



China's Long March to Retirement Reform

The Graying of the
Middle Kingdom Revisited

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China's Long March to Retirement Reform

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Foreword

The year 2008 began in China amid celebratory preparation for the Beijing Olympics. The world watched in awe as the Chinese coordinated and choreographed a breathtaking spectacle that captured the hopes and aspirations of this remarkable country. As it turns out, China could not celebrate its achievement for long. Before year's end, China found itself in an economic crisis precipitated by the global recession.

No one who knows China doubts that it will successfully weather today's global economic storm. Yet having said that, there is indeed cause for concern about China's economic future. This concern has nothing to do with the current crisis. It is instead tied to a longer-term and in many ways more serious challenge: the dramatic aging of China's population.

China's Long March to Retirement Reform warns that the aging of China's population could usher in an era of slower economic growth and mounting social stress. The sheer magnitude of China's age wave—by 2030 China will be an older country than the United States—would alone pose a serious challenge. What makes the challenge even more daunting is that the age wave will arrive while China is still developing and modernizing. The public pension system covers only a fraction of the population and could collapse under the weight of unfunded benefit promises. The traditional family support networks on which most Chinese elderly depend are weakening. Without reform, tens of millions of Chinese could arrive at old age over the next few decades without pensions and with inadequate family support.

The report outlines a plan for meeting the challenge. The plan provides for a universal poverty backstop that would protect all Chinese against an uncertain old age. It would also create a national and fully portable system of funded retirement accounts. This system would allow China to care for a much larger number of older people without overburdening its smaller working generation. As the report explains, it would also help China to maintain rates of savings, investment, and living standard growth as its population ages.

China is a lynchpin in the global economy. How it confronts its age wave will have profound implications for its own future and for the future of countries around the world. *China's Long March to Retirement Reform* offers a compelling analysis of the risks and opportunities posed by China's coming demographic transformation.



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Introduction

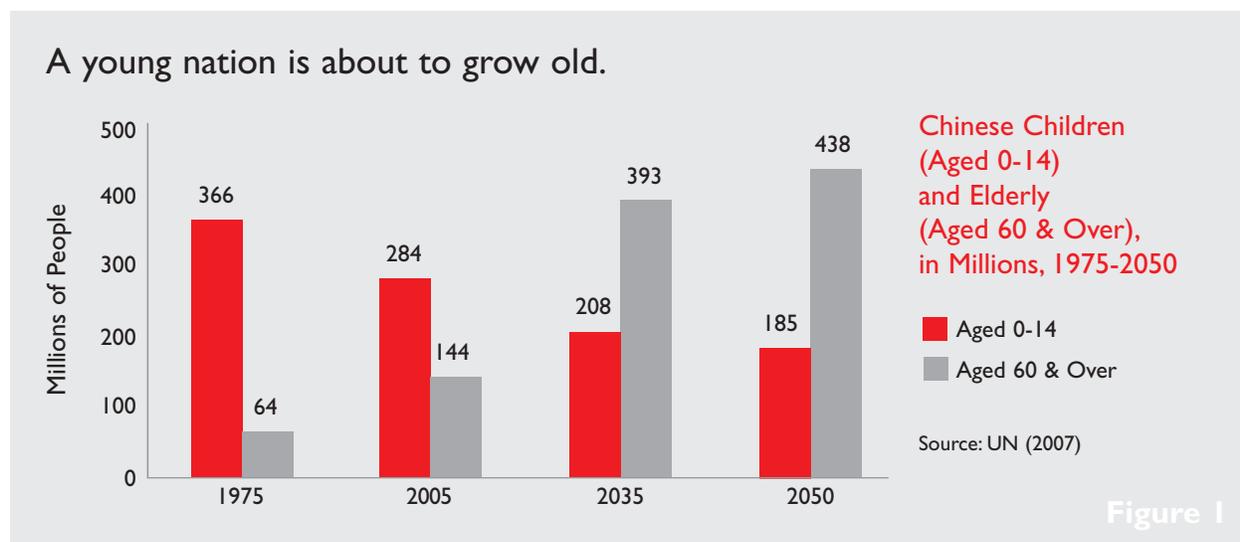
China is still a demographically young nation preoccupied with a young nation's challenges—educating the young, creating jobs for a growing working-age population, and building a modern economy. China, however, is being overtaken by a stunning demographic transformation. In 1975, there were six Chinese children for every one elder. By 2035, there will be two Chinese elders for every one child. (See figure 1.) During the single decade between 1995 and 2005, China added 107 million working-age adults to its population. During the single decade between 2025 and 2035, it will subtract 79 million.¹

China will have to pay for an age wave of developed-world size with just a fraction of the developed world's income and wealth.

