for debt payment, and a trustee system where the debtor cannot pay should be incorporated into the regulatory framework. Market infrastructure for the trading, payment, and settlement system for debt securities also needs to be strengthened.

f. Asset–Backed Securities

The demand for capital in the PRC is enormous and increasing. Asset securitization, which transforms illiquid assets into freely tradable liquid assets, provides an alternative method for raising capital. The PRC has passed targeted laws and regulations to facilitate the securitization of large infrastructure projects (highways, project finance). For example, the National Highway Law facilitated the financing and development of road construction and maintenance (Kong 1998).

In April 1997, the PRC issued its first asset backed security. China Ocean Shipping Company (COSCO), an SOE, completed an asset backed securitization transaction that securitized its future shipping revenues derived from overseas operations (Kong 1998). Other securitized investment products have not quickly developed in the PRC due primarily to gaps in the legal and institutional infrastructure, tax policy, absence of credit insurance and guarantees, and administrative control of interest rates. In addition, every stage of the transaction requires approval from various government

[69] Note that convertible bonds, which are under CSRC jurisdiction, may be issued by listed companies without going through the credit allocation process.

bodies (e.g., SAFE, SDPC, MOF, MOFTEC, and PBOC). If the originator is state owned, any sale of assets to a special purpose vehicle established outside the PRC also requires approval from its governing authority or the State Asset Administration Bureau (Kothari 2003).

Although there is great potential for a mortgage-backed securities market in the PRC to provide housing finance alternatives, there are several issues, in addition to above-mentioned impediments, that need to be addressed before this market can be fully developed. The need for housing will continue to increase based on government pronouncements (in 1999) that all vacant residential housing units built after 1 January 1999 would be sold, not allocated, and the ongoing growth in the world's largest population.[70]

The housing mortgage system in the PRC is very new. On average, only 6–7%[71] of a commercial bank's portfolio is in mortgage loans in contrast to more than 30% for commercial banks in the US. In 2002, loans for individual housing were CNY825.8 billion ($99.8 billion), an increase of CNY267.1 billion ($32.3 billion) or 47.8% over the previous year (National Bureau of Statistics 2003).

Currently, the mortgage loan market in the PRC lacks standardization. Other problems relate to unclear title and ownership of property, and absence of a central registration and collateral system, secondary housing market, and mortgage insurance.

Several cities have adopted a legal framework to provide guidance for mortgage processing on real estate. In Guangzhou, the local government published regulations on mortgages and required domestic mortgage lenders to be regulated by PBOC. In 1998, the Shanghai Housing Authority announced the establishment of a mortgage-backed securities program, involving a central agency as both mortgage broker and guarantor.

g. Collective Investment Funds

As of end–January 2003, the PRC had 54 closed-end and 17 open-end mutual funds managed by 17 fund management companies that held assets of more than CNY130 billion ($15.7 billion). Current funds under management comprise only about 20% of the assets in the PRC's insurance sector, and only about 1% of the assets in the PRC's banking system (Economist Intelligence Unit 2003)

The PRC's largest fund managers, ranked by market share in total funds under management as of end–June 2002, are China Asset Management (11.3%), China Southern Fund Management (10.2%), and Hua'an Fund Management (10.1%). Large, well-known funds include the Jintai Fund, the Kaiyuan Fund, and the Xinghua Fund.

The mutual fund industry was largely unregulated until the adoption of the Investment Law in December 1997. The law requires funds to (i) have a minimum capital of CNY200 million; (ii) have no more than 10% of a fund invested in any one company, and no more than 10% of a particular company's stock held by a fund; (iii) invest at least 80% of fund assets in equities and bonds; and (iv) invest at least 20% of fund assets in treasury bonds.

In October 1999, CIRC permitted foreign-funded insurance companies in the PRC to buy units in mutual funds, thereby permitting indirect investment in the A-share market. In October 2002, CIRC approved the PRC's first JV fund management company, Guo'an Fund Management. This JV, with a registered capital of CNY100 million, is 67% owned by Guotai Junan Securities, with the balance held by Allianz of Germany. China Merchants Fund Management, a Sino-Dutch JV,[72] gained approval shortly afterward and commenced operations in December 2002.

[70] See www.ChinaBig.com, discussion on the real estate market in China.
[71] Staff estimate.
[72] China Merchants Securities own 10% of the venture, ING of the Netherlands owns 30%, and China Electric Financial Affairs, China Huaneng Financial Affairs and COSCO Financial Affairs each hold 10%.

3. Venture Capital

Venture capitalists provide equity financing to private companies with rapid growth potential and serve as an alternative financing vehicle for SMEs. International experience demonstrates that companies backed by VC historically have produced a disproportionate share of new jobs, particularly well-paid and highly skilled jobs (Nuechterlein 2000).

The PRC has approximately 100 domestic venture centers nationwide and 3,600 companies are currently under incubation. According to MOST, the PRC also has 92 foreign VC investment corporations, with $1.2 billion in funds, of which about $300 million has been invested in the PRC and abroad. The top five domestic VC firms by amount of funds, as of end 2002, are First Eastern Investment Group ($378 million), Asia Strategic Investments ($305 million), Shenzhen Capital Group ($250 million), BOCI Direct Investment Management ($150 million), and China Merchants China Investment Management ($134 million). The largest foreign VC firms include Walden International ($1,900 million), H&Q Asia Pacific ($1,800 million), Newbridge Capital ($1,221 million), AsiaVest Partners, TCW/YFY ($710 million), and IDG Technology Venture Investment ($500 million). Box 9 presents an overview of the VC industry in the PRC.[73]

Box 9:

Overview of the Venture Capital Industry in the PRC

- March 1985. The Communist Party releases a new policy statement, the Reform of Science and Technology Systems Decision, setting up venture capital (VC) firms to promote the high-tech industry.
- September 1985. China Venturetech, the first PRC VC company, is set up with support of the Ministry of Science and Technology (MOST).
- 1987. The Wuhan East Lake High-Tech Development Zone Venture Center is set up with the help of the UN Science and Technology Promotion and Development Fund.
- 1988: China Venturetech closed.
- Late 1990s. International VC funds enter the PRC's VC market.
- March 1999. A group to draft an investment fund law is formally established, headed by Mr. Li Yining (an economist who also drafted the Securities Law) and members including the National People's Congress, State Development Planning Commission , MOST, and China Securities Regulatory Commission (CSRC).
- March 2000. CSRC announces that the quota system for choosing listings will be abolished and underwriters will determine the pricing and timing of new issues instead of the state.
- 2001. The Provisional Regulation on Establishing Foreign-Invested VC Investment Enterprises is adopted, encouraging foreign investors to invest in high-tech industries and help develop the VC market.

Several structural obstacles, including the absence of an enabling legal and regulatory framework, hinder the development of domestic and foreign VC funds. The structural obstacles are fourfold: (i) limited availability of VC resources for both seed money and subsequent funds due in part to underdeveloped legal mechanisms to channel savings into funds and lack of long-term

[73] The Government has encouraged investment in technology-based business ventures through the establishment of 53 national high-technology zones and VC funds.

investors such as pension and mutual funds; (ii) limited pool of venture capitalists with fund management capability; (iii) lack of a reliable exit mechanism and restrictions; and (iv) legal obstacles and inconsistency of laws and regulations.

Most observers agree that the lack of a reliable exit mechanism is the biggest restraint to the development of VC in the PRC. There are no channels for a venture capitalist to cash out of its investment through an IPO or other exist mechanism after a certain period (usually 3–7 years after its initial investment), when the company has reached a sufficient level of maturity. As discussed in Section IV.A.2, the PRC capital market is underdeveloped. The Government recently dropped the much-expected establishment of the equivalent to the National Association of Securities Dealers Automated Quotation system in the PRC for SMEs with small capitalization and short operating history. This was a major blow for the VC industry.

Relevant laws impose significant limitations on a VC's ability to sell portfolio investments. Investors who are shareholders prior to an IPO are required to hold their shares for an extended lockup period following the IPO, generally 3 years. This compares with an international lockup period of 6 months and has been cited as a serious problem that forces investors to organize outside of the PRC. In addition, the Company Law does not provide the rights necessary for exit strategies (piggyback rights, demand registration rights, tag-along rights, drag-along rights, and tender rights upon change in control) (ADB 2002d). The purchase of shares by the issuing corporation and their cancellation is also subject to the consent of other shareholders and the creditors of the corporation.

Other legal obstacles include (i) weak IPRs protection that prevents high-tech start-up companies from developing (Box 6); (ii) restrictions on share transfer and issuance of bond and multiple classes of stocks such as preferred stocks, which is not clearly provided for in relevant laws; (iii) lack of certainty of the status of employee incentive schemes, such as stock options and rights issuances to retain key employees under the Company Law; and (iv) inability to establish a VC as a limited liability partnership which, through its pass-through tax treatment, usually eliminates double tax issues and reduces the liability exposure of limited partners.[74] Although new rules adopted to incorporate the WTO accession agreement allow foreign firms to take up to a 33% stake in fund management companies, high paid-up capital requirements for foreign partners ($36.25 million) may discourage investment (Section IV.A.2. Capital Markets and Box 3).

