The social security system in the People’s Republic of China is experiencing dramatic changes. This paper examines the characteristics of the pre-reform social security system in the People’s Republic of China with respect to the old-age insurance, discusses and comments on the recent efforts towards old-age insurance reform, and proposes recommendations for the current reform, such as raising the official retirement ages, changing funding system, and investing pension funds to appreciate their values. (JEL J26, J14)

I. INTRODUCTION

On February 26, 1951, the People’s Republic of China (PRC) promulgated its first labor insurance regulations (Laodong Baoxian Tioli), which created a social security system for state-sector employees. Under these regulations, male workers retired at age 60 and female workers retired at age 55. Employees of state-owned enterprises were tied to their respective work units (danwei) and enjoyed cradle-to-grave benefits, including lifelong wages and housing. Work units administered all aspects of social security programs from determining eligibility to paying benefits. For the urban collective sector, benefits varied from trade to trade and from locality to locality, depending on financial resources. No social security programs existed for the then negligible private sector (Chen, 1990; World Bank, 1990; Niu, 1991; Lee, 1993).

This social security system has become obsolete and is even obstructing the ongoing economic reform and development in China. Within the old system, enterprises bore sole responsibility for providing retirees with pension benefits and other welfare services. There was much disparity in pension burdens borne by older and those borne by newer enterprises because older enterprises had relatively more retirees. Some old enterprises had more retirees than active workers and even those with good performance had difficulty allocating sufficient funds to pay for pension benefits. Consequently, enterprises with a large pension burden might not be able to pay their workers the going market wages and also might default on their future pension obligations. This seriously damaged workers’ morale.

The highly decentralized administration also lacked an established mechanism for portability of eligibility and benefits. This situation discouraged workers from moving across enterprises, industries, or sectors and thus indirectly hindered development of collective and private enterprises. Under the enterprise-tied social security system, a worker could not carry his old-age insurance with him when he changed his job. Thus, this conflicted with the labor contract system of the early 1980s, which aims to improve labor mobility and efficiency.

The large size and rapid growth of retiree population further challenge the old social security system. The number of retirees increased from 3.14 million in 1978 to 27.80...
million in 1993. As a result, the ratio of retired people to employed workers increased from 0.033 in 1978 to 0.185 in 1993 (State Statistical Bureau, 1994b, p. 664). This ratio is expected to increase faster due to longer life expectancy and the one-child policy. In China, life expectancy increased from 35 years in 1949 to 69 years in 1990. The one-child policy results in a one-two-four family structure: one child has two parents and four grandparents. The 710 Institute of the Ministry of Space and Aeronautics (1990) estimated that the retired/worker ratio will increase to 0.195 in 2000, to 0.439 in 2030, and to 0.559 in 2060.

Intense pressure on enterprises facing inordinately heavy financial burdens of pensions is a primary reason the Chinese government has focused on reforming its social security system. Reform of the old-age insurance system in China started in 1984, with experiments on pension pooling in some cities and counties. Since then, pooling has progressed rapidly. By 1991, 2,270 cities and counties established pension pools at city or county level for state-sector enterprises, covering more than 50 million permanent workers, 12 million contractual workers, and 10 million retirees. In addition, 1,076 cities and counties had pension pools for collective enterprises. Pools of some provinces, such as Jiangxi and Fujian Provinces, were at the provincial level, and broadening the risk-sharing base (Anyang Shehuibaoxian, 1991). By 1994, more than 80 million employed workers (about 53% of total workers) and 18.5 million retired people (about 60%) joined pension pooling programs (The State Statistical Bureau, March 1995). Progress on pension pooling continues, as required by the PRC Labor Law, effective on January 1, 1995 (Chapter 9, item 72).

