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# People's Republic of China

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## I. Fiscal Policy and Management

In the People's Republic of China (PRC), fiscal policy has three objectives:

- (i) *Channel social resources* to the departments that the Government wants to support. This includes the transfer of capital to the state-owned enterprises (SOEs) as well as the financing of public expenditure.
- (ii) *Income distribution* This function uses tools such as subsidies to maintain the state's stability. This important function is done by protecting groups such as workers and peasants.
- (iii) *Stabilizing fluctuations of the economic cycle* In the short term, this is realized by adjustment of aggregate demand, and in the long term by adjustment of aggregate supply. The PRC has recently been forced to change its policy of weak finance, strong banks, making debt policy an important ingredient of positive fiscal policy.

Expenditure and revenue have increased steadily due to rapid economic growth, with fiscal revenue increasing by 5.3 times between 1985 and 1998, and fiscal expenditure by five times.

Meanwhile, fiscal deficit increased at a different pace. Before 1994, the budget included the income and expenditures of government bonds, and debt issuance was regarded as a source of fiscal income. Therefore the deficit was not very high, although it increased year by year. Since 1994, the fiscal budget has not included income and expenditure of government debt, and the Ministry of Finance (MOF) has not been allowed to overdraw from the Central Bank. Fiscal deficit leaped to more than Y50 billion in 1997, and to more than Y90 billion in 1998 because of the positive fiscal policy introduced after the Asian financial crisis.

Although the absolute amount of fiscal revenue/expenditure is increasing steadily, the relative proportion to gross domestic product (GDP)

is falling as a result of fast economic development and a governmental tax system, which is not comprehensive. The lessen taxes-add subsidies policy, designed to support the reform of state-owned enterprises (SOEs) is another important factor.

TABLE 1  
*Fiscal Revenue and Expenditure as Percentage of GDP*

Year	Fiscal Revenue	Fiscal Expenditure
1982	22.90	23.23
1983	23.03	23.75
1984	22.91	23.72
1985	22.36	22.36
1986	20.80	21.61
1987	18.39	18.91
1988	15.79	16.69
1989	15.76	16.70
1990	15.84	16.63
1991	14.57	15.67
1992	13.08	14.05
1993	12.56	13.40
1994	11.16	12.39
1995	10.67	11.67
1996	10.91	11.69
1997	11.62	12.40
1998	12.44	13.60

Source: China Statistical Yearbook 1999.

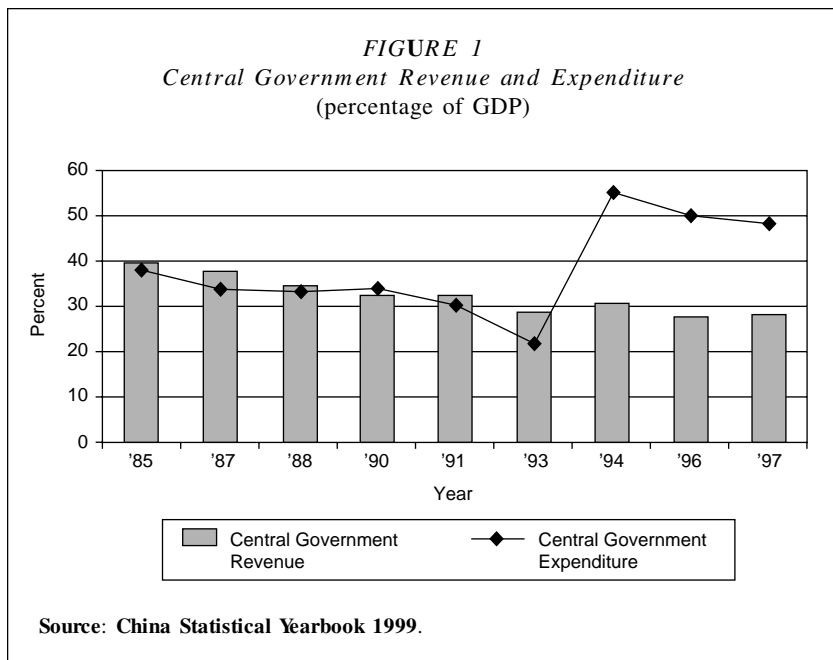
Central finance in the PRC is rather weak. While the central Government has a relatively stable proportion of overall government revenue, there is a clear downward trend. Meanwhile, the level of its expenditure is rising. In 1994, the ratio of central government expenses to overall government expenditure leaped from 22.02 percent in 1993 to 55.70 percent.

Subsidies to loss-making SOEs are not viewed as expense items but rather as revenue items, so the growth of subsidies in fact does not increase the Government's expenditure, but rather reduces revenue. There is no special mechanism to restrain this except indirect deficit pressure.

#### *A. Government Revenue and Expenditure*

Government revenue in PRC is classified as follows: (i) budget revenue; (ii) extrabudgetary revenue, and (iii) extrasupervision revenue.

The biggest source of budgetary income is the taxes and profit



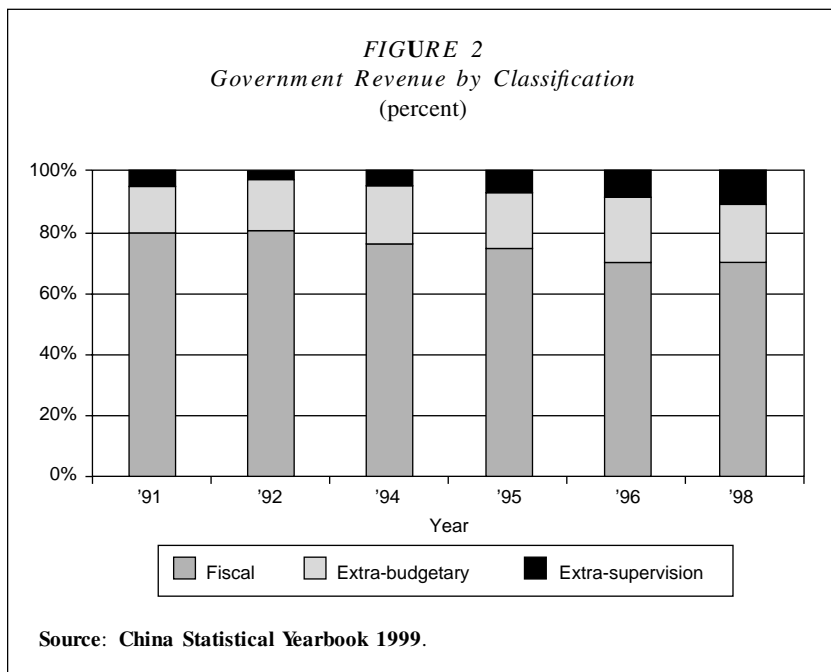
earned by SOEs. Statistics show that more than 60 percent of government income comes from SOEs. In recent years, however, SOEs have become decreasingly profitable and increasingly subsidized, weakening the basis of government income, and making the Government ever more dependent on debt issuance. Under conditions of high repayment and issuance costs, debt issue will demand larger repayment in the future, creating a cycle of larger and larger debt issuance.

Extrabudgetary revenue is not planned in the central Government's annual budget, but is controlled by local governments or departments, respectively.

Extrasupervision revenue is controlled by policy performers inwardly. It is outside the system of government revenue, and is usually used to provide for the welfare of small groups, such as peasants or farmers.

The proportion of budgetary revenue has been gradually decreasing, while extrasupervision revenue has become larger and larger, with much income raised by subordinate authorities in the form of fees or charges. This has weakened the Government's fiscal power, and often creates policy dilemmas. Weak budget finance means central Government must depend more on debt issuance, but at the same time it adds to the burden on central Government, often meaning it cannot support

this larger issuance. Before the Asian financial crisis, the economy did not run too badly under this system, but improvements in the fiscal revenue system are now more and more urgently needed.



A key problem is the efficient use of government expenses. Gross expenditure is planned by MOF and approved by the Standing Committee of the National People's Congress (SCNPC). The users are state ministries and other departments. Once they have their quota of budget, they can decide how to use the money by themselves, without supervision, resulting in inevitable inefficiency.

In Table 3, note that subsidies to loss-making SOEs are not in the revenue but rather in the expense items.

### *B. Current Problems and Future Tasks*

Compared with the healthy fiscal systems of modern developed countries, the Government's position is distorted. To improve this situation, it must stay out of many business areas and devote itself instead to molding a healthy business and legal environment.

TABLE 2  
Gross Revenue and Expenditure  
(billion yuan)

Year	Current Prices		Constant Prices		Balance (current prices)
	Revenue	Expenditures	Index (preceding year = 100) Revenue	Expenditures	
1985	186.64	184.48	124.3	119.3	2.16
1986	226.03	233.08	121.1	126.3	-7.05
1987	236.89	244.85	104.8	105.0	-7.96
1988	262.80	270.66	110.9	110.5	-7.86
1989	294.79	304.02	112.2	112.3	-9.23
1990	331.26	345.22	112.4	113.6	-13.96
1991	361.09	381.36	109.0	110.5	-20.27
1992	415.31	438.97	115.0	115.1	-23.66
1993	508.82	528.74	122.5	120.5	-19.92
1994	521.81	579.26	120.0	124.8	-57.45
1995	624.22	682.37	119.6	117.8	-58.15
1996	740.80	793.76	118.7	116.3	-52.96
1997	865.11	923.36	116.8	116.3	-58.24
1998	9,876.00	1,078.92	114.2	116.9	-92.23

**Note:** Since 1994, fiscal revenue and expenditure no longer include government debts. That means data before 1994 include debt revenue and costs. The influence of price has been excluded from all data.

**Source:** China Securities and Futures Statistical Yearbook 1999.

A major problem in fiscal revenue management is the fact that extrabudgetary and extrasupervision revenue have reached such an extent that they affect normal budgetary constraint and encourage subauthorities to abuse their power. This latent revenue cannot be used to support central Government, which in turn increases fiscal risk—one of the impediments to enlarging government debt issuance. Regulating extrabudgetary income is an important task for the future, which requires these fees and charges to be converted into taxes.

Meanwhile, tax income has not kept up with the increasing pace of GDP, and there is a lag in tax collection from SOEs. Extension of the tax base is urgently needed, to include whole economic entities, especially private and collective entities, as well as personal income taxes.

Another key problem is the system of supervision, which currently only exists at the stage of plan-making, and means efficiency is well below average. Within the central government fiscal system particularly, users have no special cost constraint, the cost burden being wholly borne by the central Government resulting in fiscal misappropriation. This occurs very often in the use of capital raised by debt issuance. Only the

TABLE 3  
 Government Revenue by Source  
 (billion yuan)

Year	Revenue	Taxes	Revenue from SOEs	Subsidies to Loss-Making Enterprises	Revenue from Funds for Key Construction Projects in Energy and Transportation Industries	Revenue from Budget Adjustment Fund	Revenue from Extra Charges for Education	Other
1985	20.05	20.41	0.044	-0.51	0.146	—	—	0.280
1986	21.22	20.91	0.042	-0.32	0.157	—	—	0.157
1987	21.99	21.40	0.043	-0.38	0.180	—	—	0.212
1988	23.57	23.90	0.051	-0.45	0.186	—	—	0.176
1989	26.65	27.27	0.064	-0.60	0.202	0.091	—	0.179
1990	29.37	28.22	0.078	-0.58	0.185	0.131	—	0.299
1991	31.49	29.90	0.075	-0.51	0.188	0.138	0.028	0.240
1992	34.83	32.97	0.060	-0.44	0.157	0.117	0.032	0.265
1993	43.49	42.55	0.050	-0.41	0.118	0.102	0.044	0.191
1994	52.18	51.27	—	-0.37	0.054	0.059	0.064	0.280
1995	62.42	60.38	—	-0.33	0.017	0.035	0.083	0.396
1996	74.08	69.10	—	-0.34	0.004	0.004	0.096	0.724
1997	86.51	82.34	—	-0.37	—	—	0.103	0.682
1998	98.76	92.63	—	-0.33	—	—	0.113	0.833

Note: The figures do not include revenue from debt issuance.

Source: China Statistical Yearbook 1999.

central Government can issue T-bonds, and it bears the entire cost, but lack of supervision drains the efficiency of debt issuance. The cost-benefit constraint on each user of fiscal capital must be improved. Discrimination against the nonstate-owned economy is another serious cause of the low efficiency of positive fiscal policy.

### C. Seigniorage Income

The Central Bank's seigniorage income (the accretion of surplus of reserve money in the balance sheets of monetary authorities) reached Y612.87 billion in 1996—almost as much as income tax.<sup>1</sup> It is created by mintage approved by the State, and so should actually belong to fiscal income. However, most of it is left to the Central Bank. MOF only receives about Y20 billion from the Central Bank each year, about 10 percent of the supposed level.

