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The Challenge of Social Security Reform in Transition Economies:

The Case of China

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Abstract

China is a transition economy country trying to introduce market mechanisms while at the same time having to deal with a variety of other problems such as social security reform, a rapidly ageing population, high unemployment and the ever-present prospect of industrial based social unrest. Social security reform has been viewed as central to the reform effort since the existing, but largely insolvent, enterprise based pension system frustrates the country's efforts to rationalize its state owned enterprises. While China has adopted the World Bank's "three pillar model" of social pool, individual accounts, and supplementary pensions, the challenge for China is to implement this system by recentralizing control over social security policy by implementing a national scheme to replace the existing decentralized enterprise system. To do this, China needs to develop a professional capability able to assess alternatives and design a sustainable pension system. This paper reviews China's current pension scheme, its efforts to implement the three pillar model, and assesses the challenges China will face going forward.

The Challenge of Social Security Reform in Transition Economies: The Case of China

I. Introduction

Since Deng Xiaoping announced his open door policy in 1978, China's economic progress has been nothing less than spectacular. In constant 1995 U.S. dollars, real per capita income in China increased from \$168 in 1980 to \$727 in 2000 (OECD 2001). "In 1978 it was estimated that nearly 60% of the population was living on less than US\$1 a day while in 1995 this had been reduced to just 22% of the population (Armstrong 1999). Thus, government policy over this period lifted several hundred million Chinese out of poverty.

While we recognize the successes, there is the need to be balanced when appraising China's economic progress. First, while the averages suggest impressive growth, there have been real regional inequalities in growth rates in China and many regions remain woefully poor. Second, urban-rural income differences are very high and 70% of China's working population is still employed in agriculture. Oxford Analytica reports that China's gini coefficient increased from .33 in 1980 to .45 in 2001 and that the bottom sixty percent of the population has a smaller share of total income in 2001 than they did twenty years ago while the top quintile increased its share of total income by 15% since 1980 (*Asia Pacific Daily Brief*, June 25, 2002). Third, China retains many vestiges of its centrally planned pre-reform economy. One remnant is the inefficient and bloated state owned enterprises (SOEs), which while declining, still account for 28% of output, 44% of urban employment, and 70% of government revenue (*The Economist*, September 28, 2000).

Fourth, China is rapidly ageing and unlike the developed countries, it is ageing while still relatively poor. It is estimated that there will be a sixty percent increase in those over the age of 60 in the next twenty years (Ding 2002), that by 2030 sixteen percent of China's then 1.5 billion population will be over 65 (McKinsey 2002) and "by 2050, the ratio of workers to

pensioners will decline to about 3 to 1 from 10 to 1 in 1995”

(www.worldbank.org/html/extdr/extme/ampr_007.htm). It is not only the absolute number of elderly but the pace of population change which is important. The proportion of people in China over the age of 60 doubled from 10% to 20% in just 27 years (Clark 2002). While not the fastest country in the region to double, among the fast ageing countries, it is the poorest. Finally, because of rapid development, the elderly cohort is likely to have a higher percentage of poor than other cohorts. China will also experience individual ageing as reflected in higher life expectancies. This along with a shift from communicable to non-communicable conditions (such as heart attacks, depression, strokes, and cancer) and the rapid introduction of more expensive medical technology is also likely to significantly increase China’s national health care expenditures.

Against this backdrop of economic change, China is in the midst of an effort to reform its social security system and its social safety net.¹ China has embarked on a unique transition attempting to recentralize control over the social security system; China previously centralized the social welfare system after the Communist revolution in the late 1940s and adopted a decentralized enterprise system during the Cultural Revolution in the 1960s. The current reform efforts are viewed as critical since the national pension fund deficit doubled between 1999 and 2000 and now totals more than 30 billion yuan,² and provincial and city schemes are facing insolvency.³ While one may take some solace in the fact that the rulers in Beijing appear to understand the links between the social security system and enterprise reform, corruption, unemployment and civil unrest, it is these linkages which make reform so difficult to address. After briefly discussing social security reform generally and then reviewing the Chinese social security system, this paper will examine the difficulties China faces in structuring its reform efforts.

II. An Agenda for Reform

There are five core functions which any social security organization must perform (Ross 2000). These are: reliable collection of contributions, taxes and other receipts, including any loan payments; payment of benefits for each of the schemes in a timely and correct way; securing financial management and productive investment of provident and pension fund assets; maintaining an effective communication network, including development of accurate data and record keeping mechanisms to support collection, payment and financial activities; and production of financial statements and reports that are tied to providing effective and reliable governance, fiduciary responsibility, transparency, and accountability.