A number of studies examine China’s social security and recent reform (World Bank, 1990; Ahmad and Hussain, 1991; Liu, 1991; Hussain, 1994; Li and Xu, 1996). World Bank (1990) provides a detailed report on pension pooling programs before 1990. It also recommends further reform of various programs in China’s social security system, including old-age insurance and unemployment insurance. This paper differs from previous studies in two main areas. First, it reports the most recent efforts toward pension reform programs. Second, it provides recommendations for the current reform of old-age insurance.

II. CHARACTERISTICS OF THE CHINESE PRE-REFORM OLD-AGE INSURANCE

The first labor insurance regulations specified retirement ages, eligibility, and benefits for employees working in state-owned enterprises and government institutions. China officially classifies work units into three categories: state-owned, collective, and private. Before the reform, social security covered all employees in the state-owned sector. Their continuing eligibility was contingent on their employment at work units, which was guaranteed regardless of performance as long as they adhered to the “correct” political orientation. For the collective sector, no standard provisions existed. Benefits varied from trade to trade and from locality to locality, depending on financial resources. These programs offered benefits lower than those provided by the state sector. They also were less stable financially. Employees in the private sector had no old-age insurance. China’s social security system worked, in essence, through an employment security system (Liu, 1991).

According to the first labor insurance regulations, a male worker retired at 60 after working 25 years, 10 of which were at his current work unit; a female worker retired at 55 after working 20 years, 10 at her current work unit. Benefits depended on the total working years, ranging from 35% to 60% of the standard wage, which is the sum of base wage, position allowance, and working-year allowance. Individual enterprises financed and administered pensions. Employees did not contribute. For the state-owned sector, individual enterprises submitted to the People’s Bank (the central bank) an amount equal to 3% of total wages as the labor insurance fund. Enterprises kept 70% of contributions for benefit payments and submitted surpluses to municipal, provincial, or ministerial administration, depending on enterprise affiliation. The central government subsidized shortfalls. Prior to February 1969, the difference between government and enterprise financing was purely nominal, as the budgets of enterprises were not separated from the government budget. Therefore, the state budget guaranteed benefit payments for all employees in state-owned enterprises.

The labor insurance regulations were amended in 1953, 1958, and 1978. Table 1 shows the changes. Generally, retirement became easier and benefits improved. Specific-
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TABLE 1
Retirement Ages, Eligibility, and Benefits: A Comparison

<table>
<thead>
<tr>
<th>Retirement age(^a)</th>
<th>1951</th>
<th>1953</th>
<th>1958</th>
<th>1978</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male workers</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Female workers</td>
<td>55</td>
<td>55</td>
<td>55</td>
<td>55</td>
</tr>
<tr>
<td>Total working years required</td>
<td>25</td>
<td>25</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Male workers</td>
<td>20</td>
<td>20</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Female workers</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>—</td>
</tr>
<tr>
<td>Years required at current work units</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>—</td>
</tr>
<tr>
<td>Benefits (Pension as percentage of the standard wages)</td>
<td>35–60</td>
<td>50–70(^b)</td>
<td>50–70(^b)</td>
<td>60–90(^c)</td>
</tr>
</tbody>
</table>

\(^a\)The retirement ages are 5 years younger for those working in the mining industry, high above the ground, below 32°F, above 100°F, or in the chemical industry.
\(^b\)50% for those who had worked in the current unit for 5–10 years, 60% for 10–15 years, and 70% for more than 15 years.
\(^c\)90% for those who started to work during the Anti-Japanese War (1937–1945) and 80% for those who started to work during the Liberation War (1946–1949); for those who started to work after the new China (1949), 75% if they had worked more than 20 years, 70% if they had worked between 15 to 20 years, and 60% if they had worked less than 15 years.