In addition, this income is used inefficiently. Apart from some used

1. Income tax in 1996 was Y690.982 billion.

by the Central Bank itself, most is transferred to state-owned banks (SOBs). Some is squandered, and most is transferred to SOEs as loans. SOE inefficiency results in lavish waste of capital, inevitably leading to poor finance for the Government. The accumulated financial risks are left in commercial banks.

Within this closed and insular cycle, the Government takes on a great deal of extra expenditure. As well as supporting the banking system through seigniorage income and SOEs through subsidies and other privileges, it must find a way of providing a healthy economic and legal environment through public investment.

Positive bond policy has thus had low efficacy because capital from debt issue is used mainly by SOEs and cannot stimulate the major current investors in the economy to invest. The situation worsened once the SOBs lost the desire to support SOEs after the Asian crisis. Banks have not been used to supporting other entities, and so superfluous capital piled up within the SOBs.

This insular and closed cycle must be broken, possibly by developing a direct financing market to break the dominance of the bank system. New and indirect control policy tools must be developed by cultivating a commercialized market. A developed and integrated debt market is absolutely crucial.

#### *D. Financing of Fiscal Deficits*

In terms of debt, the proportion of domestic debt is getting bigger and bigger, accounting for 98 percent of the total in 1998. Foreign borrowing was once an important factor, in 1993 accounting for 48 percent, but by 1998 this had fallen to 2 percent.

Although foreign debt still accounts for a large amount of the balance, the PRC is now more conscious of the huge potential of the domestic debt market. Particularly since 1993, the Government has wanted to utilize domestic debt better to decrease the risk of foreign debts.

Fiscal deficit increased to Y92.22 billion in 1998 from Y1.765 billion in 1982. From 1982 to 1993, the amount of T-bonds issued and the amount of fiscal deficit both increased, but at a different pace. From 1994 to 1997, fiscal deficit was kept within a very narrow range of Y52 billion to Y58 billion. The amount of T-bonds issued grew more quickly, however, increasing to Y241.20 billion in 1997 from Y31.478 billion in 1993. This means fiscal deficit has not been the main reason for the high growth of debt issuance.

In fact, the fiscal deficit redemption was much more dependent on overdrawing from the Central Bank until 1994. Since this practice was banned that year, however, deficit has had to be met by issuing debt.

TABLE 4  
Fiscal Expenditure Items  
(billion yuan)

Year	Total	Economic Construction	Social, Culture and Educational Development	National Defense	Government Administration	Others
1985	20.04	11.28	4.08	1.91	1.71	1.06
1986	22.05	11.59	4.85	2.01	2.20	1.40
1987	22.62	11.53	5.05	2.10	2.28	1.65
1988	24.91	12.58	5.81	2.18	2.71	1.62
1989	28.24	12.91	6.68	2.51	3.87	2.26
1990	30.84	13.68	7.38	2.90	4.14	2.73
1991	33.87	14.28	8.50	3.30	4.10	3.64
1992	37.42	16.13	9.70	3.78	4.65	3.18
1993	46.42	18.35	11.78	4.26	6.34	5.69
1994	57.93	23.94	15.02	5.51	8.48	4.99
1995	68.24	28.56	17.57	6.37	9.97	5.78
1996	79.38	32.34	20.81	7.20	11.85	7.18
1997	92.34	36.47	24.69	8.13	13.59	9.45

Source: China Statistical Yearbook 1999.

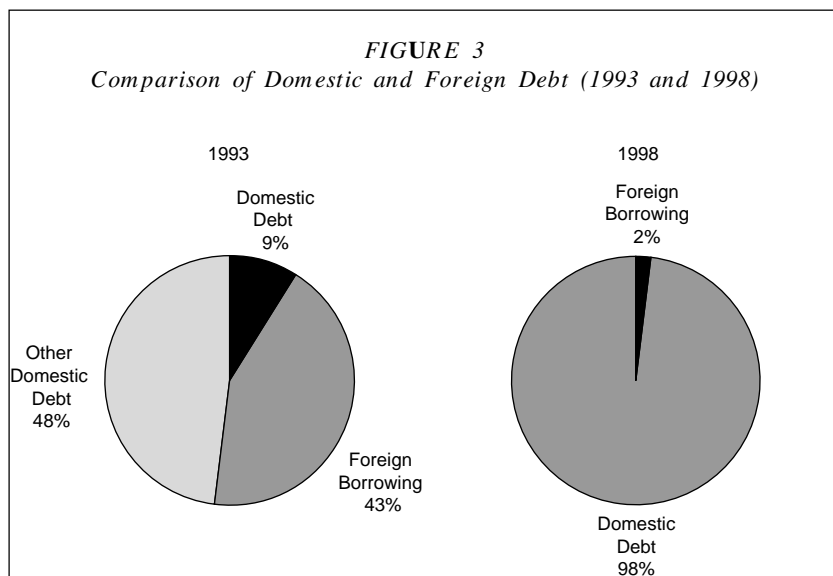


TABLE 5  
*Deficit and Domestic Debt Issuance*  
 (billion yuan)

Year	Fiscal Deficit	Domestic Debt Issued
1982	1.765	4.383
1983	4.257	4.158
1984	5.816	4.253
1985	-0.057	6.061
1986	8.290	6.251
1987	6.283	6.307
1988	13.400	9.217
1989	15.888	5.607
1990	14.649	9.346
1991	23.714	19.930
1992	25.883	39.564
1993	29.335	31.478
1994	57.452	102.857
1995	58.152	150.186
1996	52.956	184.777
1997	58.242	241.202
1998	92.223	380.870

Source: China Statistical Yearbook 1999, p. 265.

Fiscal policy does not require the annual government budget to include the income and expense of debts. Thus, the repayment of debt has to be covered by debt income. In conditions of ever-greater repayment pressure this directly causes the expansion of debt volume.

## *II. Monetary Policy and Management*

### *A. Monetary Policy Tools*

The People's Bank of China (PBC), which began to act as the Central Bank in 1984, carries out its monetary policy through the mechanism of required and excessive reserves. Besides floating nominal interest rates and required reserve rates, excessive reserve is very important. Because of the inefficiency of SOBs, required reserves cannot meet the demand of drawing. Excessive reserves are necessary to maintain the stability of the banking system. The PRC has experienced inflation for about 20 years, and in such a situation SOBs have an incentive to use the excessive reserves.

To make banks withdraw the expansion impulse, PBC had to pay interest rates to the banks' excessive reserve account. Today it pays only

for the required reserves. If the ratio of excessive reserves fell below 5 percent, the banks would be confronted with a liquidity risk. Therefore, excessive reserves led the PBC to loosen the annual loan quota. While in depression, the excessive reserves were a safe haven. Banks could increase them to gain a stable income without any risk, reducing their willingness to make loans.

The PBC for sometime paid a higher premium for banks' excessive reserves than the interest rate of deposits. Within a closed and insular cycle, the PBC only had recourse to three policy tools: nominal interest rates, loan planning, and required and excessive reserve accounts. Only the excessive reserve actually acted as a tool for daily and seasonal tuning. This was abolished in December 1998, however, because of banks' decreasing desire to make loans. The PBC thus lost a key policy tool. OMO is touted as the most likely substitute.

*TABLE 6*  
*Interest Rates for Required and Excessive Reserve*  
(percent)

	Required Reserve	Excessive Reserve
21 Aug. 1990	6.84	6.84
21 Apr. 1991	6.12	6.12
15 May 1993	7.56	7.56
11 Jul. 1993	9.18	9.18
1 May 1996	8.82	8.82
23 Aug. 1996	8.28	7.92
23 Oct. 1997	7.56	7.02
25 Mar. 1998	5.22	5.22
1 Jul. 1998	3.51	3.51
7 Dec. 1998	3.24	—
10 Jun. 1999	2.07	—

**Note:** The account of excessive reserve was abolished in 1998.

**Source:** People's Bank of China *Quarterly Statistical Bulletin 1999*, p. 37.

The annual planning of loans was abolished at the same time. Previously, the quota was planned every year and strictly carried out. Now, central Government modifies the supply scale of loans by controlling fundamental currency (M1 and M2), and all commercial banks must stick to the management of ratio of capital to current liabilities. This reform built an initiative form of modern banking and the PBC acquired a primary working platform for macro-control.

*Interest rates.* The PRC has a fixed interest rate system, with the rate regulated by the PBC. The deposit interest rate is fixed and cannot be floated. The PBC has lowered nominal interest rates six times since 1996 according to economic circumstances.

TABLE 7  
*Interest Rates for Major Deposits*  
(percent)

	Demand Deposit	Three- month Time Deposit	Six- month Time Deposit	One- year Time Deposit	Two- year Time Deposit	Three- year Time Deposit	Five- year Time Deposit
21 Apr. 1991	1.80	3.24	5.40	7.56	7.92	8.28	9.00
15 May 1993	2.16	4.86	7.20	9.18	9.90	10.80	12.06
11 Jul. 1993	3.15	6.66	9.00	10.98	11.70	12.24	13.86
1 May 1996	2.97	4.86	7.20	9.18	9.90	10.80	12.06
23 Aug. 1996	1.98	3.33	5.40	7.47	7.92	8.28	9.00
23 Oct. 1997	1.71	2.88	4.14	5.67	5.94	6.21	6.66
25 Mar. 1998	1.71	2.88	4.14	5.22	5.58	6.21	6.66
1 Jul. 1998	1.44	2.79	3.96	4.77	4.86	4.95	5.22
7 Dec. 1998	1.44	2.79	3.33	3.78	3.96	4.14	4.50
10 Jun. 1999	0.99	1.98	2.16	2.25	2.43	2.70	2.88

Sources: China Statistical Yearbook 1997 and 1999, People's Bank of China Quarterly Statistical Bulletin 1994-4, Volume XVI.

The authorities regulate the interest rates of loans too. Since November 1998, financial institutions have had the right to float up to 20 percent, according to the clients' risk, which was raised to 30 percent in September 1999. Only short-term loans can be floated.

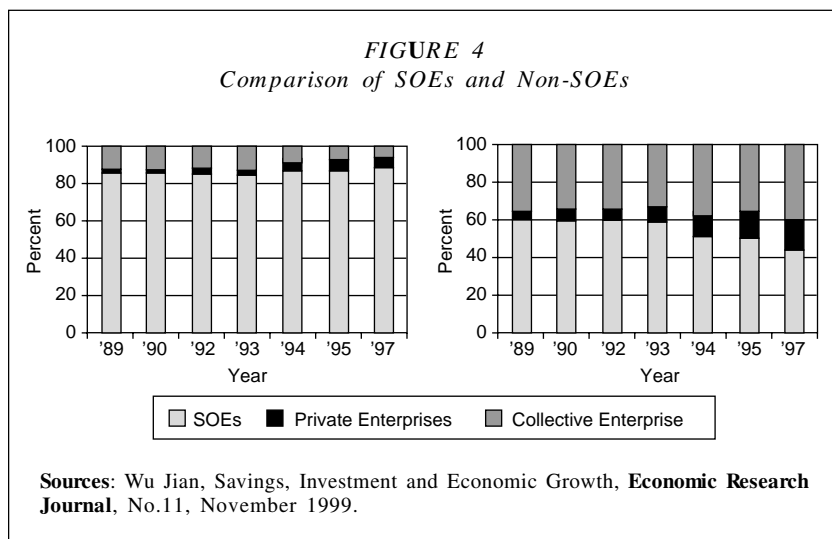
TABLE 8  
*Regulated Interest Rates of Loans*  
(percent)

	Six- month	One- year	Three- year or Less	Five-year or Less	More than Five-year
1 May 1996	9.72	10.98	13.14	14.94	15.12
23 Aug. 1996	9.18	10.08	10.98	11.70	12.42
23 Oct. 1997	7.65	8.64	9.36	9.90	10.53
25 Mar. 1998	7.02	7.92	9.00	9.72	10.35
1 Jul. 1998	6.57	6.93	7.11	7.65	8.01
7 Dec. 1998	6.12	6.39	6.66	7.20	7.56
10 Jun. 1999	5.58	5.85	5.94	6.03	6.21

Source: People's Bank of China Quarterly Bulletin 1999-4, Volume XVI.

Nominal interest rates before 1997 discriminated heavily against individuals engaged in nonstate-owned industrial and commercial business, with loans for them all carrying the united premium for risk: floating over 20 percent, no matter whether the risk was high or low. While the nonstate-owned economy has created more than 56 percent of the whole output value of the country, the percentage of bank loans they can obtain is less than 10 percent. SOES, on the other hand, receive continuous, special financial support through loans, even though their ratio of output value is becoming smaller and smaller the (Figure 4). This has caused many policy problems. When the PRC fell into deflation after the Asian financial crisis, the Government wanted to stimulate the economy through a positive fiscal policy supported by debt issuance. But the monetary system was not able to coordinate loan structure well, because the traditional bank system is designed to support SOEs rather than to stimulate private investment. The PRC's bank system must find ways to reform these mechanisms to adapt to a true market economy.