At the macro systemic level, a well designed social security system should be broad based, actuarially sound and sustainable, provide reasonable levels of post-retirement income (as determined by a considered evaluation of alternative and trade-offs within the society) coupled with a *safety-net* for the elderly poor. Clearly, all of this has to be done within the context of macroeconomic requirements and constraints including economic efficiency, incentives to work and to save, fiscal flexibility and international competitiveness. Effective reform needs to be directed toward better organizational efforts and the broader system design issues.

III. The Chinese Social Security System

China's pension *system* consists of at least three distinct arrangements. Each arrangement is in a degree of flux, with regional and local variations, as the central government tries to unify the system taking into account regional differences. It is estimated that about 200 million workers out of a total of 700 million workers in 1998 were nominally covered by a pension (Wu, et al. 2000), covering 28.6% of workers.

Like many developing or traditional societies, China relies on the family to provide old age support for the vast majority of its population. This segment of the population, generally employed either in agricultural production or the informal sector, is outside of any formal system. With longer life expectancies, lower birth rates and urbanization, the burden on children is increasing and raises concerns about the adequacy of traditional care. In China, the adoption of the one child policy, at the limit, suggests a high dependency ratio for traditional care of two married working children taking care of four retired parents – a very heavy burden.

Pensions for rural farmers were introduced in China only in 1991.⁴ This scheme is financed by voluntary personal contributions supplemented by a collective subsidy and individuals must contribute for ten years to be eligible. Of the five hundred million rural workers, only 61 million were covered under the rural pension scheme with each having an average balance of US\$311. In China, many of the rural poor are too poor to be expected to contribute to their retirement savings. Moreover, any accumulated balances are likely to be used to offset personal and natural calamities over life, rather than being particularly earmarked for old age.

The second arrangement is the pension and social security system that emerged from the turmoil of the Cultural Revolution to address the needs of workers in state-owned enterprises and urban workers.⁵ Prior to the Cultural Revolution, workers were covered under the Labour Insurance Fund (Zhu 2002). Under the enterprise based social security system a worker was provided with lifetime protection covering income, housing, health insurance, pensions. The retirement age was 60 for men and 55 for women with exceptions for women engaged in physical labor (age 50 after 15 years of service) and 60 for women engaged in agriculture (Ding 2002). These distinctions were carried over to the design of pension schemes with further differences based on the nature of firm ownership resulting in a very

complicated system. There are additional differences depending on whether the pensioner retired before the recent reforms or worked following the reforms.

In recent years many listed state-owned companies, encouraged by their Ministries at the time of listing, divided themselves into two entities at the time of the listing. One entity, essentially a shell, generally retained the marginal assets and the pension obligation to retirees. The valuable assets were transferred to a new entity. The shell company in turn received shares in the new and more valuable entity but often these were not liquid. Receipt of these pensions is dependent on the future viability of the listed entities. The design of the scheme recognized that pensions were not portable and benefits were tied to the employer. Moreover, the scheme made it difficult to restructure SOEs because unnecessary workers were retained since the social safety net was tied to employment. Most state owned businesses have not listed and retain the obligation to pay current and future pensions. Some companies have as many retirees as workers and such high dependency ratios in turn raise the issue of financial sustainability.

In 1997, the government embraced the “three-pillar” World Bank model involving a social pool, individual accounts, and supplementary pensions (Wu, et al. 2000).⁶ The three pillar model seeks to unify the state enterprise and private sectors. This system is designed to try to solve several problems including: portability and a high dependency ratio within the government system (Zhao and Xu 2002). Individuals participate in a national pension scheme involving employer and employee contributions. Most of the money paid into the individual pension accounts does not go into independently managed investment funds, but is used to meet existing commitments. While these are referred to as “individual accounts”, this term refers more to portability rather than balances – it is purely notional with administered rates of return. The government set rate of return is lower than that offered on government bonds (*The Economist*, June 13, 2002).⁷ Zhao and Xu (2002, 400) highlight that these efforts to

develop a unified system addressed the high dependency ratios found in the state owned enterprises by incorporating young private sector new hires into the scheme.