ally, the 1953 amendments lowered the number of working years at current work units to five while raising the benefit to 50%–70% of the standard wages. The 1958 amendments lowered total working years required for retirement to 20 for males and 15 for females. The most dramatic changes occurred with the 1978 amendments, which lowered total working years to 10 for both males and females and did not require workers to work at least five years at their current units before retiring. Benefits increased to 60%–90% of standard wages. In addition, the 1978 amendments allowed retirement 10 years sooner if poor health was a factor, promised to hire retired workers’ unemployed offspring, and offered middle- and upper-ranking party and technical cadres a special preferred pension benefit (lixiujin)—the full rate of pre-retirement pay plus all perquisites associated with their positions. The 1978 amendments provided generous incentives for early retirement. These amendments accounted for the sharp jump in the number of retirees in the late 1970s. Table 2 shows that the number increased 90% between 1978 and 1979, from 3.14 million in 1978 to 5.96 million in 1979.

The consequences of these policy changes include a dramatic increase in the number of retirees and skyrocketing pension costs. Table 2 shows an 8.85-fold increase from 1978 to 1993 in the total number of retirees, from 3.14 million to 27.80 million. It also shows that from 1978 to 1993, pension expenses increased 52.82 times (20.72 times in constant prices), from 1.73 billion yuan to 91.37 billion yuan. The dependency ratio in table 2 clearly shows that the burden of old-age insurance has become heavier and heavier.

Reforming this system became necessary for at least the following two reasons: (i) Highly decentralized administration of pension programs and financing entirely by employer contributions fostered workers’ dependence on enterprises and on the state without demanding responsibility. The system lacked benefit portability and eligibility, thus discouraging worker mobility across enterprises, industries, and sectors. Lack of a market mechanism and the special privilege of benefits to state-sector employees was a disincentive for workers to seek employment outside the state sector, hindering the development of collective and private sectors.

(ii) Enterprises bore sole responsibility for providing pension benefits and other welfare services for retirees. Government and enterprise financing was purely nominal, since their budgets were not separate. Now they are, and the industrial reform since the early 1980s makes enterprises accountable for their own profits and losses.
TABLE 2
Number of Retirees, Expenses, and Dependency Ratio

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Retirees (millions)</th>
<th>Expensesa (billion yuan)</th>
<th>Dependency Ratiod (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1978</td>
<td>3.14</td>
<td>1.73</td>
<td>3.30</td>
</tr>
<tr>
<td>1979</td>
<td>5.96</td>
<td>3.25</td>
<td>5.99</td>
</tr>
<tr>
<td>1980</td>
<td>8.16</td>
<td>5.04</td>
<td>7.81</td>
</tr>
<tr>
<td>1983</td>
<td>12.92</td>
<td>8.73</td>
<td>11.24</td>
</tr>
<tr>
<td>1984</td>
<td>14.78</td>
<td>10.61</td>
<td>12.50</td>
</tr>
<tr>
<td>1985</td>
<td>16.37</td>
<td>14.98</td>
<td>13.33</td>
</tr>
<tr>
<td>1986</td>
<td>18.05</td>
<td>19.47</td>
<td>14.08</td>
</tr>
<tr>
<td>1987</td>
<td>19.68</td>
<td>23.84</td>
<td>14.93</td>
</tr>
<tr>
<td>1988</td>
<td>21.20</td>
<td>32.06</td>
<td>15.63</td>
</tr>
<tr>
<td>1989</td>
<td>22.01</td>
<td>38.26</td>
<td>16.13</td>
</tr>
<tr>
<td>1990</td>
<td>23.01</td>
<td>47.24</td>
<td>16.39</td>
</tr>
<tr>
<td>1991</td>
<td>24.33</td>
<td>55.44</td>
<td>16.67</td>
</tr>
<tr>
<td>1992</td>
<td>25.98</td>
<td>69.52</td>
<td>17.54</td>
</tr>
<tr>
<td>1993</td>
<td>27.80</td>
<td>91.37</td>
<td>18.52</td>
</tr>
</tbody>
</table>

\(a\)The overall price index in 1993 was 254.9 with an index of 100 for 1978.