Some improvements have been made in the enabling environment for venture capitalists during the past few years, including abolition of the quota system for IPOs in 1999 and the ability of underwriters to determine the pricing and timing of new listings in 2000. This is a major step for CSRC to depart from its original role of mobilizing financing for SOEs and diversifying their ownership. However, in practice there continues to be a bias in favor of listing large-scale SOEs as a way of reforming the state-owned sector. Other obstacles cited by foreign investors include (i) high capital requirements to obtain listings; (ii) inability of foreign investors to obtain foreign currency upon the sales of their shares on the Exchanges; and (iii) the difficulty that companies face in carrying out share buybacks. Some experts have pointed out that inconsistencies in the Provisional Regulation on Establishing Foreign-Invested Venture Capital Investment Enterprises (adopted in August 2001) and existing laws, such as the Company Law, and Article 30 of the Provisional Regulation, which provides that state bodies will be the agencies responsible for the Regulation's interpretation, could lead to possible inconsistencies if different interpretations are presented by each ministry (China International Business 2002).

New Rules on Administration of Foreign Invested Venture Capital Enterprises were published on 8 February 2003. These rules require additional disclosure about fund organization and control of the investment process and impose international standards in the operation of PRC private equity funds (China Law and Practice 2003c).

[74] Article 2 of the PRC Partnership Enterprise Law provides that the name of a partnership cannot contain the words "limited" or "unlimited," and Article 8 states that all partners shall bear unlimited liability.

4. Leasing

Leasing plays a role as alternative financing vehicle for SMEs in many emerging markets.[75] With an appropriate legal and regulatory framework in place, leasing can play a significant role in developing the SME sector.

Several factors have contributed to the development of the leasing industry in emerging markets. First, because leasing companies focus on the lessee's ability to generate cash flow for the lease payment, rather than relying on credit history, assets or capital base, a new SME can access lease financing more easily than bank loans. Also, leasing contracts can be structured more flexibly than bank loans to meet the cash flow needs of the lessee. Second, leasing has fewer formal requirements and therefore speedy processing is possible. Third, if properly regulated, SMEs can benefit from tax incentives. In many countries lessees can offset their full lease payments against income before tax, compared with just the interest on bank loans. Fourth, leasing can have a developmental impact by enabling new small companies to access financing for investment and for industries and enterprises to introduce new concepts such as cash flow-based credit analysis. Repossession is also a significant benefit of leasing. Repossession is easier than foreclosure and makes the lessor less dependent on the judicial system for restitution.

In the PRC, JV finance leasing companies had lackluster performances during the 1980s. Many JV leasing ventures turned into costly failures. The resulting bad debt write-offs reached about $800 million (Harner 2000). The performance of domestic leasing firms was even worse. In addition to the problem of rent arrears, the PRC has no leasing law, accounting standards are unclear, appropriate tax incentives are not in place, and funding is an ongoing concern.

PBOC announced the Rules for the Management of Finance Leasing Companies in July 2000 to revive the leasing industry. The new rules encourage FDI to bring in foreign leasing expertise as technical partners for JVs and also allow leasing companies to invest in marketable securities, make working capital loans to lessees, and invest in shares of financial institutions. The latter implies that foreign invested leasing companies could become specialized financing units within bank groups, and be included under financial holding companies or within group finance companies.

In September 2001, MOFTEC issued regulations for foreign-invested leasing companies. These new regulations require all foreign-funded leasing concerns to be organized as limited liability companies and classified as financial leasing or nonfinancial leasing companies. A financial leasing company is required to have a minimum registered capital of $20 million, no less than 20% of which must be contributed by a PRC partner. For nonfinancial leasing firms, the minimum amount of registered capital is $5 million, 20% of which should come from its PRC founder.

As of end–2002, there were 42 JV leasing companies, 15 domestic financial leasing companies, and some 300 nonbank financial institutions that were exclusively or partially engaged in leasing (Economist Intelligence Unit 2003). Some foreign JVs involved in leasing include China International Leasing (owned jointly by Japan's Mitsui Bussan and China Investment Bank), China Universal Leasing (co-owned by Bank of China's Orient Trust and Investment Corporation, Japan Sanwa Bank, and Germany's Dresdner Bank), and China International Non-Ferrous Metals Leasing (a JV between Industrial and Commercial Bank of China [ICBC] and several European banks).

[75] The benefits from the perspective of the lessee, leasing companies, and the Government are discussed in IFC 1996a.

5. Insurance

a. Background

In 1984, the State Council separated the state–run People's Insurance Company of China (PICC) from PBOC. From 1984 to 1998, PBOC permitted the establishment of more than 10 domestic insurance companies. In 1996, PICC was restructured into three independent insurance companies (China Life Insurance, China Property Insurance, and China Reinsurance Corp.). In 1996, foreign insurance companies were invited to assist the PRC develop the domestic insurance market by training local staff, hosting symposiums, supporting insurance education, and investing (Korner 2002).

As of 2001, 35 insurance companies were in operation, 21 of which were foreign invested insurance companies. Although there were more than 200 representative offices of foreign insurers in the PRC, such offices were not permitted to conduct business. Due to limitations on branches, along with geographical restrictions especially for foreign companies, the nonlife insurance market remained dominated by PICC (78%), followed by China Pacific (11%), Ping An (8%), and Hua Tai (1%); and the life insurance sector by China Life (70%), Ping An (Life) (20%), China Pacific (Life) (7.6%), and New China Life (1.2%).

In 2002, the three largest life insurers, China Life, Ping An, and CPIC, continued to dominate with a market share of 91.1%, down slightly from 95.2% in 2001 (Table 20). In the property segment, the top three insurers (PICC, CPIC Property, and Ping An [Property]) control a combined share of 94.8%, compared with 96.2% in 2001. The combined share of foreign and JV companies is now estimated at just 2% but is expected to grow dramatically in the years ahead, given PRC's WTO accession (Section IV.A.7. Impact of WTO Accession on the Financial Sector).

Table 20: Top Five Insurance Companies Ranked by Premium Income in 2001
(CNY billion)

Company	Premium Income	Growth %	Market Share %
Life Insurance			
China Life	81.2	26.7	57.0
Ping An	40.1	82.9	28.2
CPIC Life	14.3	82.3	10.0
New China Life	2.3	56.3	1.6
Tai Kang Life	1.7	141.2	1.2
Subtotal (Top 1-5)	**139.6**	**–**	**98.0**
Top 6-10	2.5	–	1.8
Others	0.3	–	0.2
Total Market	**142.4**	**45.1**	**100.0**
Property Insurance			
PICC	50.9	7.8	74.0
CPIC Property	8.6	25.0	12.5
Ping An (Property)	6.7	40.3	9.7
Hutai Insurance	0.6	33.1	0.9
Tianan Insurance	0.4	50.0	0.6
Subtotal (Top 1-5)	67.2	–	97.7
Top 6-10	1.4	–	2.0
Others	0.2	–	0.3
Total Market	68.8	12.8	100.0

– = Data not available.

Source: China Insurance Regulatory Commission.

As reflected in Table 21, insurance premiums rose 44.7% in 2002 to CNY305.3 billion ($36.88 billion). Life insurance premiums grew by 59.8% to CNY227.5 billion ($27.48 billion), while nonlife insurance grew by 13.6% to CNY77.8 billion ($9.4 billion).

Table 21: The PRC Insurance Market: Total Premium Paid
(CNY billion)

Item	1996	1997	1998	1999	2000	2001	2002
Life Insurance (share %)	32.5 (42)	60.2 (55)	74.8 (60)	86.4 (62)	99.8 (63)	142.4 (68)	227.5 (75)
Growth Rate (%)	—	85	24	16	16	43	60
Nonlife Insurance (share %)	45.2 (58)	48.6 (45)	50.0 (40)	52.4 (38)	59.8 (37)	68.5 (32)	77.8 (25)
Growth Rate (%)	—	8	3	5	14	15	14
Total	77.7 (100)	108.8 (100)	124.8 (100)	138.8 (100)	159.6 (100)	210.9 (100)	305.3 (100)
Growth Rate (%)	31	40	15	11	15	32	45

Sources: China Insurance Regulatory Commission, S.M. Harner and Company; *China Statistical Yearbook 2002*; http://www.stats.gov.cn

Actuarial services are developing but have a long way to go before they are equivalent to the services provided in more developed markets. Reinsurance arrangements in the PRC are not well developed nor well understood. As a result, there is only one domestic reinsurance company in the PRC, China Reinsurance Corporation.

The agreements on accession to the WTO signed in 1999 and 2000 with the US and the EU represent significant progress and have had a significant impact on market entry by foreign insurers (Box 3 and Section IV.A.7. Impact of WTO Accession on the Financial Sector). By December 2002, 33 foreign insurers including 20 JVs and 13 branches of foreign firms had been approved to operate in the PRC. CIRC approved the bid by Italy's largest insurance company, Assicurazioni Generali, and China Petroleum Finance Company, a subsidiary of China National Petroleum Corporation, to establish a 50-50 JV Generali China Life Insurance with an initial capital of about $25 million and a sales force of 500 agents (People's Daily 2003). This was the first JV that was granted an operating license after the PRC's WTO accession. In January 2003, Aon Corporation, a Chicago-based insurance company, received the first full license to operate an insurance brokerage business in the PRC. GAB Robins Group also received CIRC approval to establish a wholly foreign-owned insurance appraisal company in Shanghai (People's Daily 2003).

b. Regulatory Framework

Although the insurance industry began to develop in 1984, there was no legal framework until 1985 when the State Council issued the Provisional Stipulations of Insurance Enterprise Administration. In 1995, the Insurance Law of China was adopted. This Law reflects international standards of regulation, attempts to clarify the basic principles of insurance contracts, draws a line between social and commercial insurance, establishes the principles of minimum protection for an insured person, and defines the legal status of insurance brokers.