The positive differential between deposits and loans since the start of the reform of the SOB system in 1994 is another important phenomenon.<sup>2</sup> High savings have led to bank capital supply exceeding demand.



2. Differential between deposits and loans refers to balance of deposits minus balance of loans.

Since the Asian crisis, the PRC has strengthened management of the ratio of capital to current liabilities to decrease financial risk, and the proportion of new bad loans is strictly limited. With SOEs earning less and less, SOBs have lost their interest in making loans to them. Rapidly growing individual savings are mainly deposited in SOBs, and used for the SOEs. Since the crisis, private savers have been keen to add to their deposits, because of the risks inherent in the period of depression and reform. This has created an increasing burden on the bank system, meaning banks must earn more profit from loans to meet the repayment of deposits.

### *B. Monetary Policy and Growth of the Debt Market*

The development of the debt market in the PRC is closely related to reform in the financial sector and implementation of monetary policy. Apart from raising capital for the Government and covering government deficit, the debt market also supports the adoption of indirect instruments of monetary policy.

The PBC began to act as the Central Bank of the PRC in 1984. Until 1994, its main monetary policy tool was credit planning. The PBC could loosen or tighten money supply, by increasing or decreasing the scope of credit through the adjustment of the credit plan. When financial sector reform started in 1994, however, three significant changes in the financial system impaired the efficiency of credit planning.

The first and most important was the diversification of financial institutions. New commercial banks, nonbank financial institutions such as trust and investment corporations (TICs) and credit cooperatives sprang up. Without a well-developed capital market, the TICs had no choice but to conduct banking business. This meant that, apart from the original four large state-owned banks, there were now many new participants. As the credit plan was aimed only at the four SOBs, it could no longer fully control the credit capital in the economy. The PBC could not tighten credit by decreasing the credit plan because this encouraged the other banks and TICs to increase credit.

The second change was the birth and growth of the financial market. After two periods of boom (1986–1988 and 1992–1993), the issuing and trading market for T-bonds and corporation stocks developed rapidly. The interbank market has become the main channel of short-term fund financing among financial institutions through repurchase agreements (repo). Poor regulation of interbank and TIC practices, as well as a lack of financial contracts and transparent information, exacerbated the disordered interbank borrowing, which was out of the PBC's control.

Meanwhile, specialized SOBs were converted into commercial banks. Since direct control methods such as credit planning were not suitable for the market-oriented activities of commercial banks, some indirect methods, including floating interest rate and OMO, were introduced.

The Government realized that the establishment and growth of the debt market were not only important for raising capital itself, but also for implementing monetary policy because it: (i) supports the establishment of a benchmark that would assist in the liberalization of interest rates, an indispensable though indirect tool for channeling monetary policy, and (ii) provides a new capital source to supersede the SOB capital.

Unfortunately, since the PRC abolished credit planning at the beginning of 1998, the conduct of monetary policy has been hampered by the lack of effective indirect monetary policy instruments. OMO requires a mature debt market, and is the first choice to replace credit quota control, but it is still at the early stages of development. Meanwhile, the interbank market remains small and illiquid. Finding an effective channel for monetary policy is thus an urgent task for the Government.

The experiment with OMO in 1996 had little effect because the scale of short-term bills—which have always been less popular with the Chinese than midterm ones—is too small to affect the demand and supply of public capital. The current scale is so small that the PBC can easily buy all of them in the interbank bond market, which remains underdeveloped. The traders in this market are commercial banks and insurance companies, which are capital suppliers rather than demanders. They hold onto bonds because of their high nominal interest, and transactions are sparse. Without enough capital demand, OMO has little effect. Also, the nominal interest rate of deposits and loans is regulated by the central Government and does not float in response to the demand and supply of public capital. Loans from banks are the main source for capital users in the PRC. OMO has no influence on loan interest rates, meaning it cannot affect benchmark interest rates either.

Another problem is that the interest rates of short-term bills are higher than for other kinds of bond. The current issue period is too long, and frequent buying and selling means the Government is not able to prepare for frequent, short-term bond issuance at present.

However, as the debt market grows, OMO will play a bigger role in the implementation of monetary policy.

TABLE 9  
Interest Rates of Short-Term Bonds and Others (1994 and 1996)

Category	Maturity (years)	Nominal Interest Rate (%)
<b>1996</b>		
1 <sup>st</sup> Issue Book-Entry T-Bond	1	12.10
2 <sup>nd</sup> Issue Book-Entry T-Bond	6/12	10.53
3 <sup>rd</sup> Issue Book-Entry T-Bond	3/12	9.90
4 <sup>th</sup> Issue Book-Entry T-Bond	1	12.00
5 <sup>th</sup> Issue Book-Entry T-Bond	10	11.83
6 <sup>th</sup> Issue Book-Entry T-Bond	7	8.50
1 <sup>st</sup> Issue Book T-Bill in Bearer Form	3	14.50
Voucher Form T-Bill	5	13.06
2 <sup>nd</sup> Issue Book T-Bill in Bearer Form	3	10.96
Special Purchaser Bond	5	8.80
<b>1994</b>		
6-Months T-Notes	6/12	9.80
1-Year T-Bill	1	11.98
2-Year T-Bill	2	13.00
3-Year T-Bill	3	13.96
Special Purchaser Bond	5	15.86

Source: People's Bank of China *Quarterly Statistical Bulletin*, 1999-3, Volume XV.

### III. Overview of the Bond Market

Issuance of domestic debt was resumed in the early 1980s, shortly after the launch of the Government's economic reform program. The motivation was the need to finance the recently emerged deficit.

In the PRC, there is only government debt, which is divided into domestic and foreign. Domestic debts comprises Treasury bonds (T-bonds), Enterprise bonds (E-bonds) and Financial Institutional bonds (F-bonds). Only central Government can issue T-bonds. Only the Central Bank and policy banks can issue F-bonds, and only strictly selected enterprises (almost all are SOEs and guaranteed by local or central government) can issue E-bonds. Other entities have no right to issue debt instruments publicly.

The turnover of debt always exceeds that of stocks—on average by 190 percent. Debt issuance has become the most important means of raising capital aside from bank loans, with amount of domestic capital raised by debts compared with annual augmentation of loans having increased to more than one-third of the amount from loans in 1997.

However, secondary market trading remains thin for various reasons, including fragmentation of the market and the preference of the country's individual-dominated investor base to hold to maturity.

TABLE 10  
Debt and Bank Loans  
(yuan billion)

Year	Domestic Debt (A)	Bank Loan (B)	Ratio in Percent (A/B)
1993	61.72	633.54	9.74
1994	129.93	721.66	18.00
1995	181.17	933.98	19.40
1996	317.23	1068.33	29.69
1997	409.85	1071.25	38.26

Sources: China Securities and Futures Statistical Yearbook 1999; and China Statistical Yearbook 1999.

#### A. Size and Potential of the Bond Market and Fiscal Risk

There is a strong relationship between the debt balance and amount issued. The interest rate on deposits and loans was high for a long time, with the interest rate of T-bonds about 2 percent higher than the former, making repayment each year a heavy burden. From 1989 to 1993, T-bonds were issued with an interest rate of 10 percent to 15.86 percent, directly leading to the huge sum balance from 1993 to 1998.

To decide whether the volume of debt is suitable, it is necessary to judge whether the economy can support larger debt issuance, and gauge the size of the fiscal risk arising from such issuance. Liability ratio (ratio of debts balance to GDP) and the ratio of debt balance to deposit balance is used to measure the former.

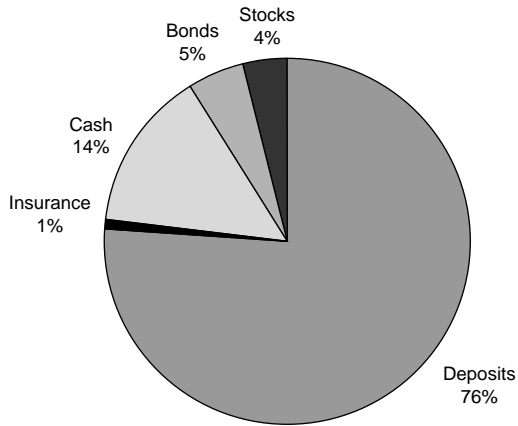
The liability ratio could be 12.66 percent in 1998 if the special T-bond issued that year is taken into account. With the foreign borrowing balance of Y146.04 billion (88.13 percent of this long-term debt), the liability ratio would be 24.47 percent. However, compared with western countries, this index is not high.

Meanwhile, the growth rate of savings in the PRC in recent years has been startling. Until the end of 1996, most individual financial assets were saved in banks due to the lack of direct finance channels. Bonds accounted for only 5 percent, leaving plenty of room for expansion.

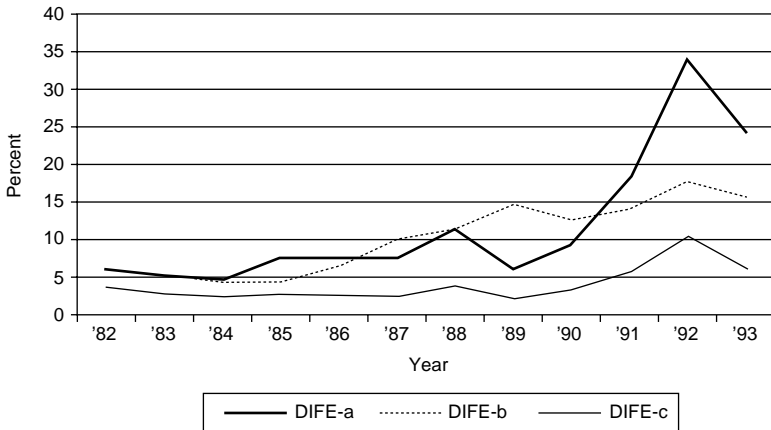
The market is thus clearly able to support a larger bond volume. The key problem is to efficiently transfer the huge sum of deposits in the banking system into government capital channels.

The ratio of total debt issuance to fiscal expenditure increased from 6.82 percent to 30.66 percent from 1982 to 1998, while the ratio of

*FIGURE 5  
Structure of Residents' Financial Assets*



*FIGURE 6  
Ratio of Debt Issuance to Fiscal Expenditure*



domestic debt issuance to fiscal expenditure increased from 3.56 percent to 35.27 percent. Usually, such a ratio in western countries is about 20 percent. As the PRC is a developing country and the demand for capital is large, the above two indices are not incompatible. However, the fact that central Government assumes all the costs of government debt cannot be ignored, the ratio of domestic debt issuance to central government expenditures must also be considered. This ratio reached 121.86 percent in 1998, highlighting the central Government's fiscal risk burden.

This does not mean the domestic debt volume is too large, but rather that the foundation of government income is too fragile. Taxes on SOEs—the backbone of the tax base—have been cut, and subsidies to them raised.

On top of this, recipient departments use the debt incurred without the obligation of repayment. Since only central government can issue bonds, all the costs of debts (including repayment and others), and thus the fiscal risk, are concentrated on central Government, which itself never invests.

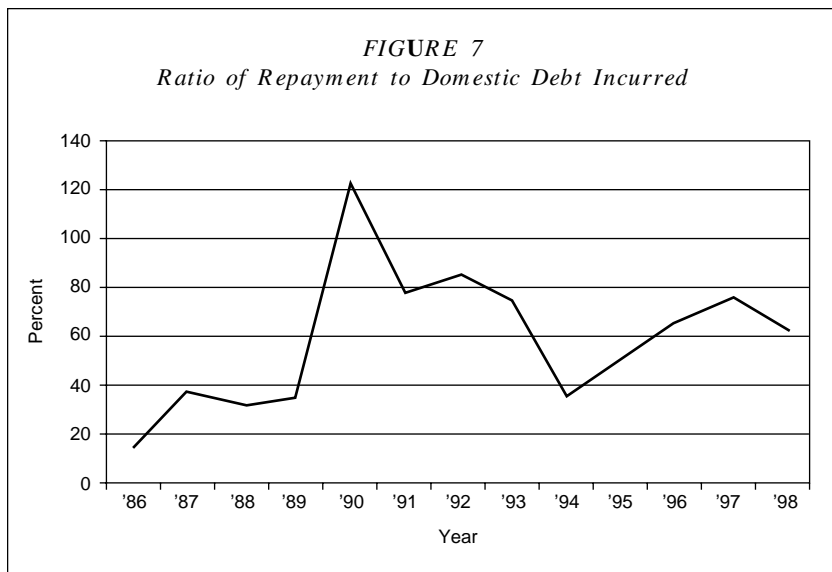
If repayment is considered as pressure on the whole government, the ratio of repayment to total fiscal revenue would be 23.78 percent in 1998.<sup>3</sup> In contrast, in most western countries, the alarm-line ratio is no higher than 10 percent. The ratio of repayment to central government revenue was 48 percent in 1998. This implies that central government revenue (not including debt incurred) is about two times as much as repayment and proves that the PRC has had to borrow to repay.