With some regional variation, contributions under the first pillar, into the social pool, are supposed to be funded by a 20% of payroll payment by the employer. Employees are supposed to contribute 8% of salary to their individual account. Collectively, these two pillars with a contribution rate of 28% of payroll are supposed to give a wage replacement rate of 56% (www.britishembassy.org.cn/english/about_china/business/sr_pen.shtml). Although this new system is technically in place, in practice the system does not exist. Loss making and technically bankrupt SOEs are unable to contribute to the Pillar 1 pool informing authorities that they did not have the funds to make contributions. The authorities have raided the individual pillar 2 accounts to top-up the pillar 1 social pool. In addition, the central authorities have had to make on and off-budget supplementary top-ups. The shortfall, US\$4.3 billion in 2000 (*South China Morning Post* June 25, 2001) and estimated to be cumulatively as large as US\$231 billion over the next 25 years, is being made up by the Ministry of Finance and is viewed by them as manageable.⁸

Benefits to retirees with fifteen years of service consist of two parts. The first part is 20 percent of the average regional wage paid in the preceding year. The second part is an amount equal to 1/120th of the individuals' notional account balance. Since part of the benefit was tied to current lagged wages, there is some protection against inflation. However, from an actuarial perspective, the scheme initially does not appear to be sustainable since the obligation to pay is for life while the individual's contributions self-extinguish in ten years leaving an unfunded liability.⁹ Part of the shortfall is made up from a pool consisting of employer contributions to workers who died prior to collecting ten years of benefits. Employee contributions are inheritable if the retiree dies before collecting ten years of benefits.

To fund the government's obligations under the social pool, the plan, until very recently, was to accelerate the *privatization* and listing of state-owned enterprises and earmark 10% of the proceeds from these initial public offerings to fund national pension obligations.¹⁰ In addition, Beijing planned to sell off the shares it owned in companies that have already listed (*Asian Wall Street Journal*, January 30, 2001). This scheme, it was estimated, could provide between US\$40 and US\$100 billion. The share sale was envisioned to free SOEs from pension obligations, introduce the discipline of the market to state-owned enterprises by weaning them from state bank loans,¹¹ and aid in the reform of the financial sector by expanding investment options.

On June 24, 2002, the government announced that it was backing away from the share sale scheme as the proposal and the threat of a large increase in the number of shares available, had depressed local share prices by 30 percent. The backtracking on this reform effort highlights China's difficulties. Stock markets are still relatively new and the government still views one of its roles as buttressing share prices. The authorities also are fearful of alienating middle class investors who must be courted, both politically and economically, over the long run to purchase future share offerings in state owned enterprises.¹² The uncertainty of government policy spooked investors who had come to expect that one only made money in the stock market. When the government announced the change in policy, both the Shanghai and Shenzhen stock exchange indices jumped more than 9% in one day.

Press reports the following day read: "Economists [had] regarded the construction of a social welfare network, led by the creation of a funded pensions system, as perhaps the most crucial of China's reform tasks" and "Without it, state companies are restrained by fears of social instability from making the mass redundancies they need to" (*The Financial Times*,

June 25, 2002, p17). The belief was that the need for political stability surrounding a leadership change later in the year required a change in policy.

Under the third pillar, China recognizes the need to introduce what are called in China, *supplementary pensions*, involving voluntary tax-advantaged retirement savings accounts. There has been some work undertaken on the legal and regulatory structures, which would be appropriate for supplementary pensions, but as of early 2002 the authorities have taken no firm decisions.¹³ As part of the effort to respond to regional variations and to respond to the need to experiment at the regional level, the Asian Development Bank in 2002 awarded two technical assistance contracts to international consultants to assist Liaoning Province develop an information system to administer individual accounts, collect contributions and manage payments.

The state enterprise pension system covered about 18 percent of the labor force in 1999 (see Table 1) and about 41.3 percent of the urban labor force (Zhao and Xu 2002). While close to one third of the 113 million people working in state enterprises at the peak of employment in 1995 have been retrenched (*The Economist*, June 13, 2002), estimates are that a further 40 million state enterprise employees may lose their jobs in the next several years following China's accession to the World Trade Organization. In addition, the government has embarked on an effort to reform the civil service and has announced plans to cut the public sector by 50 percent although the extent of real cuts is uncertain. We might view these coverage rates as potentially a high-water mark for years to come since the public enterprise and civil service sectors (with high rates of coverage) are likely to shrink over the next several years (with more cuts likely from public enterprises than the civil service) and these very same *covered employees*, if they are fortunate to find employment are likely to find employment in non-covered sectors of the economy. Table 1 also suggests that the system is not sustainable as there are very high replacement rates relative to contributions. Current

retirees may face a reduction in current benefits and future retirees will likely have to contribute more and receive less.