In February 2002, the Administrative Regulations for Foreign Invested Insurance Companies were adopted to clarify qualification requirements for foreign insurers wishing to do business in the PRC. These include at least 30 years experience abroad, operation of a representative office inside the PRC for at least 2 years, and total assets of more than $5 billion at the end of the year prior to application. These regulations include a minimum capital requirement of CNY200 million ($24.16 million) applicable to foreign-owned insurers, JV insurers, and branches of foreign insurers with headquarters overseas.

The Insurance Law was amended in October 2002 to ensure a level playing field for foreign, domestic, and JV insurance companies. The amended law, which took effect in January 2003,

includes provisions that broaden the scope of insurance businesses, introduce more product designs, and promote competition.

The CIRC oversees regulation of the insurance market. The CIRC was established in 1998 out of the regulatory apparatus of PBOC and is staffed mainly with ex-PICC employees. By 2000, CIRC had established branches in more than 30 provinces, regions, and municipalities (Allison 2001). ADB provided TA to CIRC to help prepare regulations and policies covering the regulation, organization, operation, and market behavior of insurance companies and the management of insurance intermediaries (ADB 2002f). The TA also helped CIRC address issues related to WTO entry and eventual liberalization of the insurance sector.

6. Informal Sector–Microfinance[76]

a. Background

Inadequate credit to farmers and the agriculture sector has been a major problem in the PRC. Approximately 70% of the population of the PRC lives in the countryside and most commercial banks have closed down their rural branches. Rotational savings and credit associations, otherwise known as rural credit foundations (h*ui's*), developed rapidly in the 1980s to meet demands for credit in rural areas. Their loan portfolios were more than four times that of the formal financial sector in 1998, just before PBOC ordered them to close or merge with RCCs for financial prudence. Their members were farmers and small businessmen who were willing to pay interest rates that were two to three times the official interest rate.

Currently, only RCCs operate in rural areas and have been estimated by some to have NPLs as high as 60%. To enhance the quality of lending and reduce the number of NPLs, RCCs began to apply strict credit quality control systems that required loans to be collateralized. However, since the housing of farmers cannot be used as collateral, it was difficult for farmers to obtain credit from RCCs.

With the support of international financial institutions, more than 300 microcredit pilot projects have been implemented in the PRC to help convince PBOC that farmers can maintain good credit without collateral if appropriate mechanisms are applied. However, a majority of these projects have been implemented under a flawed environment with three fundamental issues influencing their sustainability. First, the vast majority of microfinance projects have no proper legal status. Other than the few that are operated through formal financial institutions (the Agricultural Bank of China [ABC] and RCCs), microfinance schemes are illegal, but tolerated by the Government because of the possible utility of these projects in poverty reduction. In the absence of a legal basis for microfinance, these projects are subject to changes in government policy and sudden closure of operations. Second, there is no liberalized interest rate regime in which microfinance projects can operate on a sustainable basis, charging interest rates based on expected costs.[77] Third, microfinance pilot projects for the most part are exclusively microcredit, which limits their ability to grow and proliferate.

Problems have also been experienced with RCCs that have been mandated by the State Council to allocate more than half of their credit to farmers. In practice, this has proven to be difficult to realize because nonfinancial transaction costs for farmers are high and RCCs prefer to make larger loans to better-off farmers and enterprises. Other issues include weak management in terms of internal policies, procedures, systems and corporate culture, and the use of joint liability groups for production lending to relatively better-off farmers, not necessarily for the poor, the intended target for microfinance.

[76] This section is based on the ADB. 2000. *Technical Assistance to the PRC for a Study on Ways to Support Rural Poverty Reduction Projects*. Manila.
[77] See discussion in Section IV.A.1.c. Regulation of Interest Rates (China Daily 2002).

Although legally allowed to conduct microfinance operations, ABC has not proven to be effective in microfinance delivery. Due to its historical involvement in the Government's subsidized lending program for poverty reduction (except for the period 1995–1998 when such functions were transferred to the Agricultural Development Bank of China), ABC has been characterized by a lack of autonomy and poor credit discipline in its microcredit loan portfolio. As commercial orientation has been emphasized in banking sector reforms, ABC management and staff are reluctant to lend to the rural poor since microcredit is not viewed as a viable commercial business and ABC is undergoing a transformation into a regular commercial bank.

Since May 2001, PBOC has conducted a pilot project on microcredit implemented by RCCs in Wuyuan county, Jiangxi Province. By end-June 2002, more than CNY220 million ($27 million) was lent to 40,750 households (60% of farmers). The loan recovery rate was as high as 95%. The interest rate charged by the microcredit program is about 30% higher than the lending rate set by PBOC. RCCs that do not have enough money to run the microcredit program can receive funds from the PBOC window. Many provinces in the PRC are implementing such programs. The medium- to long-term objective of these programs is to reach 60% of farmers or about 110 million rural households. By end–June 2002, more than 55 million households (30% of farmers) received a microcredit loan and the total microcredit lending reached CNY70 billion ($8.4 billion).

These pilot microfinance schemes have demonstrated the relevance and viability of microfinance in the PRC and their effectiveness in reaching the poorest of the poor. However, these projects need to be provided with a legal status to be able to deliver services more effectively and sustainably. The PRC needs to decide how to implement the lessons learned from its experience of using microfinance in its poverty reduction program, particularly during the last 5 years. Institutional and policy barriers to development, identified above, need to be addressed.

7. Impact of WTO Accession on the Financial Sector

WTO commitments in the financial sector, especially those in the banking and insurance sectors, will place significant competitive pressures on domestic enterprises. Under the WTO schedule (Box 3), the PRC banking sector is gradually opening up to foreign participants. Foreign banks will be allowed to offer business in local currency to local corporate clients within 2 years after WTO accession and conduct full domestic currency operations 5 years after accession. Foreign banks may also gradually expand the number of cities where they can conduct local currency business. New licenses should be granted to foreign banks based on prudential criteria, with no limits on the number of licenses or other restrictions like economic needs tests.

Domestic banks have a 5-year adjustment period to meet WTO challenges. This requires accelerating reforms to restructure SOCBs to align reward and incentive systems for commercial management, improve corporate governance, intensify efforts to tackle NPLs, strengthen private commercial banks to support the nonstate sector, particularly SMEs, and create a conducive legal and enabling environment[78] (Appendix 8 has a more in-depth analysis on the projected impact of WTO accession on this sector).

The PRC's WTO commitments in the capital markets sector are more limited. They allow the establishment of JV fund management firms on accession to WTO. The foreign party may initially own 33% of the JV, which may rise to 49% 3 years after accession. JVs may manage domestic funds. JV securities companies may also be established. However, foreign party ownership is also limited to 33% of such companies. The agreement does not state how many licenses will be granted, a timetable of when these licenses will be granted, or make the application process transparent (Green and Wall 2000).

[78] ADB is providing technical assistance to help PBOC develop a forward-looking and comprehensive legal framework for the banking sector (ADB 2002i).

The PRC's WTO commitments in the insurance sector are broad and significant. Under the WTO schedule, foreign players will be allowed to expand into group, health, and pension lines of insurance within 5 years for the US and 2 years for the EU. Geographical limitations will be limited. As of December 2001, nonlife companies are allowed to provide master policies (if headquarters of the insured are located within the insured's licensed city) and large-scale risks without geographic restrictions. Foreign life insurance providers are limited to no more than 50% equity but can sell group products and pension products 3 years after accession. Foreign insurance brokers are allowed to form JVs now and transition to wholly owned operations by December 2006. The PRC has also agreed to award licenses solely based on prudential criteria, with no economic needs test or quantifiable limits on the number of licenses issued.

B. Infrastructure

1. General

Private sector financing for infrastructure reduces the fiscal burden on the Government, lowers the costs of providing infrastructure services by introducing competition and providing market-based incentives to encourage efficiency improvements, and helps better allocate and mitigate investment risks between the public and private sectors. The private sector brings capital, managerial expertise, and technological innovation, and thus facilitates improved infrastructure and capital market development.

Although enormous investments were channeled into infrastructure over the past 2 decades, only in the late 1980s and early 1990s did the Government begin to allow private investment. In the early 1990s, private sector infrastructure financing reached 12% of the total annual investment. However, from 1990 to 2000, investments in private infrastructure projects totaled $44 billion, accounting for less than 10% of the total annual investment.

Foreign investors tend to shy away from infrastructure projects because they find themselves negotiating with both the Central Government and the provinces and the procedures are inconsistent from one to the next (World Bank 2001c). Investors do not receive assurances on performance obligations from their PRC counterparts and are deterred by the PRC's underdeveloped legal and regulatory system, although many of these issues are being resolved and legal and regulatory frameworks are being developed. Notwithstanding these concerns, recent pricing reform, especially for utilities, has made power investments more attractive. New financing techniques have become available, often offered in conjunction with multilateral financial institutions.