The Government's aim, ideally, is to raise more and more constructional capital by means of revenue from programs carried out on the basis of debt-incurred capital. This has never been realized, however. The main part of debt incurred is used as repayment, and the rest flows to consumption items.

Since 1990, the ratio of repayment to debt incurred was very high, showing the inefficiency of the channel supposed to carry the people's capital to the Government. Except for 35.48 percent in 1994, when the

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3. Some economists suggest the fiscal revenue should be adjusted because real government income includes budgetary, extrabudgetary and extrasupervision income. Zhang Haijun calculated this figure as 5.4 percent, 6.7 percent, 9.8 percent, 11.6 percent, 12.8 percent, and 14.5 percent from 1993 to 1998. His standard is that adjusted total government revenue is about 20 percent of GDP. A little adjustment may be necessary, but the degree is not too high because most incomes are controlled by local governments and their departments without any central supervision. This income is not useful for supporting any greater issuance of debt.



amount of issuance erupted, this ratio has been continuously over 50 percent, and even reached 121.7 percent in 1990.

In a nutshell, increased government bond issuance following the Asian crisis has put more pressure on government finance, with central government fiscal risk growing sharply. Without strong fiscal revenue, the Government has been forced to depend on continuous debt issuance, resulting in a dilemma. To stimulate economic recovery, it has had to issue more and more debt, but high issuing costs have made repayment pressure a heavy burden.

The efficacy of bond policy has thus been discounted. While the positive financial policy supported by bond issuance can motivate some investment from SOEs, it cannot affect total aggregate demand level in a continuous and efficient way. Without drawing out popular investment, the multiplier effect is discounted. After the crisis, SOBs had no incentive to make loans because of the risk, while residents' deposits were flowing into banks at high speed and the consumption market was forced into depression.

### *B. Types of Securities*

T-bonds are the most issued kind of security, followed by F-bonds and then E-bonds. Treasury bonds include T-bills, Special National bonds, Construction bonds, Fiscal bonds, and Inflation-Proof bonds. Enterprise

bonds include Central Enterprise bonds, Short-Term paper and Local Enterprise bonds. Financial Institutional bonds include Investment Fund bonds, Trust Income securities, Certificate of Deposits, and Finance bonds.

State investment bonds were securities issued by six state-owned investment companies to support state key construction. They had a small issue amount, and were stopped in 1992. From an issuer's viewpoint, they are similar to State Construction bonds. MOF also issues Special Purchase bonds, Price Index bonds, Special bonds, State Key Construction bonds and Fiscal bonds.

State Key Construction bonds and State Construction bonds are designed to raise funds for budgetary production projects. Fiscal bonds are issued through private placement to specialized banks, comprehensive banks, and other financial institutions. Price index bonds are domestic government bonds with index-linked principal subsidy. Special bonds were issued to domestic entities with sound economic records, a pension fund and unemployment insurance fund for state employees, although issuance ceased in 1992. Since then, Special Purchase bonds have been issued through private placement to pension funds and the unemployment funds of employees in domestic enterprises.

TABLE 11  
*Issuing Summary of Domestic Securities by Category*  
(billion yuan)

Year	T-Bond	Policy Financial Bond	Other Financial Bond	E-Bond	State Investment Bond	State Investment Company Bond	Total Domestic Bond
1986	6.251	—	3.0	10.00	—	—	19.251
1987	11.687	—	6.0	3.00	—	3.00	23.687
1988	18.877	—	6.5	7.54	—	9.00	41.918
1989	22.391	—	6.1	7.53	—	2.25	38.236
1990	19.723	—	6.4	12.64	—	0.62	39.415
1991	28.125	—	6.7	24.99	9.5	0.23	69.541
1992	46.078	—	5.5	68.37	6.0	0.80	126.750
1993	38.131	—	—	23.58	—	—	61.715
1994	113.755	—	—	16.17	—	—	129.930
1995	151.086	—	—	30.08	—	—	181.170
1996	184.777	104.10	1.5	26.89	—	—	317.230
1997	241.179	139.95	3.2	25.52	—	—	409.850
1998	380.877	195.02	—	14.79	—	—	590.689

Source: China Securities and Futures Statistical Yearbook 1999.

Every category of government debt is divided into different classes. T-bonds, for instance, can be: (i) Book-Entry T-bonds, which are paperless T-bonds with the advantages of a convenient process and lower cost and risk, (ii) T-bonds in bearer form, which are paper face T-bonds and can be traded through exchange or OTC, (iii) Voucher-Form T-bonds, which are issued voucher as certificate for owner, and (iv) Specially Allocated T-bonds, also known as Special Purchase bonds, which mainly target pension funds and unemployment insurance funds.

A consequence of the lack of homogeneity in government debt issues has been that, even after trading became permitted in many debt types, markets have remained thin. The Government is aware of this, and there has been a trend towards reducing their variety and placing more emphasis on T-bonds. This will undoubtedly assist liquidity in the secondary market.

*Treasury Bonds.* T-bonds are designed to raise potential disposable capital for state-directed construction to meet fiscal deficit (especially since 1994, when overdrawing from the Central Bank was prohibited by law), and to adjust the macroeconomy. (This function has become imperative since the Asian crisis.) They are also used to improve the structure of social capital to boost the development of financial markets.

The main forms of T-bonds are the Voucher and Book-Entry T-bonds. The fluctuation of nominal interest rate of T-bonds stays in line with that of SOB deposits, although always about 2 percent higher.

T-bonds are issued by the central Government and so have no risk. Because of the scarcity of liquidity, investors (mostly individuals) consider T-bonds as an alternative form of saving. However, the liquidity of T-bonds is lower than that of deposits. Therefore, to remain attractive to investors, a higher premium is necessary.

*Historical Overview.* From 1981 to 1985, the purpose of issuing debt was to meet fiscal deficit. The central Government was cautious, keeping the volume of issuance under Y10 billion.

From 1986 to 1990, the issuance amount increased gradually, but this could not meet the requirements of fiscal deficit and debt repayment, so the Government had to depend on foreign loans and overdrafts from the Central Bank.

From 1991 to 1993, repayment of the debt itself became an important factor in the expansion of the aggregate volume, and the high interest rate of the T-bond exacerbated the repayment burden. From 1994 to 1997, the amount issued exceeded Y100 billion, and the growth rate each year was startling, due to the 1994 Budget Law banning overdrafts from the Central Bank, and the growing need to cover repayments.

TABLE 12  
*Issuance History of T-Bonds*  
 (billion yuan)

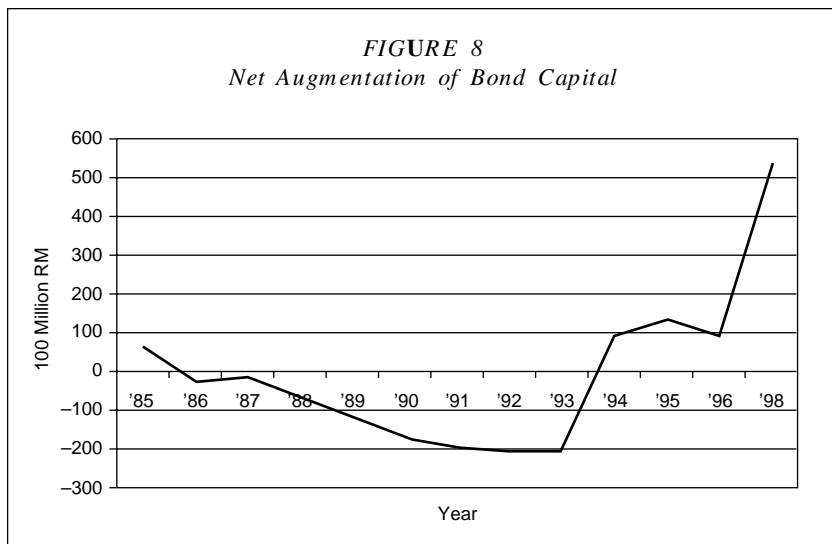
Year	Repayment	Amount Issued	Balance
1982	—	4.383	—
1983	—	4.158	—
1984	—	4.253	—
1985	—	6.061	23.70
1986	0.798	6.251	29.30
1987	2.318	6.307	39.10
1988	2.844	9.217	55.80
1989	1.930	5.607	76.90
1990	11.375	9.346	89.00
1991	15.669	19.930	117.02
1992	34.242	39.564	140.13
1993	224.300	314.780	1801.10
1994	36.496	102.857	247.78
1995	77.946	150.186	314.81
1996	122.317	184.777	380.35
1997	182.040	241.202	506.65
1998	234.860	380.870	735.13

Source: China Securities and Futures Statistical Yearbook 1999.

By 1996, repayment was increasing by more than 50 percent each year and the Government began to control the expansion of debt volume. As a result, the net augmentation (annual issuance value minus deficit redemption and repayment) of bond capital was only Y920 million in 1997. Fluctuations in this index throughout the 1990s reflect the Government's policy dilemmas in the face of repayment pressure. In 1998, the index stood at Y53.787 billion.

After the 1997 Asian crisis, the Government used T-bond issuance as a tool to stimulate the depressed economy, issuing Y380.87 billion in 1998. Meanwhile, to enhance the capital adequacy ratio of the four state-owned commercial banks, they were issued with Y270 billion of Special T-bonds.

The ratio of the amount issued compared with GDP reached 4.8 percent in 1998, up from 0.83 percent in 1982, while the ratio of balance to GDP stood at 9.26 percent, up from 2.64 percent in 1985. T-bond issuance has clearly become an important economic indicator and has begun to influence the investment behavior of the Chinese people and enterprises.



*Debt Maturity.* The bulk of the government debt is medium-term debt (three to five years). Issue periods are very long (sale of debt maybe take several months), and it was not until 1994 that two short-term debts (six months) were first issued. These two paperless issues took more than one week to place. Secondly, because of long intervals to redemption and high rates of inflation, people are reluctant to accept long-term debt. This unevenness of maturity has caused the bunching of repayment, increasing the pressure of payment of principal and interest and restricting investors' diversified needs on maturity staple. In addition, such short-term debt cannot satisfy the needs of long-term capital for infrastructure projects.

The Government needs to address these problems by increasing issuance of long-term debt, while maintaining the rapid growth trend of short-term debt. Long-term bonds have already been increased, reaching 40 percent of the market in 1998, and 58 percent between January and September in 1999.

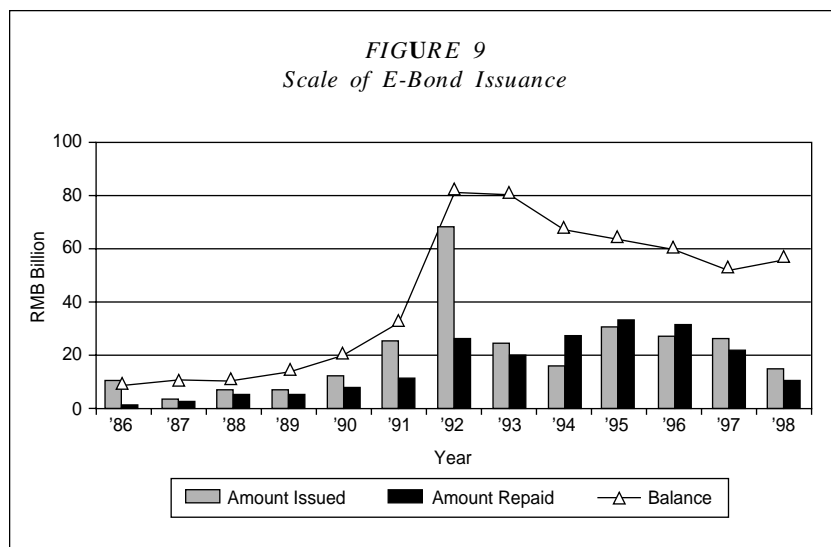
*Enterprise Bonds.* The issuance of E-bonds has been on the decline since 1993. Currently, both issuing volume and trading turnover are very small compared with other securities.

There are three kinds of E-bonds: Local E-bonds, Central E-bonds, and Enterprise Short-Term bonds. Strict procedures regulate the issue of each kind of E-bond, and issuing them is so difficult that it has limited the enthusiasm of enterprises.