Thus, China's social security reform, which is still underway and uncertain, is designed in part to relieve state enterprises from pension responsibility as commercial considerations predominate. This objective however is being balanced against the concerns of the policymakers regarding social unrest.

IV. Assessment

Section 2 of this paper outlined a reform agenda using Ross's (2000) five core functions that a social security organization must perform and adding three systemic level functions linking a social security system to the broader political economy of a country. We begin with the macro-functions first.

Regardless of whether one is addressing pension and social security issues narrowly or considering the broad society as a whole, effective governance in China is a challenge and as such we have purposely limited our discussion to two salient points. First, China must firmly establish the rule of law with respect to the sanctity of savings such that individuals believe that setting aside funds for old age is a rational act. Imbedded in this is a need to develop good regulations including a fiduciary duty for trustees, investment managers, employers in which they are held to a high standard of responsibility for the funds placed in their care, and a system of enforceable rights. Second, policymakers need to understand and appreciate that in order to prod individuals into saving for the long-term individuals need to have some minimum degree of certainty regarding future policy. China has repeatedly announced a policy only to backtrack at a later date. For example, as noted above, China's decision to backtrack on listing state owned enterprises earlier this year. Basically, long term

savers require a minimum degree of certainty, not absolute, that the money set aside for their future will be there when they need it.

A social security system should be broad based, actuarially sound and sustainable. As noted, historically the social security system in China covered civil servants and employees of state owned enterprises. While about forty percent of urban workers (80 million workers out of a total of 200 million urban workers) participated in a pension system in 2000, the vast majority of the rural population and most town and village enterprise workers were outside any scheme. China recognizes the need to expand coverage although SOEs in financial distress often find it difficult to subscribe to the new pension system and many other companies do not make contributions. Zhao and Xu (2002) note that the state council mandated all state owned and urban enterprise employees be covered under the pension system by June 1999, but that the participation rate among this group was only 63.4 in 2000, up from 50.4 percent in 1998. While there are prospects for significantly improving the participation rate further, one should not dismiss the two year, twenty-five percent improvement already achieved.

Further expansion of the base, improving compliance, and reducing evasion are all steps toward making the system actuarially sound and sustainable. These changes, however, need to be coupled with a reduction in the target replacement rate (to be provided by the first and second pillar), from 77% (table 1) to something in the mid 50% range. In addition, China will need to raise its retirement age and eliminate the distinctions based on sex, location and nature of work.¹⁴

China has historically sought to achieve high replacement rates for urban workers while ignoring the needs of others. Historically, replacement rates for urban workers and civil servants were an average of 77 percent (table 1) and as noted above, the British Embassy estimates that if the first and second pillar systems are actually implemented as designed,

they should offer a combined replacement rate of 56% which is both reasonable and consistent with world averages.

At a very basic level, a social security system must be able to reliably and accurately collect contributions, credit the amounts, and any accumulated gains, to the contributor (this is true regardless of whether individual accounts are maintained or a worker is simply credited with participation in a scheme) and then make payment of benefits in a correct and timely manner. While good governance plays a role in these functions at the macro level, these basic administrative functions must be performed at the organizational level for a system to be effective. The Asian Wall Street Journal reports that it is “typical” for employers, even state owned companies, to avoid pension contributions by listing employees as “loaned” from another entity rather than as being employed (June 29, 2002). Since employees do not receive benefit contribution statements, they only become aware of the situation when they are laid off and find out that they are not entitled to either unemployment or pension benefits. A genuine individual account based system should ensure that each member has access to his or her own account details on a regular basis.

Under the current system, employers are not able to make pension payments to retirees because the funds are simply not there because pension obligations under the pay-as-you-go system require that the payor, in the case of China, state owned enterprises, actually has the financial wherewithal to make the payments. Since more than half of all state-owned enterprises are money-losing, and on average the entire sector loses money, the funds are not there to make the payments. An analyst at the National Academy of Sciences in China estimates that lay-offs from SOEs will average 10 million per year over the next several years (*Business Week* April 8, 2002) further taxing their ability to make profits or pension benefits.