So far there have only been a few competitively bid build-operate-transfer (BOT) projects that were financed on a limited recourse basis and involved no financial guarantees from either central or local governments. Under these concessional projects, the Government, as granting authority, grants rights and responsibilities of operating a public service to a private company. The BOT Chengdu Water Project is among the most prominent concessional and pilot BOT project, following BOT Circular (1995) and has been closely monitored by SDPC. This project was the first BOT water supply project awarded through competitive bidding in the PRC and was developed with ADB assistance (Box 10). One of the results is that water tariffs are lower than tariffs from publicly owned water supply companies in Chengdu. The project mobilized more than $100 million without any fiscal support from either the central or local governments.

This project shows that the private sector can provide quality infrastructure services efficiently. With experience and continued improvements in the legal and policy framework, the PRC can and should take advantage of private sector participation in infrastructure financing. If conditions are right, the private sector can help overcome infrastructure bottlenecks in the Western Region.

Box 10:

Chengdu Generale des Eaux-Marubeni (Chengdu Water Supply Project)—1999

The Chengdu Water Supply Project was designed to provide bulk supply of treated water to the capital city of Sichuan Province in the People's Republic of China (PRC) under an 18-year build-operate-transfer (BOT) contract. Chengdu is the second largest city in the southwestern part of the PRC and classified by the PRC Government as having serious water shortages. The Project involved the construction of a water treatment plant with a capacity of 400,000 cubic meters per day, two water intakes, and a 27-kilometer transmission pipeline to the city. The project sponsor is a consortium of Vivendi from France and Marubeni Corporation from Japan.

The Project was developed with the assistance of the Asian Development Bank (ADB). As the first BOT water supply project in the PRC, it would serve as a model for similar projects in other parts of the PRC. Through technical assistance support to the Chengdu Municipal Government, ADB helped ensure that the basic elements of transparent bidding were observed, the lowest feasible tariff was obtained, and that project fundamentals, such as tariff increases to enable cost recovery, were in place. The Project demonstrated that the BOT structure could be used at the municipal level and funded externally without any central government guarantee.

ADB was instrumental in structuring the finance for the Project, estimated to cost $106.5 million. In addition to its own direct loan of $26.5 million, ADB helped secure debt funding commitments from seven commercial banks under ADB's Complementary Financing Scheme ($21.5 million) and under a guarantee facility from the European Investment Bank ($26.5 million).

Following approval by ADB and financial closing, the Project won four awards for excellence in project finance in 1999 from four internationally recognized financial publications. The London-based *Project Finance International* cited the Project as the "Infrastructure Deal of the Year," while both the Hong Kong, China-based Financial Intelligence Agency and the *International Financial Law Review* voted it as the "Project Finance Deal of the Year." The awards were given in recognition of the Project's innovative and superior financing structure that allowed international lenders to take long-term municipal risk in the PRC for the first time.

a. Legal and Regulatory Framework for Private Participation in Infrastructure

Although the PRC has made substantial progress in issuing a series of laws, regulations, notices, and circulars governing the legal framework (the Bidding Law, unified Contract Law, Project Finance Measures, and the BOT Circular) for private participation in infrastructure (PPI), work still needs to be done in this area.

Relevant regulations, notices, circulars, and implementing rules are issued by agencies at both the central and local levels. Many important and routine decisions are left to administrative authorities, often with inconsistent results. For instance, ADB conducted studies on the three main regulations granting operating rights for toll roads and identified inconsistencies and contradictions.[79]

The BOT Circular of 1995, which clarified some unanswered issues concerning PPI under previous laws, such as concession terms, granting authorities, convertibility of foreign currencies and procurement, was considered a major breakthrough. The Circular was drafted as a limited experiment and requires further refinement. Despite potential benefits, it is uncertain whether the

[79] The three main regulations granting operating rights for toll roads are (i) the Highway Law issued by NPC, (ii) the Notice of Strengthening the Administration of Transfer of Infrastructure Assets issued by SDPC, and (iii) Measures of Transfer of Operating Right of Highway with Compensation issued by the Ministry of Construction.

Government will promote BOT types of projects as a major means of attracting private capital in the future based on the availability of other funding options.

The World Bank's recent report on PPI outlined possible directions that the PRC can take, including (i) tightening existing laws and procedures without passing specific legislation on PPI; (ii) codifying the BOT Circular into law; and (iii) adopting a new framework law covering a broad range of models for PPI. The framework law is recommended as the most effective way to proceed. The proposed framework law should

- (i) establish a legal framework specifically for projects involving PPI and, with respect to existing requirements that might apply and new requirements as they are adopted, clarify which requirements take precedence when there is a conflict;
- (ii) apply to all projects involving PPI and cover concessions, management and leasing contracts, BOT, and so on;
- (iii) emphasize the development and protection of basic contract rights for projects involving PPI;
- (iv) provide flexibility so that project terms are left for negotiation between the granting authority and the investors (i.e., the BOT Circular prohibits domestic financial and nonfinancial institutions from providing any guarantees for project financing);
- (v) refer to model contracts to facilitate implementation, without obliging parties to use those contract terms;
- (vi) grandfather all existing projects to provide protection and certainty to existing investors; and
- (vii) be consistent with sector laws.

The approval process for PPI projects is cumbersome. According to the World Bank report, the official review and approval process for an infrastructure project generally has three stages: (i) project approval stage, (ii) project company approval stage, and (iii) operational approval stage. A basic project approval process for pilot BOT projects requires 8 approvals from various agencies, with each step further requiring smaller approvals, consultations, and filings with various agencies. For non-BOT projects or projects initiated by local governments, the approval process is more complex, requiring 12 approvals from various agencies, both central and local. The next step is to establish a project company that could require 18 additional approvals, followed by more than 10 other approvals at the stage of operational approvals. In total, an infrastructure project could require about 40 different approvals. The approval process continues even after the project starts, through site inspections from numerous local government agencies. International experience shows that cumbersome current approval processes can be streamlined by adopting "one-stop approval shops" under which all relevant approvals can be handled.

Capacity building of local governments is essential for successfully formulating BOT projects. Increasing PPI has put pressure on local governments to strengthen their capacity as granting authorities (World Bank 2001c). Due to the tender approach taken for BOT projects, local governments are required to do a substantial amount of preparatory work, including preparation of bidding documents, as opposed to the JV approach in which local governments can rely on foreign partners for most of the time-consuming task of formulating the project. Given the successful BOT Water Project in Chengdu (Box 10), ADB should provide further assistance to the Central Government to establish a mechanism and ways to disseminate best practice to other local governments.

2. Transport—Road and Highways[80]

In the past 5 years, the PRC has invested close to $242 billion on infrastructure projects, including 25,500 kilometers (km) of highway, of which 8,000 km are expressways. Another 4,000 km of trunk rail lines were built and 3,000 km of track were either rehabilitated, double tracked or electrified (China Daily 2002l).

Of the total investment, approximately $62 billion has been raised through treasury bonds while the rest has come from public coffers, funding agencies, private investors, and user charges. However, the share of private capital is still very small. According to the World Bank, the share of private capital investment in the road sector between 1990 and 2000 accounted for about 10%, 80% of which was invested in the coastal provinces. None of these investments involved "greenfield" (start-up) projects with higher risks than "brownfield" (expansion or rehabilitation) projects.

The planned investment in the road sector is expected to increase road assets by a further 150,000 km over the next 5 years at a cost of about $115 billion. This includes several thousand kms of high-capacity roads and expressways that form the National Trunk Highway System (NTHS), costing approximately $34 billion. Revenue from user charges on the NTHS will likely cover less than half the cost. Hence there is a need to mobilize nongovernment sources of funding to supplement public sources. A major portion of the planned investment over the next 5 years will be in the western provinces for development roads and class 1 and class 2 roads. Many of these will not be suitable for private sector financing.

Modest private participation in the road sector in the past reflects several factors: (i) the nascent development of the domestic capital market; (ii) unclear government policy on public and private financing; (iii) evolving legal and regulatory environment; (iv) lack of transparency in the approval process; (v) weak contract enforceability; and (vi) defaults on loans and bonds.

There are several models for PPI: (i) cooperative JVs, (ii) securitization, (iii) domestic bond market, and (iv) commercial loans from PRC banks. Transforming the road sector into public-private partnerships requires a more aggressive introduction of corporatization, leasing/concessioning, and securitization (ADB 1997c). There are no BOT schemes for highway projects involving foreign investors.

Corporatization is relatively well-established in the PRC. However, the following key issues need to be carefully addressed in the corporatization process: (i) the necessity of the Provincial Communications Department (PCD)'s authorization to support the establishment of a new share limited company, while obtaining its agreement to reduced shareholding in the new company; (ii) scope of the corporatization; (iii) the need to identify five founders of a new share limited company in an innovative way (as opposed to PCD/Ministry of Construction as a single shareholder of the expressway corporation); and (iv) structuring an optimum debt/equity ratio of the new company.