TABLE 13  
Term Structure of T-Bonds  
(billion yuan)

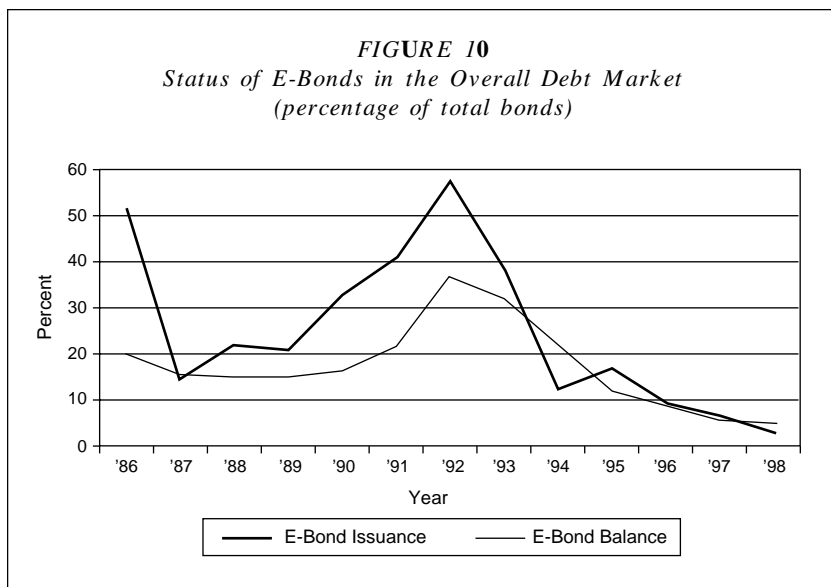
Year	0-1-Year		2-5-Year		6-10-Year		Total	
	Amount	%	Amount	%	Amount	%	Amount	%
1981-1984	—	—	3.532	20	14.128	80	17.600	100
1985-1987	—	—	23.999	100	—	—	23.999	100
1988-1990	—	—	60.991	100	—	—	60.991	100
1991-1993	—	—	109.490	100	—	—	109.490	100
1994-1996	846.51	19	315.953	71	45.03	10	445.634	100
1997-1999	—	—	573.700	64	325.80	36	899.500	100

Source: People's Bank of China Quarterly Statistical Bulletin 1999-4, Volume XVI.



Central E-bonds were issued for the first time in 1992. These have been important since 1995, always accounting for more than 30 percent of total E-bonds. Local E-bonds are issued without any termination, and give local government, which does not have the power to issue T-bonds, a means of raising capital for its enterprises. Enterprise Short-Term bonds have been issued since 1988. These bonds are issued by an enterprise to meet its seasonal short capital needs, with the principal and interest paid back in three, six or nine months. These bonds accounted for 90 percent of E-bond issuance from 1993 to 1996, as short-term capital

needs were large while the economy was booming. However, since the Asian crisis, this need has fallen. Internal bonds were issued from 1988 to 1992. House Construction bonds and Local Investment Company bonds were issued as an experiment with a maturity of three years in 1992.



The main maturity of central and local E-bonds is three or five years, or occasionally eight, while for Enterprise Short-Term bonds it is three to nine months.

The nominal interest rate of E-bonds may not exceed that of deposits by more than 40 percent. Among E-bonds of the same maturity, no matter whether the credit rating is high or low, there is little difference in nominal interest rates. As the authorities select each enterprise, and most of the credit risk is transferred to the Government, no company has the incentive to make itself stand out from the others. Moreover, the interest rate is decided not only by the enterprise's manager, but by the censoring and authorizing departments.

The cost of E-bond issuance is not high, compared with raising money by stock issuance and bank loans. As E-bonds are midterm bonds, the nominal interest rate is much lower than loans taken out in the same year. However, the key problem is that not every qualified enterprise gets the chance to issue, as issuance is restricted by complicated selection procedures.

TABLE 14  
*Explicit Cost of E-Bond Issuance*

Items	Cost
Issuance Fee	1.5 percent of the total raised capital
Credit Rating and Auditing Fee	0.1 percent of total raised capital
Nominal Interest Rate	Cannot exceed nominal interest rate of deposits by 40 percent

Another reason for the decline of E-bonds is that SOEs generally have a high liability ratio, which makes issuance of debt with higher interest rates seem unsuitable. Also, the Government has a policy of guaranteeing T-bond issuance, which is very important for government revenue, so it does not want E-bonds to interfere with T-bond issuance.

*Historical Overview.* From 1983, when E-bonds first appeared, until 1987, the reason for issuance was to raise funds from employees and society by enterprises. It was not regulated by law. From 1988 to 1992, the Government encouraged SOEs to issue debt to supplement the scarcity of working capital.

From 1993 to the present day, issuance levels have been low and declining. The ratio of E-bond issuance to total domestic debt issuance is now down to 2.5 percent, while the ratio of E-bond balance to total bond balance is 4.36 percent. Compared with the same indices in 1992, (57 percent and 36.57 percent, respectively), it is clear that E-bonds are on the decline.

Unlike stocks, enterprises that issue E-bonds must repay the premium and principal in the future, and the high interest rate is a heavy burden. Those which have the right to issue stocks need not worry about repayment, however, so interest has switched to stock issuance. Currently, some loss-making local enterprises are refusing to repay the principal and premium, and this has unsurprisingly killed off investor interest in E-bonds.

*Financial Institution Bonds.* With the reform of the economy, the capital market has begun to take shape. Since 1985, the Government has allowed commercial banks and nonbank financial institutions to issue F-bonds. The aims were to: (i) raise mid- to long-term capital to recapitalize SOBs; (ii) change the traditional capital structure; (iii) improve risk control in the banking system; and (for Policy F-bonds) (iv) form a capital source to support policy banks.

TABLE 15  
Share of E-Bonds by Classification to Total  
(percent)

Year	Enterprise		Internal Bond	House Construction Bond	Local		Total
	Central E-Bond	Local E-Bond			Short-term Bond	Investment Company Bond	
1990	—	39.0	39.7	21.3	—	—	100
1992	10.8	37.8	33.4	16.3	0.9	0.6	100
1994	—	23.8	76.2	—	—	—	100
1997	32.0	37.1	25.8	—	—	—	100

Source: China Securities and Futures Statistical Yearbook, 1999.

F-bonds have been very important since 1996, and especially since the Asian crisis, when people were reluctant to invest and consume. Household deposits increased to more than Y6 billion, but the growth rate of fixed capital investments decreased continuously. This meant the main task for the Government was to stimulate domestic investment and consumption.

More and more F-bonds are now held by commercial banks and other nonbank financial institutions, increasing the capacity for future OMO, as these institutions will be the means for currency creation. The Central Bank can repurchase F-bonds in the interbank bond market to control expansion or contraction of money supply.

F-bonds account for as much as 34.94 percent of total bond issuance and 37.32 percent of total bond balance. In 1998, the amount of F-bonds issued was about Y348.7 billion, almost equaling the amount of T-bonds issued. Policy F-bonds are the most important type of F-bond (98 percent in 1997) and play an important role in channeling huge capital from commercial banks to policy banks, which carry out public finance investments to support positive fiscal policy. In addition, Special F-bonds are issued to meet liabilities arising from securities repurchase.

From 1985 to 1994, F-bonds were mainly issued by four large specialized SOBs: the Industry and Commercial Bank of China, the Agricultural Bank of China, the China Construction Bank, and the Bank of China.

After the 1994 bank reform the National Development Bank (NDB), Agricultural Development Bank, and China Import and Export Bank started to issue Policy F-bonds to commercial banks and other nonbank financial institutions. This guarantees the political separation of commercial banks from policy banks. Policy banks use the capital to support infrastructure construction, develop basic and mainstay industries, release

bottlenecks and adjust industry and local economic structure. The main issuer is NDB, which accounts for more than 95 percent of issuance volume. Around 90 percent of NDB's loans are raised by bond issuance.

TABLE 16  
F-Bond Issuance  
(billion yuan)

Year	Total of Bond		Policy Financial Bond		Other Financial Bond		Total of F-Bond	
	Amount Issued	Balance	Amount Issued	Balance	Amount Issued	Balance	Amount Issued	Balance
1986	19.3	40.2	—	—	3	2.5	3.0	2.5
1987	23.7	56.3	—	—	6	5.5	6.0	5.5
1988	41.9	87.4	—	—	6.5	8.0	6.5	8.0
1989	38.2	112.9	—	—	6.1	7.1	6.1	7.1
1990	39.4	131.9	—	—	6.4	8.5	6.4	8.5
1991	69.5	175.4	—	—	6.7	11.8	6.7	11.8
1992	126.8	255.9	—	—	5.5	14.3	5.5	14.3
1993	61.7	275.9	—	—	—	10.9	—	10.9
1994	129.9	335.5	—	—	—	9.5	—	9.5
1995	181.2	430.1	—	161.3	—	9.5	—	170.8
1996	317.3	611.4	104.1	240.0	1.5	11.0	105.6	251
1997	409.9	972.5	140.0	348.7	3.2	14.2	143.2	362.9
1998	—	—	195.0	511.7	—	—	—	—

**Note:** Some sections of the table are incomplete due to difficulty in finding access to sufficient statistics on F-Bonds.

**Sources:** China Statistical Yearbook 1999; China Securities and Futures Statistical Yearbook 1999.

Maturities of F-bonds are from one to five years, with interest rates a little higher than nominal savings interest rates. Principal and interest are repaid only when F-bonds mature, so creditors cannot withdraw principal before maturity. F-bonds can be traded in the interbank bond market, although turnover is limited as investors tend to hold until maturity.

Following changes in the economic situation since 1989, the interest rate has been adjusted continuously. F-bonds have therefore adopted a floating coupon rate pegged to the deposit interest rate. The maturity of F-bonds is partly determined by that of special loans. Generally, these are required to match each other, and are normally one to five years.

Trading of F-bonds is strictly supervised. It is prohibited to trade them publicly, and they can only be repurchased in the interbank bond market. The main participants are commercial banks and insurance companies. The Central Bank's OMO is another probable means of trading.

To improve the secondary market for F-bonds, the interbank bond market should be opened to a wider range of investors.

### *C. Investor Base*

The major target of debt sales are individuals, unlike in developed debt markets, where the major investors are institutional investors, such as banks, insurance companies, and mutual funds. At present, individual investors hold more than 60 percent of government debt.

The Government is aware of the drawbacks of this investor structure. Firstly, an individual's main purpose in investing in T-bills is to chase higher yields for profit, which increases the cost of raising capital by issuing Treasury bills. Secondly, If individuals hold the bulk of T-bonds, it is difficult for the central Government to carry out OMO, as they always hold T-bills until maturity without exchanging them in the secondary market—unlike institutional investors, who hold bonds for liquid management.

The Government therefore adopted a series of measures to reduce the proportion of debt issued to households. The Y13 billion paperless issue in 1994 was the first attempt to explicitly target wholesale buyers (such as banks, insurance companies, etc.) via voluntary T-bill sales. Prior to 1993, the PBC did not permit banks to hold government securities, except those issued on a mandatory basis. Likewise, pension funds and insurance companies have only been encouraged to hold T-bills since late 1993.

Although the PBC recognizes that control of monetary and credit conditions via OMO as a policy tool requires the relevant institutions to hold a stock of T-bills, as well as a liquid secondary market, the Government's efforts have not had the desired results. Individuals still maintain their position at the top of the investors' league, and banks have been forbidden to enter the stock exchange for T-bond trade since 1997, to prevent securities risks flowing into the financial system. The proportion of institutional investors has therefore decreased once again. However, it is inevitable that individuals will be superseded in the future by other sources of funds.

## *IV. Bond Market Infrastructure*

### *A. Issuance Methods and Procedures*

Methods used to issue government debt over the past two decades have moved away from administrative placement towards more market-

oriented methods. However, flaws in institutional arrangements have limited the degree of success.

In the first phase (1981–1990), debt was placed administratively, quotas were assigned by the MOF to the financial department of the provincial and local governments, and quotas distributed among production units. These units in turn allocated bonds to workers and employees, as an automatic deduction from wages. Although this was compatible with circumstances at that time (high inflation and lack of investment consciousness, which curbed people's desire to buy government bonds), the hostile public response to semicompulsory placements became intense. A new issuance method was badly needed.

In 1991, MOF adopted an underwriting syndicate to launch an issue for the first time on an experimental basis. The underwriters received a commission of 0.15 percent of the underwritten amount, and sold the bonds on a voluntary basis to clients. But in 1992, the volume issued by underwriting syndicates was only a small proportion of total issues, at 12.5 percent. Underwriting syndicates faced difficulties in selling the desired quantity of government bonds due to competition from the booming equity and property markets. The Government tried to improve bond distribution by appointing 19 financial institutions as primary dealers (PDs) that were to be responsible for distributing government bonds. After they fulfilled their placement, they would be entitled to privileges such as priority in bringing equity offers to market.

Auction methods have been introduced from 1995 to the present day, a further step towards market-oriented placement. In 1995, seven billion of the 10 billion T-bills were underwritten by 50 PDs, while the rest were underwritten by the auction method. Afterwards the price auction method (Dutch auction) and yield auction method (American auction) were adopted.