\(b\)The numbers are the ratios of total retirees to total employed workers.


III. CURRENT REFORM OF OLD-AGE INSURANCE

China’s reform of the old-age insurance system started in 1984, with pension pooling experiments in some cities and counties. Enterprises participating in pooling programs put a portion of their total wages into a pension fund managed by a local old-age insurance bureau. Individual workers can voluntarily use their savings to supplement the pension fund. In the reform’s early stage, city and county governments set uniform contribution rates and benefits within their respective jurisdictions. Hence, risk sharing of pension funds was limited to individual cities and counties. As the reform progresses, the pooling base has broadened, with some at the provincial level.

The current reform establishes a so called three-tiered old-age insurance system. The first tier provides a basic pension to all workers in urban sectors. The second tier consists of enterprises’ additional contributions to the basic pension and depends on availability of enterprise bonus and welfare funds. The third tier is mandatory individual pension accounts layered on top of the first two tiers.

Once the three-tiered system is established, the state, enterprises, and individual workers share pension financing.

A key objective of this reform is to relieve individual enterprises of full direct responsibility for their workers’ retirement pensions by establishing funds that pool resources and share risks among enterprises. By doing so, old-age insurance reform would complement and support other economic reforms. Pension pooling would reduce the financial burdens of old enterprises and better protect retirees. Pension pooling that maintains workers’ coverage from job to job would also facilitate labor mobility and be consistent with the labor contract system created in the early 1980s.

To promote the old-age insurance reform, the central government has issued a series of documents and laws. The 1995 Labor Law passed by the Chinese Congress on July 5, 1994 and effective on January 1, 1995, requires enterprises and individual workers to join social security programs. The State Council (1991) established the following major guidelines to the old-age insurance reform: (i) Old-age insurance should have three components: basic insurance, enterprise supplementary insurance, and individual pension savings. The state, enterprise, and individuals should share pension costs. (ii) Contributions to pension pools are primarily on a pay-as-you-go basis, with a small surplus. Each province or autonomous region sets its own contribution rate and reports it to the State Council. To administer pension funds, each local government establishes an old-age insurance committee.
whose members are from departments of labor, finance, planning, auditing, banking, and worker union. (iii) Workers contribute 3% of their standard wages to individual supplementary pension funds. Contributions are deducted from payrolls and deposited into bank accounts called "old-age insurance special accounts," which neither enterprises nor individuals are allowed to use. These special savings accounts earn the same interest rates as do general accounts with the same terms. (iv) Basic retirement payment is adjusted according to the overall price index of urban resident consumption and the growth rate of active workers' wages.

In practice, methods of pension pooling vary from place to place, as permitted by the central government. For example, starting in July 1992, enterprises in Jiangxi Province began contributing 23% of the sum of permanent employee wages and retiree pensions, pre-tax, to a local social security bureau. The local bureau sets deadlines for contributions and charges a daily delay fee equal to 0.5% of the late contributions. Starting in September 1992, permanent employees pay 3% of their standard wages, deducted from their payrolls (Jiangxi Provincial Government, 1992). In Zhuzhou City, Hunan Province, the total contribution rate is 21%—18% from enterprises and 3% from individual workers (Social Security Bureau, 1991). In Guizhou Province, state-sector employees have contributed 3% of their wages to pension funds since April 1, 1992. These wages are deducted from their payrolls and recorded in their old-age insurance handbooks (Department of Labor, 1992). In Bingzhou Prefecture, Shandong Province, the contribution from individual workers depends on their standard wages: 1.5 yuans per month if the monthly standard wage is lower than or equal to 100 yuans, 2.0 yuans per month if the monthly standard wage is between 101 and 150 yuans, and 2.5 yuans per month if the monthly standard wage is more than 150 yuans. Contributions are deducted from payrolls and deposited into special old-age insurance accounts. Workers can transfer their contributions when they change jobs (Hang and Gao, 1992).