Leasing is a special case of concessioning in the Leasing of Assets, also known as the Transfer of Operating Rights in the PRC. While leasing has occurred mainly through JVs, the concept of competitive leasing or concessioning is virtually precluded by the approval process, which requires that the corporate structure and details of the lease be fixed before approval for the lease is given by higher authorities. As a result, the concept of competitive leasing or concessioning has not yet been used in the PRC. Major issues include (i) how to ensure fairness in the valuation of land and resettlement of existing residents (up to 20% of the shares may be allocated against the value of the land and resettlement costs); (ii) how to secure and process the land use certificate under prevailing circumstances in which obtaining the land use certificate takes more than 2 years and many road projects are implemented under a permit for use of the land only; and (iii) how to effectively and accurately manage demand.

Securitization is popular in the PRC as a funding modality for toll roads, although listing requirements, such as 3-year profitable operations prior to listing, remain hurdles for further use of securitization.

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[80] This section is based on an ADB staff report and ADB 1997c.

Privatization of roads and highways is not progressing rapidly. A number of PCDs have established separate, but 100% owned, provincial expressway companies to carry out specific highway projects under preferential treatment. Under WTO rules, such preferential treatment will need to change to an arm's-length relationship with open and competitive bidding for concessions or operating rights. If the private sector, particularly the international private sector, is to invest in these companies, they will need to be restructured so that their autonomy from the Government is evident and their internal operations and decision making becomes accountable to all owners, not just PCD.

Another issue is the absence of a coherent set of rules and standards to guide the process. For example, a detailed set of regulations setting standards has not been adopted under the amended Highway Law. In addition, both the Ministry of Construction and SDPC have issued inconsistent administrative orders and notices that impact on forming private-public partnerships.

3. Transport—Railway

The 68,000 route-km railway system in the PRC comprises 58,000 route-km of the state-owned national railway and 10,000 route-km of local railways. The 1990 Railway Law provides the framework for regulating and operating railways in the PRC. As the PRC moves toward a more dynamic, decentralized, and market-driven economy, and in the light of increasing competition from the expanding road network, structural reforms touching all aspects of railway operation and management are being implemented to modernize and improve the efficiency of the railway system. Important reform efforts include the introduction of (i) the productivity contract system in 1986; (ii) the assets operation liability system for the national railway in 1999; (iii) the management contracts system in 1999; (iv) a new commodity-based freight tariff structure and additional charges for freight loading and unloading; and (v) various restructuring measures to improve productivity and reduce operating losses after 1999. Due in part to these reform efforts, unit revenues from both freight and passenger services increased more than unit operating costs, which improved the financial performance of the national railway.

Challenges still remain. The lack of railway capacity to meet the increasing demand for transportation services is constraining economic growth. The Government's plan for railway development gives priority to (i) expanding the railway network by constructing new railway lines to provide economic transportation and catalyze growth in poor inland regions; (ii) encouraging the construction of JV railways to develop local economies; (iii) improving the efficiency of the existing system by using new technology and modern management tools; (iv) increasing cost recovery by commercializing services and adopting appropriate pricing policies; and (v) encouraging nongovernment investment in infrastructure and related services.

The Tenth Five-Year Plan envisages (i) constructing 6,000 km of new lines to provide access to unserved areas with the network length reaching a total of 74,000 route-km; (ii) providing 3,000 km of double lines and electrification of 5,000 km of key lines to increase capacity; and (iii) increasing operating speeds on 5,000 km with the total length of such lines reaching 15,000 km. The total outlay for the Plan will be CNY350 billion ($42.27 billion) for railway development, consisting of CNY270 billion ($32.61 billion) for capital construction, and CNY80 billion ($9.66 billion) for rolling stock. About one third of this investment will be internally generated. The remaining investment will be arranged from domestic markets and foreign sources. The Ministry of Railways (MOR) is channeling 30% of its funds for railway construction into the western regions to spur economic development. The total length of railways in the western region will reach 27,500 km by 2005, accounting for 37% of the country's total length of railways open to traffic, up from 23,700 km (35% of the national total) in 2000. Total investment is expected to amount to CNY127 billion ($15.3 million) for 2001–2005 to connect provinces, municipalities, and autonomous regions in the western region with the eastern part of the country.

The PRC's entry to WTO has opened up railway transport services to foreign investors and operators. MOR is no longer a monopoly. Reforms in the railway sector include further imple-

mentation of the asset management responsibility system, separation of the accounting of freight transport and railway network operations, and acceleration of the restructuring of non-transportation enterprises. The sector is currently taking measures to attract more foreign capital into railway construction and is making use of foreign loans. The railway freight transport market has been opened by allowing foreign investors to establish JVs. MOR will grant more independent decision-making power to railway bureaus, including the power to examine and approve enterprise investment. Efforts are being made to review projects for administrative approval, revise outdated rules and regulations, and reduce administrative interference in enterprises. The 14 railway bureaus will complete the grouping of internal passenger transport companies next year.

A wider role for the private sector is envisaged in the railway sector through investments in railway project facilities and services from nongovernment and private sector sources, such as construction of industrial sidings, tourism, and containers and luggage-related businesses. An enabling environment conducive to such investments is needed.

ADB has supported commercialization of railway operations with full cost recovery to ensure financial sustainability. In 1996, ADB supported the Guan-Shen Railway Company—the first PRC railway entity to raise $510 billion in international markets through an IPO. ADB continues to assist the commercialization process, particularly in tariff setting to ensure full cost recovery, strengthened marketing, and improved services.

4. Water and Sanitation[81]

Private sector participation in the water supply industry is at an early stage of development. The major source of financing continues to be government equity and grants, supplemented by domestic loans and official development assistance. Between 1991 and 1997, local governments spent CNY50 billion ($6.08 billion) on water supply. The investment required for urban water supply is estimated to be more than CNY74 billion ($9 billion) between 2000 and 2004, a 48% increase over expenditures in the 1991–1997 period. To mobilize necessary domestic resources, the Government created a water resources fund financed mainly from two sources: (i) an allocation equivalent to 3% of national and provincial taxes on transport infrastructure; and (ii) an allocation of not less than 15% of taxes for urban infrastructure maintenance in cities with high flood risk. The Government is considering including in the water resources fund part of the taxes paid on fixed investments. The Government recognizes that because of large investments needed, greater efforts are required to mobilize private sector funding. In 1991, the Government adopted a policy to allow and encourage foreign investment in this sector and is experimenting with the BOT model.[82]

A key factor for success in developing a viable private sector participation package is to balance potential risks and rewards for private sector operators in a manner that is acceptable to the public sector. The Government's main objectives in promoting private sector participation in the PRC water sector are to (i) improve access to capital funds; (ii) gain access to advanced technology and equipment; (iii) introduce new approaches to management that will increase production efficiency and financial performance; (iv) upgrade the technical skills of water supply company (WSC) employees; and (v) create opportunities to reform water tariffs.

The objective of the private sector partner is a reasonable return on investment at an acceptable level of risk. The principal elements of risk for the private sector partner are (i) changes in the fiscal, legal, and regulatory regime; (ii) failure to achieve performance standards for construction or operations; and (iii) failure to realize revenue requirements due to factors such as low sales

[81] This section is based on an ADB staff report.
[82] A construction agreement on the first urban water infrastructure project for Chengdu City, approved by the Government to investigate the use of foreign funds under the BOT scheme, was signed in July 1998, and was the result of ADB assistance in structuring and partially financing the project. Construction started in early 1999 and the plant began operations in 2002 (Box 10).

volumes, low tariffs, and exchange rate movements. Water tariffs have been low in the PRC, even lower than water production costs, and although tariffs increased by 18% per annum from 1986 to 1998, they are still not high enough to ensure the financial viability of water companies.

Tariff policies have a key role in managing risk when private sector participation is introduced. This is particularly true when a private sector partner assumes direct responsibility for the water tariff, but it is also the case when the municipal government and the WSC retain responsibility for tariffs. In either case, revenue risk is minimized if clear policies requiring tariffs that recover the full cost of the water supply exist, while establishing an independent and transparent regulatory process to safeguard the customer from excessive profit taking. Important policy milestones include (i) the Regulation on Management of Pricing of Urban Water Supply (1998) that was the first national guideline on water tariffs and includes the principle of full cost recovery through tariffs; and (ii) the Circular on Strengthening the Collection of Wastewater Treatment Tariffs that came into effect in 1999. The ability to attract private sector partners in the PRC water sector will depend on the future prospects for cost recovery, including a reasonable return on capital investment. ADB's two water tariff study TAs implemented over a 4-year period have contributed significantly to water tariff reforms in the PRC. Also, ADB's Chengdu Water Supply Project, the first internationally bid BOT water supply project in the PRC, contributed to the reform of the water sector (Box 10).

5. Power

The PRC is the world's second largest installed base of electric power generation capacity at over 300 gigawatts. Power generation is open to foreign investors. Over the past 2 decades, electricity demand grew by nearly 9% per annum, except from late 1997 to early 1999. The slower-than-expected growth in demand led to a series of contractual disputes between the off-takers and the independent power producers. A recent decline in FDI reflects the impact of disputes in this sector, the high liquidity of domestic banks that are very interested in lending for power generation projects, and current overcapacity in power generation.