The form of placement has thus been affected by temporal conditions, such as high inflation and lack of a market mechanism at the beginning of the 1980s, which compelled the Government to adopt administrative placement. Later, decreasing inflation (that comparatively increased the yield of government bonds) made them relatively attractive, so market-oriented methods were preferred. When inflation became serious again in 1993, and illegal fund-raising made issuance of government debt difficult, the Government had to fall back on administrative placement. There is clearly a long way to go before a fully market-oriented issue method is achieved.

### *B. Issue Frequency*

Primary issues for government debt have been offered irregularly. Without regular maintenance of a sufficient volume of debt issue of any maturity (but especially short-term), the development of a liquid secondary market is impossible. Consequently a short-term market yield curve cannot be developed. Moreover, the absence of a liquid short-term market presents problems for the use of indirect methods of monetary control. In addition, since issues are made irregularly, there is little scope for investors to synchronize the timing of sales with their cash flows. The issue pattern puts considerable strain on investors' liquidity and risk management capabilities, limiting the number of investors and causing a liquidity problem—both of which raise the Government's cost of funds. Therefore, the Government has considered undertaking regular issues of short-term debt to properly meet investors' needs and help to form a benchmark.

### *C. Secondary Trading Systems*

*T-bonds.* In the early 1980s, trading of T-bonds was banned and illegal trading was rife. The ban was lifted in 1985, and the Government tried to set up secondary T-bond market, with a discounting business introduced as a first step for the circulation of T-bonds.

The PBC formulated detailed rules on the discount T-bond business, which stipulated that T-bond holders could transfer the bonds to banks for discounted cash after holding them for two years. This is limited, however, because of high discounting rates.

The circulation system improved substantially in April 1988, with the State Council approving cities with a sound base and experience in financial reform to develop OTC trading of T-bonds.

In 1992, trading accelerated with the setting up of the Shanghai Stock Exchange (SSE) and several regional trading centers. More than Y108.26 billion was traded that year. The ratio of trading volume of bonds to stock was 84.4 percent. In 1993, T-bond derivatives were also developed. Repo of T-bonds between securities firms and banks was allowed in the interbank bond market. There was an experiment with T-bond futures on the SSE, and some securities firms promoted T-bond trading with T-bond portfolios.

By 1995, the ratio of turnover to balance had shot up to 1,799 percent. Most trading was not through the spot market but rather through repo and T-bond futures. From 1996, T-bond trading turnover decreased, however, as a result of the ceasing of T-bond futures trading.

TABLE 17  
 Volume of T-Bond Trading (1988–1998)  
 (billion yuan)

Year	Turnover of T-Bonds (A)	Outstanding T-Bonds (B)	Ratio in percent (A/B)
1988	0.024	65.41	0.04
1989	0.021	68.71	0.03
1990	0.116	95.79	0.12
1991	0.370	106.07	0.35
1992	0.713	128.27	0.56
1993	8.717	154.07	5.66
1994	1,991.127	228.64	870.86
1995	5936.000	330.03	1,798.62
1996	1,803.778	436.14	413.58
1997	1,645.881	550.89	298.77
1998	2,160.079	725.69	297.66

Source: China Securities and Futures Statistical Yearbook 1999.

At present, centralized trading is carried out on the Shenzhen and SSE, while decentralized trading is carried out through trading centers as well Securities Trading Automated Quotation (STAQ). This is mainly in the interbank bond market.

*E-bonds.* There are two types of secondary market for E-bonds—stock exchange and OTC. In PRC, OTC covers 90 percent<sup>4</sup> of E-bond trading, while stock exchange trading is becoming smaller and smaller.

Securities institutions play a key role in OTC deals. Due to the lack of a fully liquid and unified secondary market, dealers usually monopolize the price. Regional segmentation is the main problem in the OTC market.

SSE accounts for about 80 percent of E-bond exchange turnover. However, the absolute quantity is still so small that this was only Y3.1 billion in 1998, compared with a massive Y2.2 trillion total T-bond trading volume.

The yield of E-bonds in the exchanges is as high as T-bonds, but unlike T-bonds, they cannot act as a tool for liquidity management. Thus institutional investors, especially commercial banks, do not like them very much.

4. Many papers quote 90 percent, but we have been unable to locate the source in any public publication.

TABLE 18  
Trading in Shanghai and Shenzhen Stock Exchanges

Year	Listed Number		Turnover (million yuan)		Deals (lot)	
	Shanghai	Shenzhen	Shanghai	Shenzhen	Shanghai	Shenzhen
1993	12	8	7.82	3.20	162	—
1994	18	6	1.83	0.03	65	3
1995	12	1	61.06	23.04	4,442	1,846
1996	5	1	116.12	29.97	11,032	2,368
1997	5	2	1,550.32	257.78	49,205	2,145
1998	5	2	3,131.84	936.73	304,452	6,047

Source: China Securities and Futures Statistical Yearbook 1999.

Securities institutions play the biggest role in OTC deals, but it has not been possible to turn around the inactivity of the bonds. OTC is mainly made up of institutions buying and selling for themselves, i.e. using their own capital to buy E-bonds from individuals at a fixed price decided by dealers and then selling the bonds to other individuals or institutions at a higher price. Due to the lack of a fully liquid secondary market and regional splitting, individuals have no power to negotiate the price, which sharply decreases the liquidity of E-bonds.

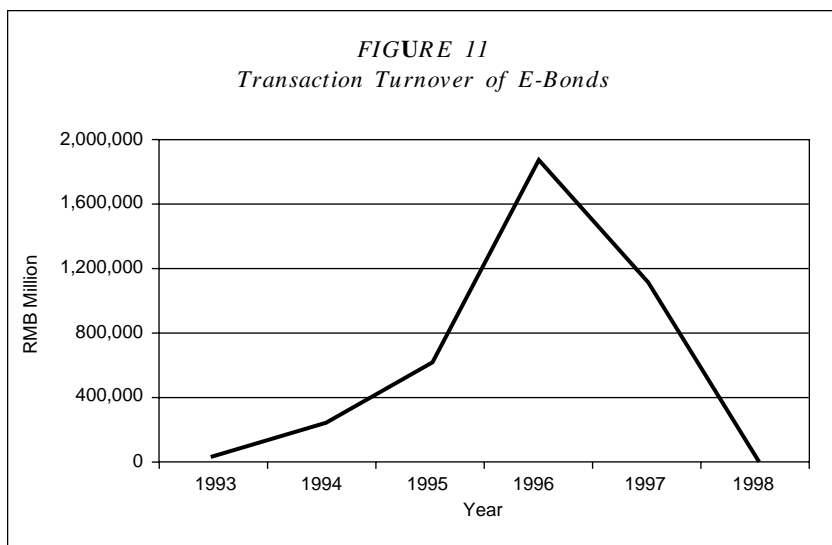
There were no new listed E-bonds in 1998, largely due to government neglect. Since T-Bond issuance has become such an important means of raising revenue for the Government, it does not want E-bond issuance to disturb T-bond issuance. Interest among enterprises has also tailed off because of the high costs and complicated procedures of going public, which also requires enterprises to pay many fees to securities exchanges every year. Individuals, meanwhile, do not like the inconvenience of trading in stock exchanges.

TABLE 19  
Trading Scale of E-Bonds

Year	Listing Numbers	Transaction Turnover (million yuan)	Transaction Volume (lots)
1993	20	47,903.97	31,550
1994	24	223,318.50	330
1995	13	631,971.40	238,400
1996	6	1,838,962.00	282,420
1997	7	1,127,512.00	2,281,200
1998	7	4,068.57	7,763,910

Source: China Securities and Futures Statistical Yearbook 1999.

Another impediment was that commercial banks were forbidden to invest in stock exchanges, as part of the Government's effort to cut off their capital access to stocks to prevent securities risks from flowing into the financial system. This removed financial risk, but also reduced an important capital source in E-bond trading. Turnover in 1998 accounted for only 0.09 percent of total securities turnover.



Individual investors, no matter whether they have T-bonds or E-bonds, prefer to hold on to them until maturity. Until such time as an improved secondary market can distinguish between T-bonds and E-bonds in terms of correct risk, yield, and liquidity, E-bonds will not play an important role in the securities market.

*F-bonds.* F-bond trading is divided between transaction on exchanges and transaction on the interbank bond market. The latter is divided into repo between commercial banks, and repo or purchase through PBC's OMO.

Very few F-bonds are listed on exchanges. In the past two years no new F-bonds have been listed, while in 1993 there were just 21, in 1994 there were nine, in 1995 four, and in 1996 two. The Government intends to concentrate F-bond trading in the interbank market.

Policy F-bonds cannot be formally traded, but the Central Bank has approved monetary market repo of them.

TABLE 20  
Turnover of Bonds by Type

Year	Turnover of Stocks	Turnover of T-Bonds	Turnover of E-Bonds	Turnover of Financial Bonds	Total	Share of E-Bond Turnover (%)	Share of E-Bond to T-Bond on Turnover (%)
1993	366,702	8,717	47,904	4.47	423,328	11.32	549.54
1994	812,763	1,991,127	223,318	0.91	3,027,209	7.38	11.22
1995	403,647	5,936,000	631,971	0.03	6,971,618	9.06	10.65
1996	2,133,216	1,803,788	183,962	0.05	5,775,966	31.84	101.95
1997	3,072,184	1,645,881	1,127,512	—	5,845,577	19.29	68.51
1998	2,354,425	2,160,079	4,069	—	4,518,573	0.09	0.19

Source: China Securities and Futures Statistical Yearbook 1999.

The turnover of F-bonds is small compared with the absolute issuing amount. F-bond buyers are commercial banks and other financial institutions. Once these buyers hold F-bonds, they prefer not to sell, as they can be a tool for capital management.

Currently, only Policy F-bonds and Special F-bonds have custodial accounts at China Government Securities Depository Trust & Clearing Co., Ltd.

Interbank market participants are the Central Bank, commercial banks, and insurance companies, which are mainly capital suppliers (until securities companies were allowed to join this market for the first time in 1999), rather than demanders. Therefore, there are no capital demanders wanting to sell their bonds. A wider range of participants is needed. Without the participation of capital demanders, OMO through repurchasing Policy F-bonds will have little effect.

#### D. Interbank Bond Market

Currently, trading on the stock exchanges is withering. All government bonds are moving towards trading in the interbank bond market. E-bonds, however, have not been accepted by the interbank bond market.

The interbank bond market is an important vehicle for transferring funds between the banking system and nonbank financial institutions, which include a variety of trust and investment corporations, financial companies, and securities dealers. The principal instruments on the interbank bond market are short-term loans. However, a growing repo agreement market has been emerging since 1992.

Although loans on the market are intended to be strictly short term for liquidity management purposes, short-term loans have tended to become long term through roll-over agreements, which the PBC periodically

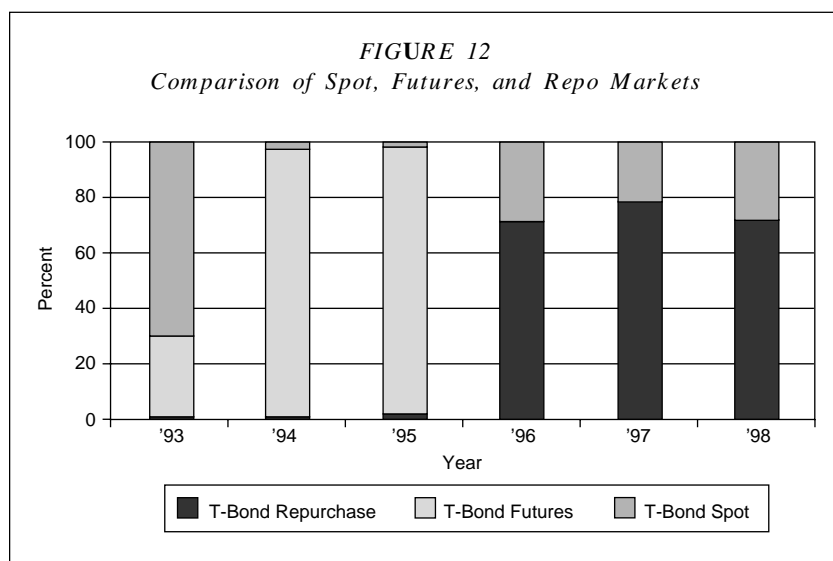
attempts to curtail. Nonbank financial institutions' participation in the interbank bond market was virtually unrestrained prior to 1993, and was identified as the principal source of credit leakages responsible for the overheating of the economy that year.

This access was subsequently cut off, and these institutions could no longer get funds from the interbank market through repo or borrowings from the banking sector to invest in securities markets (including the bond and equity markets). This resulted in a fall in the bond and equity markets in late 1993 and early 1994.