Pension pooling has led to significant developments. By 1991, 2,270 cities and counties had established pension pools at city or county levels for state-sector enterprises, covering more than 50 million permanent workers, 12 million contractual workers, and 10 million retirees. In addition, 1,076 cities and counties had pension pools for collective enterprises. Some provinces, such as Jiangxi and Fujian Provinces, had pension pools at the provincial level and thus increased risk-sharing base (Anyang Shehuibaoxian, September 1991). By 1994, more than 80 million employed workers (about 53% of the total workers) and 18.5 million retired peoples (about 60%) joined pension pooling programs (State Statistical Bureau, March 1995). All these developments follow a general trend of spreading risk among enterprises and shifting administration from individual enterprises to local governments and then to provincial governments. A new-old-age insurance system is forming.

IV. RECOMMENDATIONS

The current reform of Chinese old-age insurance nevertheless needs improvement. Three recommendations to further reform the old-age insurance are (i) changing the official retirement ages, (ii) changing the funding system, and (iii) investing pension funds to ensure and appreciate their real values.

A. Change the Retirement Ages

Retirement ages in China should be increased to 65 for men and 60 for women. The current official retirement ages, men at 60 and women at 55, were formulated in 1951 when national life expectancy was about 40. Since then, the national life expectancy has increased steadily. It exceeded 70 in urban areas in 1990. Men at 60 and women at 55 are still mentally and physically active. They can continue their work for a few more years without problems. Raising retirement ages not only employs healthy and productive workers in their fifties and sixties but also will hold down future pension growth.

Of course, engaging older workers for a longer time may reduce work opportunities for younger people. However, several factors occurring in China could mitigate this job reducing effect. First, various reports show that in China, many newly retired people have returned to work. Du (1992) shows that 3.6 million newly retired people were reemployed in 1990. In Shanghai, 47.8% of new retirees returned to work and significant proportions re-
turned to work in other places—41.2% in Zhejiang Province, 39.6% in Tianjing, 31.9% in Anhui Province, 25.1% in Beijing, 22.7% in Hubei Province, and 22.1% in Jiangsu Province. A survey of 38 enterprises in Chongqing City of Szechaun Province reveals that 20% of their retired workers have been reemployed in various trades (Huang and Yang, 1987). Wang (1991) shows that among 2,000 newly retired people surveyed in Gaotang County of Shangdong Province, 46.5% were reemployed. These facts suggest that people at retirement ages are both willing and able to continue to work and that reemployment of retired people has provided some relief to the shortage of skilled workers in some industries.

Second, the change of working hours lately from 48 hours (six eight-hour days) to 40 hours (five eight-hour days) would mean a 16.7% increase in number of workers necessary to do the same amount of work, ceteris paribus. The timing for raising retirement ages would be just right in the near future.

Third, the service sector in China is developing rapidly in recent years. It creates many job opportunities and absorbs many workers. A recent report shows that more than 50.59 million new jobs were added to the service sector (42% increase) in the period of 1990–1995 (People’s Daily, 1996). The big floating population of peasants in Chinese cities not only indicates a big labor surplus in rural areas but also suggests a strong demand for labor in urban areas.

Comparing the retirement ages among countries that have similar life expectancies reveals that retirement comes relatively earlier in China than in many other countries. For example, retirement ages are 65 for men in the Philippines, 65 for men and 63 for women in Australia, 65 for men and 62 for women in Japan. No official retirement ages exist in the United States although 65 is norm.

Raising retirement ages seems unavoidable. In China, the population is aging rapidly. The proportion of men at age 60 or over and women at age 55 or over to the national total population has increased steadily over the last few decades. The proportion grew from 7.8% in 1964 (second census) to 9.3% in 1982 (third census) to 10.3% in 1990 (fourth census). Longer life expectancy and the one-child policy accounts for the continued increase. Raising retirement ages could slow down future pension growth.