What makes China's age wave so daunting is not just its magnitude or the speed with which it is approaching, but the fact that it is arriving in a society that is still in the midst of modernization. While today's developed countries were all affluent

societies with mature welfare states by the time they became aging societies, China is aging at a much earlier stage of economic and social development. No matter how fast its economy grows over the next few decades, it will have to pay for an age wave of developed-world size with just a fraction of the developed world's per capita income and wealth.

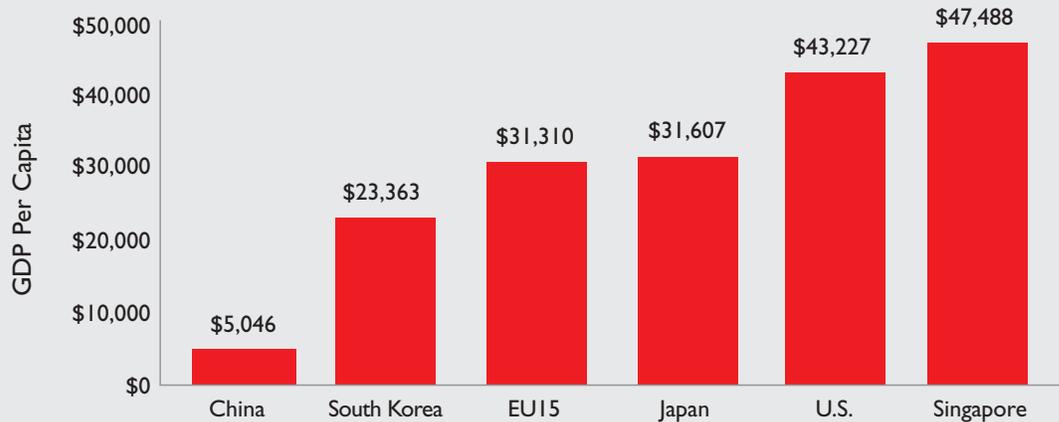
When China embarked on its "Open Door" program of economic reform in 1978, it was an impoverished country with few ties to the global marketplace. Today it is a rising global economic power. China has become the factory floor of the world. In 2007, exports of goods and services reached 41 percent of GDP, ranking China (in dollars) as the world's third largest exporter, just behind the United States and Germany. Thanks to its massive current account surpluses, which reached 11 percent of GDP in 2007, it is also becoming a major global creditor. As of mid-2008, China's foreign exchange reserves totaled \$1.8 trillion, or 50 percent of GDP. Along the way, the typical Chinese has seen a spectacular increase in living standards. In the three decades since China began its transition to a market economy, real per capita income has risen elevenfold. Its economic success is manifest in the breathtaking skyline of Shanghai's Pudong business district and was on display to the entire world at the Beijing Olympics.



¹ All population projections cited in this report refer to the UN's 2006 Revision "constant fertility" scenario. "Children" refers to the 0 to 14 age bracket, "working-age adults" to the 15 to 59 age bracket, and "elderly" to the 60 and over age bracket. The UN projections, as well as other major data sources, are discussed in "A Note on Data and Sources" at the end of the report.

Despite its rapid economic growth, China remains a low-income country.