In 1999, some nonbank institutions were allowed to reenter the interbank bond market, and repo was resumed at the same time. However, restrictions have been imposed on both the volume of their borrowing and the term of loans (now restricted to a maximum maturity of seven days). Although the interbank bond market is designed to improve the flow of funds between the banking system and securities firms, securities firms no longer appear to depend heavily on the interbank system for resources.

#### *E. Futures Market*

The futures market, based on T-bond trade, was mainly focused on the Shanghai (from 1993) and Shenzhen (from 1994) Stock Exchanges. Trading of T-bond futures reached a peak in 1994. As a result of illogical future varieties, ignorance of risk control, and excessive speculation, however, the Government decided to halt this trade in May 1995.



T-bond futures failed for three reasons. Firstly, the scale of the spot market was too small to support future operations. Speculative capital could manipulate the future market, which increased risks for hedgers. Secondly, there were flaws in the design of trading rules, such as limitations on price fluctuations and holding volume. The third problem was the inefficiency of government regulations due to imperfections in the relevant laws and regulations.

#### *F. Repo Market*

A repurchase (repo) agreement is the sale of a security with a commitment by the seller to buy the security back from the purchaser at a special price at a designated future date. Basically, it is a collateralized loan, where the collateral is a security (especially a T-bond).

In the early 1990s, T-Bond repo sprang up with the establishment of the STAQ system. The first repo trading of T-bonds was accomplished between two STAQ members in July 1997. Wuhan Trading Center introduced repo in T-bonds the following year. Later, Shanghai and Shenzhen Stock Exchanges, as well as several regional trading centers, started repo of T-bonds as T-bond issuance escalated and the T-bond spot market flourished.

Although the practice of T-bond repo is a recent occurrence, turnover has grown rapidly. The number of institutions dealing with T-bond repo reached more than 3,000 in 1994, and overall trading turnover exceeded Y1,554 billion in 1998. The ratio of T-bond repo to overall trading turnover has been higher than 50 percent since 1996.

*TABLE 21*  
*Share of T-Bond Repo Turnover*  
(billion yuan)

Year	Total T-Bond	T-Bond Repo	T-Bond Spot	Proportion of Repo (%)
1993	8,717	42	6,102	0.49
1994	1,991,127	7,578	46,837	0.38
1995	5,936,000	124,852	77,520	2.10
1996	1,803,788	1,300,864	502,924	72.12
1997	1,645,881	1,287,606	358,274	78.23
1998	2,160,079	1,554,084	605,995	71.95

**Source:** China Securities and Futures Statistical Yearbook 1999.

The repo market is used by dealing firms (investment banking firms and banks acting as dealers) to finance their positions and cover short

positions. It has evolved into one of the largest sectors of the money market in developed countries. Financial and nonfinancial firms participate in the market as both sellers and buyers, depending on their circumstances. In the PRC, commercial banks are typical net buyers of securities (i.e. net providers of funds), while securities firms and bank trust departments are typically net buyers of fund (i.e. providers of securities). Securities firms and banks are thus the two basic categories of participants in the repo market.

During the period of rapid growth of T-bond repo, some serious problems were revealed. For instance, many disqualified institutions were taking part in the repo market, and illegal speculation was prevalent.

There were other problems, too. Repo is basically a short-term financing tool (term range of T-bond repo in the US is from seven days to one month). In the PRC, however, this could be several years because of illegal operations—creating a dangerous debt-chain of overdue repos. Repo therefore became a major source of financial risk, and the Government decreed that the term should not be longer than one year.

Another problem is repo collateral. In the PRC, repo turned into an illegal means of financing for securities firms. Dealers could raise funds without delivering the securities to the customer, or hold the securities in a segregated customer account, making the risk of default very high. The Government therefore banned T-bond repo without sufficient Treasury securities as collateral, and it was made illegal for securities firms to make repo arrangements by embezzling clients' T-bonds. In 1995, a central deposition and clearing company was set up to help overcome the institutional drawbacks of T-bond repo.

Repo rates should be lower than the cost of bank financing, which is unsecured borrowing. In the PRC, however, the lack of availability of collateral, long terms of repos, and poor quality of repo market participants made the repo rate very high. The main function of repo became a means of financing which bypassed the Government's credit plan control.

Another problem was the interrelationship between the repo and stock markets. Stock index and repo rates move in opposite directions in a developed market. In the PRC, however, the stock index and repo rates move in the same pattern. This highlighted the fact that some security firms were using repo to raise funds to invest in the stock market. The unregulated repo market fostered speculation on the financial market, including the repo and stock markets.

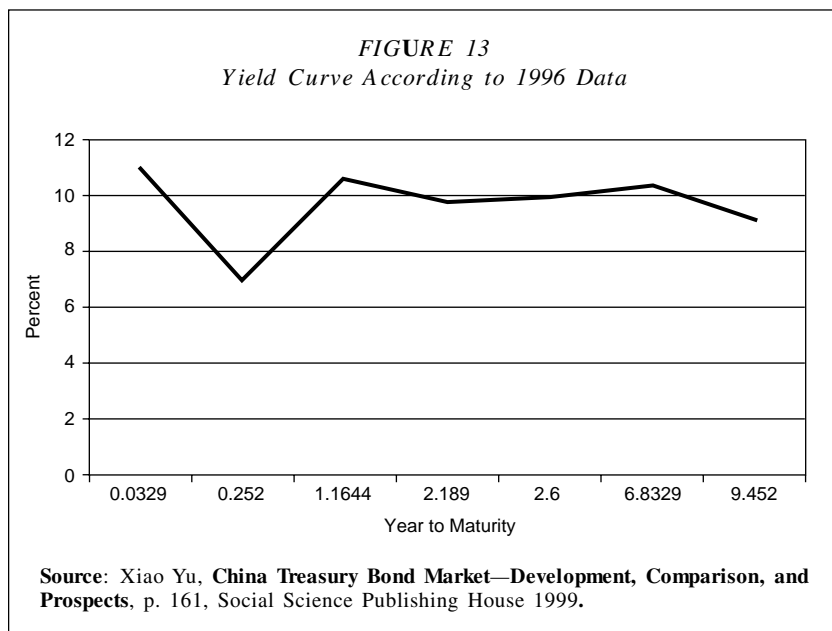
### G. Other Aspects

#### 1. Benchmark Yield Curve

Bond market issues should provide a benchmark rate, which can help establish a yield curve. A yield curve has only been discernible since 1996, when there were seven kinds of marketable Treasury bonds on the two stock exchanges, from which a yield curve can be drawn.

However, the concept of a benchmark issue in relation to new debt issue is not really operative in the PRC today due to: (i) the administered setting of yields in the primary market (the operative benchmark is the interest rate on bank deposits, which is administratively determined), and (ii) poorly determined pricing of credit risk, making it hard to distinguish between the credit risk of a government-owned company and actual government risk. With continuing economic reform, flexibility in rates and tough budgetary constraint of SOEs is needed, which would make benchmark issues play a significant role in future debt pricing.

Developing the role of benchmark issuance in defining the secondary market yield curve requires: (i) a greater range of maturities; (ii) a more regular issuance calendar, and (iii) a greater focus on developing a wholesale market to enhance liquidity.



## **2. Tax Treatment**

All the interest from E-bonds incurs 20 percent income tax while T-bonds are income tax-exempt.

## **3. Credit Rating**

Credit rating started in the PRC in 1987. There are about 50 companies, but most belong either to the Central Bank's suboffices or to SOBs, and only about 20 companies have independent legal qualifications. Nowadays, only nine credit rating institutions can engage in the rating of E-bonds. Most of them are local, except Dagong Global Co., Ltd. and Chenxin Securities Rating Co., Ltd. Most of the business is carried out by the latter.

Credit rating is still very new, and investors do not care about it very much. In fact, the ratings are only shown to the authorities which make decisions on the procedure of issuance. In an environment of strict state control, investors know that in reality the bonds are government-guaranteed, because local governments generally have very close relations with the issuing enterprises.

Normally, E-bonds that are issued publicly have the grade above A or A-. While strict state-control reduces the risk of repayment failure, it results in confusion between corporate and government credit.

Reform of SOEs is therefore crucial to help reduce this confusion and to allow the E-bonds' rated grade to reflect the true standard of the enterprises themselves.

The credit rating system of F-bonds must also be improved. There is a very real difference in levels of risk among commercial banks and levels of efficiency of capital use in policy banks, but until recently rating for these bonds was nonexistent. Without credit rating, all issuers are treated the same, creating confusion between the real and government risk. Without a pricing function in the F-bond market, the formation of a flourishing F-bond market will be hampered.

## **4. Clearing and Settlement**

It is important that the Government should develop a central registration and clearing company as a unified center for registering, depositing, and clearing.

The China Government Securities Depository Trust & Clearing Co., Ltd. (CGSDTC), set up in 1994, is a good first step. The CGSDTC is currently building an OTC system of E-bonds. Since 1997, most E-bonds

have been issued in book-entry form. Once book-entry E-bonds are issued, CGSDTC can build a united depository account for them. Investors, no matter whether individuals or institutions, can use one depository account to trade in different local markets, avoiding the waste of resources caused by settlement and dealing in an uncombined OTC market. The state wants to use the united depository, registration, and clearing system to bring about united administration of E-bond dealing. It also wants to integrate the uncombined local OTC into a united E-bond market, using the interbank call money system to build the quotation system for E-bonds.

If the necessary conditions are fulfilled, authorities will allow E-bonds deposited in CGSDTC to enter the interbank debt market. Therefore, T-bonds, E-bonds and F-bonds can make up a united debt market using the same infrastructure, which will finally bridge the gap between the capital and monetary markets.

#### *V. Regulatory Framework*

The regulatory framework has improved greatly in the past decade. However, the substantial role and sometimes ad hoc intervention of the Government, especially in primary issues, remains a problem. There are difficulties of ensuring compliance and enforcement, and the regulatory framework is fragmented.

Overall authority for the government bond market in the PRC rests with a variety of agencies. Planning and preparation of the bonds is done by the MOF, while the State Economy and Trade Committee shares responsibility with the MOF for developing an issuance plan. The draft plan is put to the People's Representative Congress every August for approval. MOF also conducts regulation and supervision of the securities debt market, while the China Securities Regulatory Commission (CSRC) is in charge of regulating the primary and secondary market. PBC has some role in the government debt market, especially when debt policy has a close relationship with monetary issues.

Regulation of debt securities is less defined and more fragmented than supervision of the equity markets. According to current regulations, MOF is in charge of the issuing of T-bonds, while the PBC is in charge of overseeing the approval of bonds issued by financial institutions and the securities of investment funds. The State Planning Commission (SPC) is in charge of the inspection and approval of state investment bonds and bonds issued by state investment companies. The PBC and the SPC share responsibility for the approval of Central Enterprise bonds, and provincial or municipal governments are in charge of the approval of Regional Enterprise bonds.

This division of responsibilities only covers regulations in the primary market, and reflects the great variety of government debt issued in the PRC. The PBC is responsible for bond trading activities only to the extent that it approves securities trading centers. Monitoring activities on the two officially recognized stock exchanges is done by the CSRC. Monitoring the actual trading of bonds, especially government bonds, has been a gray area, however. The PBC, while responsible for the trading of government securities, has not had the capacity for regular monitoring.

#### *A. Regulations on E-Bond Issuance*

The Regulation of E-Bond Administration, promulgated in 1993, is the most important law relating to E-bond issuance, and requires that E-bonds are issued by legally registered PRC citizens, and that the issue is made public.

The SPC, PBC, MOF, and the CSRC decide the issue plan by countersignature annually, and then confer the planned scale to the relevant provinces, which carry out the plan.

In addition, the decided nominal interest rate of E-bonds cannot exceed that of deposits by more than 40 percent, and E-bond issuance must not have any impact on T-bond issuance. E-bond issuance is arranged after the end of T-bond issuance.

The issued E-bonds must be underwritten by securities institutions. E-bonds can be transferred, mortgaged, and inherited, but only by the ratified securities institutions.

Moreover, the Companies Act of China requires that the accumulated bond value may not exceed 40 percent of the company's net capital, which must be more than Y30 million for a joint stock limited company and more than Y60 million for a limited liability company.

The enterprise's average disposable profit of the past three years must be enough to meet one year's repayment, and the purpose of the raised capital must fit the state policy of industrial adjustment.

*Administrative Authorizing Procedure.* To gain issuance permission, enterprises must get the recommendation of the local government and the services in charge of the industry. The procedure is very complicated, the quota very small, the issuing period very long, and the latent transaction costs very high. If an enterprise does not have good relations with a whole string of governmental authorities, E-bond issuance is nothing more than a dream. Potential issuers of E-bonds must gain both quota and issuance approval:

*Quota Approval.* (i) Enterprises submit the projects that need capital to the provincial supervisory agency, applying for formal ratification and recommendation; (ii) the supervisory agency of one sector submits the application to the Provincial Planning Commission and the Provincial Sub-Office of the PBC to declare for the quota; (iii) the Provincial Planning Commission and the Provincial Sub-Office of the PBC unify the local plan for submission to the State Planning Commission and the headquarters of the PBC, respectively; (iv) the State Planning Commission and the headquarters of the PBC integrate and censor each application. They then compile the total plan of annual issuance to apply for approval at the State Council meeting, and (v) after the quota has been approved, the State Planning Commission and the headquarters of the PBC distribute the quota to the Provincial Planning Commission and the Provincial Sub-Office of the PBC. The quota then returns to the supervisory agency of one sector and is distributed to the enterprises.