What is the best strategy for raising retirement ages? One strategy is to raise retirement ages by three months every year so that by 2015 they will reach 65 for men and 60 for women (World Bank, 1990). The advantage of raising the retirement age slowly over a number of years is that transition is relatively smooth. The disadvantage is that it is administratively tedious to various organizations involved and may confuse workers. An alternative is a one-time adjustment. It has the disadvantage of being abrupt. However, the advantage is that for several years pension expenses would slow down significantly, and the savings could be invested to generate more income for future use.

A better strategy involves combining the two alternatives. For example, retirement ages could be raised one year for every three or five years. Or retirement ages could be raised in two steps: two years in the first step (by 2005) and three years in the second step (by 2010). Implementing such a strategy would not make the transition too abrupt; neither would it lead to tedious administration. Starting in 2000, the retirement ages for men and women could reach 65 and 60, respectively, by 2015 or 2010, depending on which strategy is adopted.

B. Change Funding System

Currently, pension programs in China follow the pay-as-you-go (PAYG) approach. Under this system, pension financing is determined by the following formula:

\[ t = \frac{B}{W} \times \frac{N_b}{N_w} = r \times d \]

where \( t \) is the contribution rate; \( B \) is the average social security benefits; \( W \) is the average taxable wages; \( N_b \) is the number of beneficiaries; and \( N_w \) is the number of active workers. The ratio \( r = \frac{B}{W} \) is the aggregate replacement rate; the ratio \( d = \frac{N_b}{N_w} \) is the dependency ratio. Contribution inflows and benefits outflows are projected into the future by making some economic and demographic assumptions. When a nation faces an aging population (i.e., \( d \) increases), the above formula shows that, given the fixed replacement rate
the contribution rate \((t)\) must rise accordingly.

Although the PAYG system makes adjusting the contribution rate relatively easy, an aging population worsens the burden on younger cohorts and thus threatens the future popularity of the system. The U.S. social security system, a defined-benefit PAYG program, illustrates the potential problem. The U.S. Social Security Trustees forecast that contributions will fall below benefits in 2012 and the system’s trust fund will be exhausted in 2030 (Gramlich, 1996).

Without changing the PAYG system, the problem of pension financing in China would be even worse than that in the United States. China is a populous nation, and its population is aging rapidly. In 1990, China had a national population of 1,130.51 million; 10.3% of the total population were over the official retirement ages (State Statistical Bureau, 1994b, p. 61). Table 2 shows that the number of retirees increased from 3.14 million in 1978 to 27.80 million in 1993. As a result, the dependency ratio increased from 0.033 in 1978 to 0.185 in 1993 (State Statistical Bureau, 1994b, p. 664). This ratio likely will increase faster due to longer life expectancy which increased from 35 years in 1949 to 69 in 1990, and to the one-child policy. Estimates are that the dependency ratio will increase to 0.19 in 2000, to 0.44 in 2030; and to a peak of 0.56 in 2060 (710 Institute of the Ministry of Space and Aeronautics, 1990). The aggregate replacement rate would increase to 0.16 in 2000, to 0.35 in 2030, and to a peak of 0.45 in 2060. This ratio is far above the tolerable limit of 20%-25% accepted by most industrialized countries.

How should the Chinese old-age insurance be reformed? One direction is to privatize and create a fully-funded social security system, as Kotlikoff (1996) and Mitchell and Zeldes (1996) propose for the U.S. Under this system, workers have their personal social security accounts (PSSA). Social security bureaus or private investment companies hold these PSSAs, but individuals have choices over how they are invested and used in retirement. PSSAs can be annuitized or be drawn in lump sum payments.