Future demand should grow at an annual average rate of 5% over the next decade. Based on required demand, by 2010 capital cost for power generation will be $700 a kilowatt for a typical coal-fired power station.[83] The Government expects that 25–30% of the investment will be mobilized through private sector participation in power generation.

a. Independent Power Projects

The independent power generation sector has experienced mixed results over the past few years. About one third of all projects have proceeded without problems, another third have had minor delays or misunderstandings, and the remaining third remain at an impasse. The most serious cases involve abrupt project cancellations and changes in tariff rates following initial negotiation and signing of contracts which threatens the willingness of foreign companies to invest in, and commercial banks to provide, project financing in the PRC. It is usually the provincial and municipal governments that are deemed hindrances to this process. Corruption, uncertainty over prices, ambiguity over decision-making authority, fall in power demand in 1997, and ensuing government renegotiations of power purchase agreements (PPAs), have deterred investors. While excess supply of energy exists in some regions and inhibits the development of some independent power projects (IPPs), other regions have insufficient supply.

[83] ADB staff estimate.

The source of many disputes over IPPs derives from contracts. The Government and foreign companies retain diverging views on the degree of sanctity of contracts. The Government sometimes appears to regard contracts only as a means of initiating a project before moving to a second stage of cooperation where the project commences and all variables are again negotiable. Investors and lenders reject this concept of a “flexible” contract. The contract is a further source of strain, especially in “take-or-pay contracts,” since the Government may not interpret the wording with the same level of rigidity as do sponsors and lenders.

Another lingering problem in the power sector is ambiguity over project planning authority. While the SDPC approves new plants, existing projects are under the authority of SETC and the State Power Corporation. Confidence in power planning has been further hampered by excessive revisions of energy planning that have contributed to oversupply where demand was overestimated.

In addition to contract and planning process problems, the larger issue of power deregulation is a crucial one currently facing independent power purchasers. The stage of deregulation in the PRC today makes negotiations especially sensitive. The transition from a contract-based determination of prices to market-based determination leaves room for uncertainty from both negotiating parties. When the US passed through this stage, it was necessary to buy out projects to terminate the corresponding PPAs. However, PRC authorities are unwilling to pay such transition costs. Uncertainty also arises with regard to what level electricity tariffs will be set at. Ambiguity on what tariff rate power producers will face in both the near and long term is not conducive to a climate that encourages private investment.

Plans to standardize electricity tariffs for relevant government bodies have been adopted by SDPC. Further assurances to investors that such guidelines will be honored would help allay investor apprehensions. The separation between generation and transmission assets remains ambiguous in many provinces. Completion of electricity sector restructuring would reduce uncertainty over grid access, ensure a shift away from the monopolistic structure toward competition, and help reduce uncertainty and restore investor confidence. The announcement of the Power Sector Restructuring Plan in 2002 (PSRP), discussed below, is a major step in the right direction.

While some companies may cite negotiating difficulties as exclusive justification for leaving the PRC power sector, their choices are directly linked to other international market forces and strategic business decisions. Specifically, with the market for power strengthening in both the US and Europe, the market in the PRC becomes relatively less attractive, especially given the aforementioned complicating factors for IPPs.

With the PRC having achieved parity in power demand supply, the availability of cheaper domestic funds and concerns among sponsors and lenders about the enforceability of contracts on which project finance decisions are based, FDI in the power generation sector could slow. However, there are areas where large investments are required such as in high voltage transmission and city distribution modernization schemes. There are no foreign investments in these areas.

Foreign investors will need to monitor developments that arise from the introduction of competitive power markets. Six pilot areas[84] have been selected for separating generation from transmission and introducing an embryonic form of a power market by the end of 2000. A full power market system, including retail competition, is to be developed by 2010. Although there has been some delay in the implementation plan, future foreign investors will need to participate as investors in merchant plants and sell power in a competitive market. Most likely there will no longer be any plant set up on the basis of selling power on a take-or-pay contract with agreed tariff levels. BOT projects may not be the most appropriate for channeling future private investments in power generation.

[84] Shandong, Zhejiang, the northeastern region provinces of Heilongjiang, Jilin and Liaoning, and Shanghai Municipality.

Foreign investors believe that the following further improvements are required in the reform process:

(i) a clear statement on the future of existing take-or-pay PPAs and clarification on the status of existing contracts (will they be honored or bought out?);
(ii) separation of the operation and ownership of the transmission and distribution system from generation assets to remove conflicts of interest and guarantee fair access to dispatch and transmission functions;
(iii) legal support for fair access to the transmission and distribution network for all generation companies;
(iv) foreign investor access to the transmission and distribution network; and
(v) access to local capital markets.

b. Power Sector Restructuring Plan

On 9 January 2002, the State Council passed the PSRP, which was drafted by SDPC and discussed extensively among government agencies, key economists, and other experts in the PRC. ADB supported the development of this plan. Among the key issues debated in the process of drafting the PSRP was whether or not an integrated nationwide transmission network should remain after restructuring. The PSRP is known as the "1 plus 6" plan, which suggests that the current transmission operations be restructured as one "new" state power grid corporation plus six other regional power grid corporations. Previous plans including "0 plus 4", "1 plus X," and "0 plus 6" were also considered. Key elements of the proposed PSRP and related implementation issues include the following.

Transmission. The PSRP recommends that the State Power Corporation be dismantled both horizontally and vertically. A State Power Grid Corporation (SPGC) will be responsible for interregional transmission lines and construction and operation of the Three Gorges Transmission networks for a short period. Five regional power grid corporations, namely, (i) North (including Shandong); (ii) Northeast (including Inner Mongolia); (iii) Northwest; (iv) Central (including Sichuan and Chongqing); (v) East (inclusive of Fujian Province); and (vi) South (consisting of Yunnan, Guizhou, Guangdong and Hainan Provinces) will be legally independent from SPGC and from each other. However, SPGC may be a shareholder of the five regional power grid corporations. The PSRP also suggests that the Northwest and North PRC, as well as Central PRC and East PRC, be merged in the future to realize the nationwide power grid interconnection by four regional power grids.

Some experts believe that the five regional power grid corporations should be subsidiaries of SPGC to ensure an integrated power network across the country. There is some debate whether the State Power Corporation should take a majority share in SPGC to ensure that the thermal power supply is supplemented during the dry season in the southern areas of the PRC and surplus power in Fujian Province can be transmitted to Guangdong when there is a shortage of electricity.

Generation. The PSRP suggests restructuring state-owned power generation assets. According to the Plan, SPGC would hold the total generation capacity, except 20%, as a peak-regulating tool and four to five generation companies will manage remaining generation capacity to ensure that the market share of each generation company does not exceed 20%. Each generation company would have about 40 gigawatts (GW) of generating capacity. The existing Huaneng Group Corporation would also be restructured as an IPP.

There are tremendous challenges in restructuring the generation subsector, given the complexity of the ownership structure of existing power plants. Some power plants are old without any loan repayment obligations, and others are new with long-term liabilities, PPAs, and much higher tariffs. There will also be long negotiations between the provinces and the Central Government to

determine the ownership of equity in many plants (Section II.A.3. Ambiguous Private Property Rights). Possible power generation giants include Huaneng International, Datang Generation Company, Shandong Power International, Guohua Generation, and State Power Generation.

Distribution. There would be no change in the distribution subsector. Power grid companies will manage the distribution operations.

Formulating a New Tariff-setting Mechanism. The PSRP shed little light on a new tariff-setting mechanism, market incentives to promote environmental protection, and ways to resolve existing long-term PPA issues. Many questions regarding the future power market framework, energy efficiency, and conservation remain unanswered.

Establishing a State Electricity Regulating Commission. A new commission, which will report directly to the State Council, will be established to implement the PSRP.[85] The Plan suggests that SPGC and regional power grid corporations be established within 1 year. Electricity trading centers will also be set up for regional power grids and all power generation companies will compete to sell electricity to the grids.

Refining the Regulatory and Legal Framework. This will include (i) revising the current Electricity Law and related sector regulations; (ii) formulating regulations on environmental protection; and (iii) implementing these regulations in conjunction with the competition scheme for power selling.

Implementation Timetable. The PSRP was approved by the State Council in January 2002, but is still awaiting formal issuance. The Plan suggests that it should be substantially implemented within 1 year.

C. Oil, Gas, and Coal

1. Oil

The PRC is the world's third largest oil consumer after the US and Japan and will be the world's fastest growing regional oil market, with an average annual demand growth of 4.7% between 2000 and 2010. Since becoming a net oil importer in 1993,[86] the PRC's petroleum industry has focused on meeting domestic demand. In 2000, total crude oil production reached 160 billion tons and 70 million tons of petroleum was imported. About 90% of production is located onshore. Government priorities for oil production focus on stabilizing production in the eastern regions of the country at current levels, increasing production from new fields in the western regions, and developing the infrastructure required to deliver western oil and gas to consumers in the east (Energy Information Administration 2001). The Government expects that additional oil production from the Bohai Sea and the Pearl River delta could be developed in the east. In the west, production from the Xinjiang Uygur Autonomous Region could reach 1 million barrels per day by 2008.