*Issuance approval.* If and when the quota is won, the enterprises must get approval from the SPC and PBC (for central enterprises), and from the Provincial Planning Commission and Provincial Sub-Office of the Central Bank (for local enterprises).

After getting the countersignature, the enterprises must submit the application to CSRC. After CSRC's censorship, CSRC will make known the issuance arrangements.

### *B. Regulations on F-Bond Issuance*

Issuers must apply for approval from PBC, reporting their issuing plans in detail. The Central Bank decides the scale of total F-bond issuance, and allocates a quota to each issuer according to the credit capital balance and demand for special loans. If provincial institutions plan to issue F-bonds, they must report to the Provincial Sub-Office of the Central Bank.

The overall issuance plan is determined by the Central Bank, based on credit programs and the amount of previous bond payment, so issuers cannot break the approved quota. Issuing banks are required to report their issue plans for each branch in detail and in good time.

After getting approval from the PBC, issuers advertise an issuing notice, laying out in detail the objective of the issue, issue volume, style, term, coupon rate, target, and place of sale. They then sign underwriting contracts with their branches or underwriters.

Within a fixed period, underwriters send raised capital to the issuers, who pay an underwriting fee to the underwriters' accounts. The raised

money must be used for repaying the bonds at maturity and making particular loans. The amount of particular loans must be within the limits of the approved quota.

There is clearly too much government regulation of issuance. The fact that F-bond issuance has to coordinate with state macroeconomic policy means issuers do not have much power to select date, interest rate, etc.

Issuing and trading is confined to the Central Bank, commercial banks, and other nonbank financial institutions. This is too narrow and insular, and has diminished interest among demanders and investors, making trading inactive.

In addition, the PRC has an exacting financial audit system. Any organization that issues or buys bonds without PBC approval will be fined or forced to stop business.

## *VI. Major Policy Issues and Recommendations*

The current most important impediment to the development of the bond market is the weakness of the fiscal system, exposed after the Asian crisis.

Weak government finance is a key problem, and fiscal risk makes it hard to increase bond issuance. This problem originates ultimately not in debt issue, but the government income system.

### *A. Recommendations*

Supervision of fiscal capital use should be improved to enhance the efficiency of debt-incurred capital. To control fiscal risk, T-bond issuance and repayment should be included in the annual government budget.

Enlarging F-bond issuance instead of T-bond issuance would also reduce the large fiscal risk concentrated on central Government, making it easier to gather capital from the banking system through policy banks. It will be an important means of supporting the demands of current positive fiscal policy, as well as preparing tools for future OMO, since F-bond issuance will increase the amount of bonds held by commercial banks and nonbank financial institutions, feasibility of future money creation will be enhanced.

OMO is urgently needed to fill the vacuum left by the nullification of the excessive reserve requirement in 1999. Only OMO can substitute this as a daily and seasonal economic tuning tool.

To liberalize interest rates, a benchmark must be built, potentially by increasing long-term bond issuance. The PRC does not have a fu-

tures bond market to form this pricing mechanism, and there is no hedging power to balance the yield which will be used as benchmark. Thus the futures bond market should be opened once again whenever possible.

The Government must impose cost-benefit constraints on each user of bond capital. The aggregate budget plan must be broken down into the specific users' revenue-cost audit. The NPC should have special power to supervise this process.

*Market Integration.* Currently, trading on the stock exchanges is withering. All government bonds are moving towards trading in the interbank bond market. E-bonds, however, have not been accepted by the interbank bond market.

CGSDTC should strengthen its functions for future unification of the government bond market. Some T-bonds and nearly all E-bonds are still not registered by it. This has resulted in regional E-bond separation. Moreover, CGSDTC currently does not have the power to supervise trading in the interbank bond market, resulting in a long reaction interval. A more rational arrangement is needed.

A unified bond market means a market open to all investors. However, current bond trading in the PRC has many qualification-based limitations. Many would-be investors cannot go into the bond market for capital management. The interbank market should be more open. If the country is aiming for a unified bond market, the current entities in the interbank bond market are too small, and the structure of investors too simple.

The number of bonds listed on stock exchanges, no matter whether T-bonds or F-bonds, should be decreased, with the eventual aim of abolishing exchange trading. The Government should focus instead on the development of the interbank bond market. Building too many markets will hamper the realization of a unified bond market and waste resources.

STAQ should be updated to adapt to the needs of the future unified bond market. Current regional fragmentation is a result of underdeveloped infrastructure, and STAQ and a system of settlement and clearing are only a start. To develop a modern bond market, there is a need for connected issuing, trading, settling, and clearing throughout the nation. Such infrastructure will help overcome regional segmentation and enhance efficient resource allocation.

### *B. T-Bond Market*

However, with rapid economic growth, there is potential for increasing the scale of government debt. Infrastructure limitations of the

government debt market and drawbacks in the macroeconomic control system will make it very difficult to realize this potential in the near future.

Illogical term structure and debt management makes government debt very expensive as a means of raising capital. Meanwhile, the debt service ratio is becoming higher and higher, leaving government debt issuance locked into a vicious cycle where a large portion of debt revenue is used to meet repayment for principal and interest. The relation between bond issuance and government revenue and expenditure shows very clear fiscal risks.

Fiscal risk exists mainly in central government finance, which undertakes all of the costs of T-bond issuance, including issuance fees and future repayment. Expensive issue costs force the central Government to issue more debt, otherwise repayment would use up more than half of the annual revenue. Annual expenditure is now less than debt issuing volume, which has created a dilemma for the central Government. Its policy performance is extremely dependent on debt issuance, but the expense of debt issue drives an increase in issuance, which aggravates this dependence still more.

The potential benefits of the bond market are not being fully realized. Most of what is issued is used for repayment, and without a liquid secondary market many functions, such as OMO, benchmark, and risk management cannot be fulfilled either. The current annual government budget does not include the budget for bond issuance and repayment, which leads the Government to issue debt without restraint, while the NPC controls the annual scale of issuance without controlling the annual balance scale. This makes the Government neglect the impact of balance, which is the main source of repayment and an important tool to promote bond augmentation.

The efficiency of capital arising from debt issuance is very low. NPC and MOF control the total amount of annual issuance, but they do not get involved in concrete procedures to supervise how it is used. Limited participation of wholesale and institutional purchasers of bonds leads to market distortion.

*Interest Rates.* Financial reform will allow a greater role for interest rates as a pricing mechanism and the transformation of banks into entities which lend on the basis of risk evaluation and credit worthiness of clients rather than credit plan and **guanxi** (relationship). State enterprises must also be reformed so that they face a real environment of risks and return.

If the Government intends to undertake monetary control through debt sales, it needs to be certain that the volume of debt sold will not

cause interest rates to rise to levels which might damage both the real economy and the developing debt market. This is increasingly important at present, with an escalating volume of Treasury debt outstanding. Debt issues must therefore better coordinate with monetary policy and spending requirements.

*Supervision of Debt Capital Use.* The NPC should step in to oversee how debt capital is used, as well as changing annual issuance scale control into balance scale control. The government budget should include revenue and repayment of government bonds. The practice of dividing debt capital issuance and use should be eliminated. It would be better to distribute a future repayments plan to local governments based on the amount of capital they use. Furthermore, calling for bid and price tendered should be introduced into the programs that use debt capital.

*Encourage Investors.* The Government should reduce the variety of issues and stabilize the issuing interval, and institutional investors should be encouraged. To maintain the enthusiasm of individuals, various bond funds should be built up as soon as possible.

The most important goal is not to augment T-bond issuance, but rather to enhance the efficiency of bond issuance and capital use. Many market-oriented issuance methods such as auction and a primary dealer system should be encouraged.

The range of maturity should be extended to satisfy a wider range of investors. Increasing the volume of short-term offerings would assist financial institutions with liquidity management, and encourage the development of OMO by the Central Bank. Meanwhile, longer maturity bonds would meet the growing need for financial infrastructure investment by central and local governments.

*Pricing.* Liberalizing the interest rate in areas such as short-term and money market rates would help to better define a short-term yield curve and thus help the pricing of new government debt issue.

The yield at issue should be related to current secondary market yields rather than deposit rates. To form a benchmark, a futures market is necessary for the price discovery mechanism of the bond market.

*Secondary Market.* Many of the problems in the secondary market stem from underlying primary market problems, but could be alleviated by spacing issues more evenly throughout the year on a preannounced schedule, and primarily targeting wholesale investors.

Other measures in the secondary market include improving the regulatory framework. The present jurisdictional overlap between PBC and CSRC must be addressed, and consolidated under a single authority. The underlying laws need to be clarified.

*Clearing and Settlement.* An efficient clearance, settlement, and deposit system should be established. The setting up of the Central Registration and Clearance Company has been an encouraging step.

*Central Bank Participation.* The Central Bank should be encouraged to act as a main participant of the bond market. MOF can commission the Central Bank to underwrite short-term bonds, which it could hold. The timing of sales to banks and nonbank financial institutions could be decided according to the needs of monetary policy, thus ensuring that the Central Bank has enough power to influence money supply and benchmark rates.

As PRC liberalizes and reforms its financial markets and monetary policy instruments, it should rely more on OMO. However, this requires the Central Bank to be able to buy and sell government bonds, so the Central Bank should be encouraged to act as a main bond market participant.

### *C. E-Bond Market*

In terms of developing the E-bond market, the Government should consider the following:

*Credit Rating.* The Government should cultivate independent credit rating institutions, with good reputations and prestige to cover most of the E-bond credit rating business, and the close relationship between SOEs and the Government should be broken down, making the enterprises more independent.

The Government can encourage enterprises with high ROA to issue E-bonds, providing a good example for future issues. Investors' interest in E-bonds would be revived because of the higher quality. Meanwhile, those enterprises with a high asset-liability ratio should be prevented from issuing E-bonds. The Government should not regard E-bond issuance as simply another means of supporting enterprises which lack current capital. E-bond issuance can overcome this scarcity in a short time, but it will hamper the bond's long-term development.

*Simplify Issuance.* Changing the current complicated censoring and approval procedures is very important. If conditions permit, this could be carried out by intermediate social institutions.

*Interest Rates.* The Government should get rid of the limitation which states that nominal interest rate of E-bonds may not be higher than that of deposits by more than 40 percent. Under current low interest rate conditions, E-bond issue will otherwise become uncompetitive. Higher premia are needed to hedge higher credit risk.

*Reduce Regional Segmentation.* The Government could soon allow E-bonds to be traded in the inter-bank bond market. The central trust depository and clearing system can be opened to E-bonds, helping to unify the currently-split regional market and enhancing the activity of the E-bond market.

#### *D. F-Bond Market*

Rebuilding the F-bond market is a means of connecting policy-oriented and market-oriented practices. The market must therefore be meticulously designed.

*Credit Rating.* The credit rating system of F-bonds must be improved. There is a very real difference in levels of risk among commercial banks and levels of efficiency of capital use in policy banks, but until recently, rating has only been applied to E-bonds. Without credit rating, all issuers are treated the same, creating confusion between the real and government risk. Without a pricing function in the F-bond market, the formation of a flourishing F-bond market will be hampered.

*Widen Investor Base.* A wider range of investors should be introduced to the primary market to invest in F-bonds. If investors are limited to the PBC and commercial banks, F-Bond issuance will be dependent upon the wishes of commercial banks and the capital source will remain narrow. Under current economic conditions, the primary F-bond market could be opened to individuals, allowing them to discount F-bonds in divisions of commercial banks. This would form a new and infinite capital source for the Government's positive fiscal policy.

*Increase issuance.* With current high fiscal risks, MOF should slow down T-bond issuance and instead increase the issuance of F-bonds, making policy banks the main issuers of government bonds. Positive fiscal policy would thus be more dependent on F-Bond issuance, transferring some of the fiscal risk to policy banks. Moreover, it would decrease issue costs through the simpler issue system between policy banks and commercial banks.

Currently, there is only one means of F-bond general trading, through repo. Although liquidity is not very important in the current environment of deflation, spot trading between commercial banks would enhance commercial banks' desire for F-bond subscription.

*Interest Rates.* The nominal interest rate of F-bonds should be decided not by the standard of deposit premium, but by the monthly weighted average interest rate in the interbank money market. The repo yield of F-bonds in the secondary market can be decided on the basis of real interest rates.

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