Before China actually adopts a supplementary pension scheme, the third pillar, management and investment of assets will not be a major issue. However, individual

supplementary savings accounts will introduce a whole host of additional problems in China. China has a small equities market dominated by state linked companies with the government often maintaining majority control of shares. The regulatory regime under which financial and capital markets operate remains weak, although it is improving, and these markets continue to be viewed by many more as legitimate gambling or speculation than a vehicle for long term savings and investment. In this context, there will need to be a significant change in the mind-set of savers that long term saving and investment in domestic equities is reasonably prudent for generating long term returns that can be used for retirement. Similarly, investment related products such as annuities need to be developed by insurance companies to offer longevity protection. China's entry into WTO, and provision for Sino-foreign joint ventures should accelerate these offerings.

Accurate data, record keeping, and effective communication, is a massive undertaking in China's case given the number of individuals covered. While most of these tasks could effectively be performed within the workplace under the old state enterprise system, new approaches need to be developed if workers have nominally portable accounts and the record keeper is independent of employment. Regulations, applicable to all three pillars, will be needed governing the frequency and nature of disclosure, a challenge and appeals process needs to be developed when errors are alleged, and fiduciary responsibility needs to be legislated covering every entity having possession of retirement funds.

V. Conclusion

Our discussion is meant to suggest that there is a realization among policymakers in China of the need to improve the performance of the social security system.¹⁵ While some may say that China is "muddling through", muddling through is what can be expected given the enormity of the problem and the interconnectedness of social security reform to state

enterprise reform, reforming the banking sector, economic growth, employment, and social peace. In addition, social security reform in any country needs to deal with the reliance of current retirees, the expectations of near-term retirees, and the current and future needs of younger workers. As such, incremental change is far easier than radical reform.

As we have quoted in this paper, “the creation of a funded pensions system is perhaps the most crucial of China’s reform tasks”. China is ageing fast, it is urbanizing rapidly, its economic institutions are in flux and as a consequence the traditional social safety net provided by the state, the enterprise and the family is being swept aside. With a massive unfunded future pension liability, China must maintain very high growth rates and to avoid social unrest, which will undermine high growth, it must be able to absorb millions of new workers a year.

Again, the economic challenges do not sit in isolation. To develop a viable second and third pillar, China needs pension regulations and a legal structure that will allow individuals to save with confidence knowing that the funds will be managed as promised and be returned when due. So many more institutions are required to develop an effective third pillar, such as legal standards, mature equity markets, appropriate financial products, a population of investors reasonable educated about financial and retirement matters, and effective regulation. In the case of China, these tasks are so daunting that it would not be unreasonable to delay implementation of this pillar until the prerequisite institutions are in place. As Rodrik (2000) has argued, while there is consensus that institutions matter, there is ample room for being humble concerning the practical knowledge required to develop appropriate institutions from the existing ones.

Finally, while we recognize that social security reform is inherently a political process and as such each country will undertake those activities which are consistent with its domestic political economy, the reform efforts need to strive for greater professionalism and

results need to be benchmarked against best international practice. This task is particularly difficult in the Chinese context because unlike other transition economies, China's reform efforts are targeted at recentralizing its social security system and removing the basic functions from state owned enterprises. Thus, there is a critical need for the state to develop a professional capability to fine tune the development of national policy, to ensure correct implementation of policy and to assess successes and failures.

Table 1

China's Pension System Compared to Selected Regions in the World

| Region | Participation as share of labor force % | Contributions as ratio to wages (%) | | Average income replacement ratio (%) | Average pension as per cent of GDP per capita | Pension spending as per cent of GDP |
|-------------------------|---|-------------------------------------|-----------------------|--------------------------------------|---|-------------------------------------|
| | | Pensions | All social insurance | | | |
| China (1999) | 18^a | 25^b | 30^c | 77^b | 99^b | 3 |
| OECD | 90 | 19 | 34 | 38 | 54 | 10 |
| Range | 79-98 | 6-35 | 14-57 | 25-49 | 23-98 | 5-15 |
| Asia and Pacific | 26 | 14 | 17 | NA | NA | 1 |
| Range | 3-73 | 3-40 | 4-46 | NA | NA | 0-3 |

Source: OECD 2002 (Table 8).

Notes:

^a The regular urban pension system and that for civil servants.

^b The regular urban pension system. N.B. employee contribution rates increased every year 1997-2001.

^c Approximate national average.

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¹ For a good review of the theoretical issues surrounding social insurance, see Gent (2001).

² As of July 1, 2002, the exchange rate was 8.27 Yuan to one U.S. dollar.