[85] In February 2003, the State Council approved the functions of the new State Electricity Regulatory Commission that include (i) regulating the electricity industry and establishing a nationwide unified regulatory system; (ii) proposing the drafting and revision of the laws and related regulations in relation to the supervision and administration of electricity industry; (iii) determining the development program for national and regional power markets, and reviewing and approving the market models and establishing power trading entities; and (iv) participating in formulating technical, safety, and quality control specifications and issuing business licenses; (v) proposing adjustment to electricity prices; and (v) implementing power sector reform in accordance with the State Council's instructions.

[86] The PRC's dependence on oil imports is increasing and one of the major oil national producers, the China National Petroleum Corporation (CNPC), has acquired oil concessions in Iran, Iraq, Kazakhstan, Peru, Sudan, and Venezuela.

In 1998, the Government reorganized most state-owned oil and gas assets into two vertically integrated firms, CNPC and the China Petrochemical Corporation (Sinopec). CNPC and its affiliates predominantly operate in the northern and western parts of the country while Sinopec operates mainly in the southern and coastal regions of the country. Other domestic companies involved in development of the oil and gas sector are the China National Offshore Oil Corporation (CNOOC), which has exclusive responsibility for the development of offshore oil and gas resources, and the China National Star Petroleum Corporation, which was the fourth major state-owned oil and gas corporation and is now a subsidiary of Sinopec operating under the name Sinopec Star Petroleum.

The years 1998–2001 witnessed dramatic reforms in PRC's energy industries, particularly in the oil and gas sector. Major reforms were implemented in the upstream and downstream segments of this sector. Reforms implemented in the upstream segment include (i) the adoption of market-based pricing mechanisms for crude oil and linkage of PRC crude oil prices to international markets; and (ii) IPOs of the three major oil companies. In June 1998, the SDPC promulgated the oil pricing reform scheme that abolished government controls over the price of crude oil. The new scheme required SDPC to publish monthly benchmark prices for various types of crude oil based on the same prices in Singapore. The sale of crude oil will take place based on these benchmark prices (plus surcharges or less discounts to reflect duties, transportation costs, oil quality, etc. in accordance with the relevant contract). In March 2001, SDPC promulgated the Crude Oil Price Circular, which abolished the benchmark-pricing scheme and allowed oil companies to set their own crude oil prices based on Singapore prices and in accordance with the principles established in the Oil Pricing Reform Scheme. Shares in CNPC were listed on the New York and Hong Kong, China stock exchanges in April 2000 through a company named PetroChina. Shares in Sinopec were listed on the New York; Hong Kong, China; the PRC; and London stock exchanges in October 2000. Shares in CNOOC Limited (a subsidiary of CNOOC that has been given the exclusive right to exercise CNOOC's offshore oil and gas exploration and production rights) were listed on the New York and Hong Kong, China stock exchanges in February 2001. The privatization of Sinopec contributed to a revitalization of several foreign JV petrochemical projects and three major partnerships with foreign companies in the retail petroleum sector.

Regarding the downstream segment of the oil and gas sector, the oil pricing reform scheme requires that SDPC promulgate standard retail prices for gasoline and diesel fuel for each province, which will be adjusted monthly by SDPC. CNPC and Sinopec are required to set their prices within 5% of SDPC's standard prices, adjust the prices at least every 2 months, and register their prices with SDPC. CNPC and Sinopec are free to set their own ex-refinery and wholesale prices for gasoline and diesel fuel, provided they register the same with SDPC. Prices for jet fuel and heavy oil for fertilizer production are still determined by SDPC. CNPC and Sinopec set prices for kerosene, heavy oil, and liquefied natural gas (LNG) in line with SDPC's pricing measures. Natural gas prices for producers and consumers and gas transmission tariffs are determined by SDPC and other relevant government departments.

Foreign participation in exploration and production of oil and gas, onshore and offshore, is generally carried out under a petroleum contract. This form of production-sharing contract has been subject to MOFTEC approval. The foreign contractor is responsible for financing and performing all exploration operations and required to carry all associated risks. If a commercially viable discovery is made, the contractor may recover its costs while the PRC partner takes up 51% of the participating interest in the field and may also take over field development operations. Onshore oil and gas exploration and production activities are carried out in accordance with the 1993 Regulations for Foreign Cooperation in the Extraction of Onshore Petroleum Resources, while offshore oil and gas exploration activities are carried out in accordance with the 1982 Regulations for Foreign Cooperation in the Extraction of Offshore Petroleum Resources. Under both regulations, CNPC, Sinopec, and CNOOC may enter into petroleum contracts with foreign partners through invitation of competitive bids for certain concession areas and selection of the best bidder or occasionally through direct negotiations. Offshore oil and gas exploration and

production concession areas that were opened for foreign participation have been successful in attracting international oil companies (about 150 petroleum contracts with 70 foreign companies as of the end of 2000). However, mobilizing international oil companies for oil and gas exploration and production has been less successful onshore. This seems to be based on the poor oil and gas prospects of some of the concession areas that have been offered.

With the exception of the planned Nanhai petrochemical complex that will be built and operated by Shell International in Huizhou, Guangdong Province, all refineries are operated by CNPC and Sinopec. The Government is planning to upgrade existing refineries to be able to process increasing imports of heavier crude oil from the Middle East. Foreign companies can only establish directly owned retail gasoline stations if they have invested in the concerned highway. British Petroleum, Shell International, and Exxon Mobil have agreed to form JVs with Sinopec that would allow each to establish some 500 gasoline stations in three provinces (British Petroleum in Zhejiang Province, Shell International in Jiangsu Province, Exxon Mobil in Fujian Province).

During WTO negotiations, the PRC agreed to reduce its state monopoly on the oil trade by releasing the imports of 4 million tons of petroleum products and 7.2 million tons of crude oil each year to the private sector (China Daily 2002p and China International Business 2002), with SOEs such as Sinochem retaining exclusive trading rights for the remainder. Foreign firms will be able to participate in oil distribution 3 years after WTO accession and fully own a minimum of 30 gasoline stations each. The wholesale oil market will become fully market-based by 2006.

2. Natural Gas

Given the PRC's significant natural gas reserves and the environmental benefits of using gas, expanding the natural gas infrastructure has become one of the highest priorities for the Government. Gas currently accounts for only 3% of total energy consumption, but consumption is expected to more than triple by 2010. Natural gas demand is expected to increase considerably in the near future, growing 9% per annum to 2010. However, even if this growth in gas demand materializes, the share of natural gas in total energy consumption would increase to only about 7% by 2010.

Adequate gas infrastructure is lacking and the largest reserves of natural gas are located in the western part of the country. Significant investments are required in gas infrastructure to supply natural gas to potential markets that are predominantly located in the coastal areas. The largest gas infrastructure projects under consideration include the 4,000 km east-west natural gas pipeline which, together with the required investments in development of the gas fields and the downstream distribution facilities in Shanghai, would require investments of at least $17 billion. An LNG receiving terminal in the Shenzhen Special Economic Region in Guangdong Province will cost about $600 million. Shell International will be involved in financing and constructing the pipeline. The Shanghai municipal government is seeking foreign partners with experience in natural gas distribution to undertake the required expansion of the gas distribution network. British Petroleum has won a share of 30% in the JV company that will own and operate the LNG terminal. Nine major gas transmission pipelines and three additional LNG terminals (in Fujian, Shandong, and Shanghai provinces) are planned over the next decade.

Although foreign investors are now encouraged to participate in several major domestic pipeline projects linking gas deposits in central and western regions and consumers mainly in eastern cities (Shanxi-Beijing, Hebei-Shandong, Sichuan-Hubei, and Hunan), foreign investments in the oil and gas sector are not regulated by a single law or subject to supervision by one organization. SDPC made regulatory changes in July 2000 to ease foreign participation in gas projects, including opening up the possibility of foreign firms taking majority stakes. However, the regulatory framework is deficient. It does not promote competition and lacks transparency. Obstacles to foreign investment—such as uncertainty about SDPC's and other relevant departments' responsibilities and methodologies to be used for determining gas transmission tariffs and prices for gas producers and consumers—remain.

The PRC has agreed to increase foreign access to its energy markets by adopting a phased series of reforms that will be implemented over a 5-year period after WTO accession.

Other issues remain. First, access to markets for distribution and retail of petroleum products currently remains restricted. Implementation and enforcement of the WTO agreement and the Government's commitment to newly emerging regulations that support the liberalization of the sector will be essential. Nontariff barriers should be avoided. Requirements for storage capacity and environmental protection at new downstream wholesale and retail projects should be implemented on a fair and equal basis for both foreign and domestic companies. Second, regulatory reform needs to be strengthened, including the development and implementation of streamlined approval procedures and a clear and complete separation of regulatory and commercial functions. Third, a clear and coherent natural gas policy is necessary. For example, it is unclear whether recent reforms allowing majority foreign stakes in the large west-east natural gas pipeline are applicable to other projects. Investments in local distribution networks also appear to be subject to local, nontransparent conditions. Fourth, gas pricing should also be reformed to reflect the right market signals to downstream gas distribution companies and consumers.

3. Coal

The PRC is the world's largest producer and consumer of coal. Coal accounts for two thirds of primary energy consumption. In 2000, total coal production was about 1.17 billion tons, which represented 32% of total global coal production. The demand for coal is projected to more than double by the year 2020. About 40% of the increased demand for coal will come from the power sector as the PRC is planning to add 100 GW of new coal-fired power generating capacity up to 2020. The remaining 60% is expected to occur in the industrial sector for steam and heat generation in the chemical, cement, and pulp and paper industries and for the manufacturing of coal coke for steel production. Because of the abundance of coal reserves and the PRC's limited reserves of oil and natural gas, coal will remain the dominant source of energy.