Critics cite two main concerns about such a fully-funded system. One is that the two important functions of social security—risk sharing and fund pooling—are absent. The merit of such a system depends only on the assumption of myopia or moral hazard. Several studies point out its problems (Eckstein et al., 1985; Abel, 1986; Diamond, 1993). The other concern relates to transition. Switching over to a fully funded system would expose either the United States or China to a serious transition problem. The current generation of workers is paying for its parents’ retirement. Under a fully funded system its children will be paying for their own retirement. Who will pay for the current generation’s retirement?

Another alternative involves establishing a partially-funded system requiring a higher contribution rate in early years so that a surplus accrues relative to the PAYG scheme. As a result, contribution inflows would be larger than benefit outflows in early years. Since part of contributions can be saved and invested for future benefit payments, this system can prevent the contribution rate from going too high in the future, thus smoothing the burden among generations. Another approach for a partially-funded system involves mandatory PSSAs layered on top of the PAYG scheme. With this approach, workers and employers contribute on a PAYG basis, but in addition, individual workers must have PSSAs. These accounts might be held by social security agencies, though individuals are free to choose how their own funds are invested. Upon retirement, accumulations would be annuitized and added to an individual’s regular social security benefit. The mandatory PSSAs require smaller future contribution inflows, thus reducing pension burden on future generations.

Establishing a partially-funded social security system in China is feasible. In fact, several pooling programs have required individual workers to contribute to pension funds after the State Council issued “Decisions on Old-Age Insurance Reform” on June 26, 1991. For example, individual workers in Guizhou and Jiangxi Provinces have contributed 3% of their standard wages since April 1992 and September 1992, respectively (Jiangxi Provincial Government, 1992; Department of Labor, 1992). Individual contributions to pension funds continue to increase with growth in workers’ wages. Although increasing in PSSAs would reduce personal disposal incomes in the short run, it would smooth consumption over
the long run and improve life-cycle welfare among generations.

C. Invest Pension Funds

Currently, social security bureaus at various government levels administrate funds contributed by enterprises and workers and record the contributions in individual pension handbooks. These funds are deposited into special pension accounts in banks and receive interest rates prevailing for other savings accounts (State Council, 1991). However, this practice cannot even maintain the real value of pension funds because inflation rates in China in recent years were higher than interest rates for most saving accounts. Table 3 shows interest rates of major saving deposits in 1993. Given the overall retail price index of 16.1% in urban areas (State Statistical Bureau, 1994b, p. 231), all interest rates were lower than the inflation rate except the fixed deposit of eight years and over. The inflation rate was 25.0% for urban residents in 1994 (State Statistical Bureau, 1994, which was also higher than interest rates for savings accounts. Hence, pension funds were devalued in the past few years.

To keep and appreciate the real value of pension funds, China should explore various channels for investing the funds. Possible venues include (i) purchasing government bonds that have relatively higher returns than most savings accounts in banks, (ii) investing in stocks, an investment that is becoming more and more popular in China, and (iii) investing directly in projects, such as real estate, energy, transportation, communication, and large scale construction projects. Investing pension funds in international financial markets deserves special consideration. Such investment might have a higher risk, but the risk could be reduced through diversification. In this regard, China probably needs to develop its strength in financial/portfolio management.

V. CONCLUSIONS

This paper has examined the characteristics of the pre-reform Chinese old-age insurance system in light of the overall industrial reform in the early 1980s that compelled social security reform. Starting in 1984, the old-age insurance reform in China established a pool system for retirement pensions. By 1994, more than 50% of the total of employed workers and retired people had taken part in pension pooling programs. A new old-age insurance system is emerging.

The current reform of Chinese old-age insurance needs improvement, however. This paper recommends (i) gradually raising the official retirement ages in China to 65 for men and 60 for women, (ii) changing the funding system from a PAYG system to a partially-funded system, and (iii) investing pension funds to appreciate their real values. Possible venues for investment include purchasing government bonds, investing in stocks in both domestic and international markets, and investing in projects such as real estate and communication projects. China needs to develop its strength in financial/portfolio management in order to meet the retirement needs of a large and aging population.
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