³ It is not uncommon for local governments to manage retirement pools. The State Council decreed in 1991 that retirement pools be managed at the provincial level. This issue highlights the difficulties the central government has in reforming a disaggregated pension system. Zhao and Xu (2002) report that by 2001 only five provinces were complying with the decree. They further note that a by-product of the reform decree was that local governments no longer had an incentive to enforce pension collections since they no longer benefited by having access to the funds.

⁴ Under the Communist system, a “portion of the income generated by communes and collective enterprises in farming communities were set aside as public reserve funds, public welfare funds and management expenses to be retained and allocated by the communes and collectives themselves. The system of ‘five guarantees households’ (households guaranteed food, clothing, medical care, housing and funeral expenses) in farming villages provided the rural household with social security” (*Taipei Times* April 10, 2002).

⁵ Civil servants and the military are covered under a different scheme. Currently civil servants are covered by a non-contributory scheme providing 80-90% of their last drawn salary. In addition, they are provided with health insurance. Government salaries have gone up in recent years and there is some expectation that retirement benefits will be adjusted downward.

⁶ It would be a mistake to assume that the central government in China is a monolithic entity with an ability to effectively permeate society with policies designed in Beijing. As Zhu (2002) reports, China does not have a national social security law and policy has been made by State Council decisions on a “piecemeal” and “ad hoc” basis with provincial governments left to formulate detailed rules in accordance with local circumstances.

⁷ In Liaoning, a northeastern, highly urban, Chinese province, an experiment in individual, fully funded, accounts were started in 2001. The contribution rate is 8 percent. Unfortunately, by year end, contributions were delinquent and the central government was compelled to kick in US\$120 million. State owned enterprises reported that they simply did not have the funds to make contributions.

⁸ The picture with respect to current and soon to be retired workers may require more *management* than the Ministry of Finance believes. Protests by laid off state-factory employees and retirees have been growing as state enterprises fall increasingly behind on the payment of both unemployment and retirement benefits. In some cases, retirees have not received pension benefits for over three years. Demonstrations have even reached the capital, Beijing, where retirees from the Beijing Automobile Works factory blocked traffic this year protesting non-payment of pensions.

⁹ Wang, Xu, Wang and Zhai (2001) conducted a sophisticated fifty year simulation of the current system and also concluded that the current system is not sustainable. Other simulations such as (Zhao and Xu 2002) may be overly optimistic about real rates of return on investments in individual accounts and should perhaps be used with caution when making policy.

¹⁰ The word privatization is a misnomer since as of 1998, the government retained a majority stake in all of the companies listed on the Hong Kong stock exchange (Dixon and Newman 1998).

¹¹ The situation has been described as a vicious circle (OECD 2002) in which the banks are forced to lend money to state owned enterprises. The state owned enterprises are inefficient but are pressed to retain workers in order to avoid social unrest thus avoiding the very reform

that would potentially make them more efficient. The government retains its equity control of the SOE's to ensure that they do not lay off workers and the SOE's are rewarded with new loans regardless of their financial situation. Moreover, by removing commercial considerations from a variety of decisions, reform of corporate and banking governance is deferred to a later date. While reform efforts are underway (FRBSF 2002), we are skeptical of their likely success in the short to medium term.

¹² Almost every listed Chinese company traces its roots as a state owned enterprise.

¹³ China's financial problems have been characterized as "colossal" (*The Economist* June 13, 2002) and the financial services infrastructure, regulatory framework, and products necessary to support the third pillar of tax advantaged personal savings is lacking. First, the banks require recapitalization and a change in investment underwriting to commercial standards. Second, the insurance industry is relatively immature beyond life and casualty insurance products. Third, domestic investment alternatives are limited to deposits, government bonds, a property market with boom/bust cycles, and an equities market based on shares in government dominated companies.

¹⁴ There are actually two components to the retirement age: the age that one works until and the age that one can begin to draw retirement benefits (Clark 2002). A gap between retirement and drawing benefits is not necessarily a problem as early "formal" retirement, often at age 55, is often viewed as a benefit and the delay in taking benefits allows further accumulation of invested returns. In China, many older workers are likely to be "retired" from the formal sector well before they are aged 55. Some are likely to find employment in the informal sector where they are not likely to be covered by the pension scheme. In order to achieve the target replacement rates, integrating the informal sector becomes important.

¹⁵ While we have focused on the provision of pensions, the social safety net requirements are much broader as the economy changes from centrally planned to more market oriented and includes unemployment, health care protection, and disaster relief programmes. Zhu (2002) summarizes recent developments in China that relate to unemployment insurance and healthcare provision.