Traditionally, the coal sector was supervised by the Ministry of Coal Industry. However, this ministry was abolished in 1998. All coal mines are currently supervised by the respective provincial governments, with the exception of safety aspects, which are supervised by the State Administration of Coal Mine Safety Supervision. Recently the coal industry experienced serious oversupply problems. Large coal stockpiles appeared at large coal mines, and at small, sometimes unlicensed, mines. Coal mining productivity in terms of coal production per miner per year ranks as one of the lowest in the world and mines are usually gaseous and pose considerable safety and health risks for miners. Emissions of coal bed methane, which is a greenhouse gas, from PRC coal mines are estimated at 8 billion cubic meters a year. Mine accidents result in thousands of casualties each year. In 2001 about 4,500 people were killed in about 2,300 accidents. In 1998, because of the excess capacity in coal production and the relatively unsafe operations of small, often village-run, coal mines, the Government embarked on a program to close such mines. By end-2001, about 11,000 small coal mines had been closed, either for operating illegally or because of inadequate safety. The Government estimates that about 80% of the approximately 23,000 remaining small coal mines are illegal or have inadequate or nonexistent safety precautions and therefore need to be closed.

By end-2005, the Government plans to restructure large state coal mines into seven corporations in a process similar to the establishment of CNPC and Sinopec in the oil and gas sector. At present, some larger coal mines have finalized agreements for joint coal development with foreign partners while FDI in coal mining operations have also materialized. The Government is encouraging FDI in coal mining to promote the introduction of new technologies and/or reduce the environmental impact of coal mining and handling. The areas that require the introduction of foreign technologies include coal mine development, coal washing, coal liquefaction, coal bed methane drainage and production, and transportation of coal as slurry by pipeline (as opposed to increased coal transportation by rail, which has physical limitations).

D. Social Sector

1. Education

Private participation in higher education through JVs is encouraged by the Government and the Ministry of Education (MOE).[86] There were about 30 JV educational programs approved by MOE in 2000. However, two constraints have hindered top-level private educational institutions from entering the PRC market. First, a JV educational program is prohibited by law from making a profit. Second, foreign higher educational institutions (universities) need to have a local university host to enter the market. Some foreign universities believe that their program content would be under scrutiny, which may compromise their academic integrity.

Distance learning has the potential to facilitate human resource development cost-effectively and efficiently through the provision of higher and continuing education to a larger number of students than could be covered under a traditional education system. Although valued by MOE as an effective and efficient means to address deficiencies in the current higher education system, foreign players cannot participate in the distance learning market. In April 2000, MOE banned foreign companies and organizations. This reflects two concerns: (i) the need to control substandard educational service providers; and (ii) cultural and national issues related to control over the educational and social system.

Training is another potentially important but unregulated and fragmented education subsector. There are about 38,000 training organizations, of which 20,000 are private consulting firms that also provide training. The remaining 18,000 are government training organizations (American Chamber of Commerce 2001a). Services delivered through these training institutions include language programs, computer skills training, and ISO 9000 certification training. However, a wide range of corporate training that can facilitate corporate governance, and vocational and management training tailored for new entrants and displaced labor, is lacking.

2. Health

The health sector is going through structural changes as the PRC transforms into a market-oriented economy and from a society with high fertility and mortality rates to one with low fertility and mortality rates.

Government spending as a percentage of total health expenditure fell from 25% to 15% during the 1990s. Out-of-pocket spending as percentage of total health expenditure increased from 37% in 1990 to 59% in 1999. Health expenditure per capita in urban areas is about three times that in rural areas. Pressure on public spending on the health sector has resulted in an increased role for private medical practice.

According to the results of a recent World Health Organization (WHO) survey, the health sector is facing major challenges, including increasing medical costs and the need for quality regulation of private medical practice. There is a general concern with high medical costs among the population. About 70% of the WHO survey respondents felt that health care costs were too high and unaffordable. Public clinics are not affordable and are not responsive to patients' needs. Health care utilization by certain segments of population, particularly lower income households and the uninsured, has decreased due to the increased costs of health care.

Private medical practice is now playing an increasing role, but needs to be regulated for quality and unchecked proliferation. There is weak monitoring and enforcement of rules. About one third of the WHO survey respondents stated that their last medical visit was to a private clinic.

[86] Foreign investment in basic education remains prohibited.

Decisions to visit a private clinic are made primarily based on seriousness of the illness. For minor ailments, an increasing number of respondents go to private clinics. However, for serious medical problems people tend to go to public hospitals. Reasons cited for opting for private clinics include their responsive services, accessibility, and affordability.

Joint efforts are under way between the Ministry of Health (MOH) and WHO to create monitoring tools to measure WTO policy effects on the health sector. Since WTO policy implementation is independent of health policy implementation, it may or may not conflict with overall public health policy. Health system performance involves multiple factors and is affected by governance, policies on fairness and equity, system responsiveness, training and human resource capacities of the system, and overall elements of service delivery. To measure health/trade impact on system performance, an attempt is being made to assess the impact of WTO on FDI in the health sector, including long-term capital investment, capital investment in advanced medical equipment, and household expenditures at facilities developed because of WTO mandated trade liberalization.

a. Medical JVs

Foreign investors are allowed to establish for-profit medical JVs. MOH has already approved more than 200 JV medical institutions, including 23 in 2001 (China International Business 2002). Approval criteria for both parties applying for a JV license include (i) their direct and indirect investment in, and administration of, medical and health services; (ii) provision of internationally advanced medical services and management; and (iii) provision of internationally advanced medical technology and equipment. The total funds invested must not be lower than CNY20 million ($2.42 million), and the PRC share must not be lower than 30%, with a cooperation period not exceeding 20 years.[87]

b. Medical Equipment and Pharmaceuticals

The medical market is growing rapidly. In 1999, over $1.5 billion was spent on medical equipment, more than half of which was imported. One of the PRC's WTO commitments is to allow direct foreign distribution of pharmaceuticals within 3 years of WTO accession. This should allow hospital pharmacies to provide a wider range of services. Some critical issues cited by foreign medical investors and companies include (i) high import duties and a value-added tax on most imported medical equipment (this issue is addressed by WTO commitments);[88] (ii) counterfeiting of pharmaceutical products; and (iii) a lengthy approval process (exceeding 30 months) for new pharmaceutical imports.

c. HIV/AIDS[89]

AIDS is a major disease and a high priority for disease control in the PRC. The Government reports that there were about 850,000 people infected with HIV in 2001. Some international HIV/AIDS experts, however, estimate that there may be over 1 million HIV-positive cases. In 1998, the State Council approved a report entitled the PRC National Medium and Long-Term Strategic Plan for HIV/AIDS Prevention and Control (1998–2010) (the Plan) jointly drafted by MOF, MOH, MOST, and SDPC. This plan requires every region and sector to formulate and implement their own plans and strategies according to local conditions, and incorporate their local strategic plan into their overall socioeconomic development programs. However, implementation of the Plan has been uneven. There has not been enough coordination to prevent HIV/

88 China International Business 2002. See also discussion in Section II.A.6.b. on Unemployment.
89 Import duties on most medical equipment are 10% (in addition to a value-added tax of 17%), which is expected to be reduced to an average of 5% in 8 years.
90 HIV/AIDS = human immunodeficiency virus/acquired immunodeficiency syndrome.

AIDS and sexually transmitted diseases, especially to address the spread of HIV among intravenous drug users and through illegal blood collection and/or blood transfusion, despite repeated prohibitions. To ensure that the objectives and tasks set forth in the Plan will be achieved on schedule, the State Council in 2001 formulated the PRC's Action Plan for Reducing and Preventing the Spread of HIV/AIDS (2001–2005).

d. Public Health Emergencies

The recent emergence of the Severe Acute Respiratory Syndrome (SARS) in the PRC and the potential economic impact highlight the urgent need for a coordinated, effective, and timely government response to public health emergencies. The warm humid climate of the southern region of the PRC, with millions of people living in close proximity to animals, makes it a breeding ground for new viruses. The growth in air travel and globalization enables diseases originating in this region, the manufacturing hub for exported products, to rapidly spread throughout the world (Business Week 2003 and Far Eastern Economic Review 2003).

SARS required the government to spend more on health care to screen and quarantine suspected SARS carriers and hospitalize SARS patients. In response to SARS, the Government established a national SARS task force, known as the SARS Control and Prevention Headquarters of the State Council, headed by Vice-Premier Wu Yi, and a national fund of CNY2 billion ($243 million) for SARS prevention and control (Embassy of the People's Republic of China in the United States of America. 2003.). In April 2003, the PRC invited WHO to review the way that local health authorities were working to contain SARS and began to provide its citizens with more information than it had previously provided about other public health issues.[90]

[90] ADB plans to provide a $2 million TA to the PRC to help contain the outbreak of SARS by strengthening local capacities for SARS prevention, surveillance, management, and mitigation with a particular emphasis on quick action to protect front-line medical workers, the poor, and other at-risk groups.