GDP Per Capita (in 2005 PPP Dollars), by Country in 2007



Source: World Bank (2008)

Figure 2

Yet despite its blistering economic growth, China is still a low-income country. Per capita income may have risen elevenfold since the beginning of the reform era, but even taking into account differences in purchasing power, it is still just one-fifth the level in South Korea and one-ninth the level in the United States. (See figure 2.) In exchange rate dollars, China produced 6 percent of global GDP in 2007, while the United States, with one-fourth of China's population, produced 25 percent. China has lifted more people out of poverty in a shorter time than any country in the history of the world. But according to the World Bank, at least 170 million Chinese still lived on less than \$1 a day in 2004.² According to the McKinsey Global Institute, less than 1 percent of Chinese households have incomes equal to or greater than the *average* income of U.S. households.³

China is also a country whose social fabric is being strained by rapid modernization. While the industrial revolution in Europe and the United States unfolded over a century or more, China's is being telescoped into a single generation. When the government launched its program of economic reform, urban workers lost the cradle-to-grave social protection that many had enjoyed in the days of the planned economy. Tens of millions of peasants are moving from traditional agricultural villages to bustling manufacturing hubs, where they join

a rootless "floating population" now estimated to number 150 million.⁴ Industrialization and urbanization are weakening the extended family and degrading the environment. Worker mobility and turnover are rising and the income gap between the rich and poor is widening. China's leaders know that they must deliver on the promise of mass affluence or face a major social—and perhaps even political—backlash. But they also understand that the social costs of breakneck development threaten their goal of building a "harmonious society."

The rapid aging of China's population could act as a multiplier on the social and economic stresses of rapid modernization. Less than one-third of China's workforce is now earning a public pension benefit of any kind. Despite China's lofty national savings rate, only a small minority of workers are accumulating sufficient financial assets to support themselves in retirement. The great majority will have to fall back on the most traditional form of old-age insurance: children. But as the extended family weakens and birthrates decline this informal safety net is beginning to unravel. Unless China prepares for the challenge, a retirement crisis of immense proportions looms just over the horizon. Imagine tens of millions of members of China's low-wage floating population maturing by the year 2020 or 2030 into tens of

² "China Quarterly Update," The World Bank Office, Beijing, February 2008, <http://www.worldbank.org>.

³ Diana Farrell, Ulrich A. Gersch, and Elizabeth Stephenson, "The Value of China's Emerging Middle Class," *The McKinsey Quarterly*, Special Edition (2006), 63.

⁴ "China Sees Soaring Migrant Population," Xinhua News Agency, October 29, 2006.

millions of indigent urban elders who lack pensions or nearby families. Or imagine, in China's western rural regions, entire towns of demographically stranded elders.

Unless China prepares for the challenge, a retirement crisis of immense proportions looms just over the horizon.

A rapidly aging and rapidly developing China will need a retirement system whose coverage is broad and whose benefits are adequate and affordable. The foundation of the system must be a universal floor of protection against poverty in old age that covers all Chinese elders, whether or not they have participated in the contributory public pension system. Above this floor, we believe that the best solution is for China to rely more heavily on funded retirement savings. We recommend that China transform its current “basic pension system” for urban workers, which consists of a first tier of pay-as-you-go benefits and a second tier of largely “notional” personal retirement accounts, into a national system of genuinely funded personal accounts that would be publicly regulated but privately managed and invested. We also stress the importance of expanding supplementary retirement coverage under China's new private enterprise annuity system.

A genuinely funded retirement system would have enormous long-term benefits.

The reform we propose would have enormous long-term benefits. The floor of protection would spare tens of millions of elders from a destitute old age—and might even avert widespread social and political unrest in an aging China. The national system of funded personal accounts would, over time, allow the majority of tomorrow's elders to enjoy a comfortable retirement without overburdening tomorrow's workers. It would also help an aging China to meet its long-term development goals by broadening and deepening capital markets and by maintaining adequate rates of savings and investment. Along the way, it would turn most workers into property-owning stakeholders in the future of China's economy.

The current global financial crisis and the drastic decline in world stock markets—between its peak in December 2007 and the end of October 2008 China's stock market fell by two-thirds—are causing

policymakers in some countries to question the wisdom of basing retirement security on funded savings. One country has gone beyond questioning. Argentina, which introduced a funded personal accounts system in the mid-1990s, nationalized its pension funds in November 2008 and is now shifting back to a purely pay-as-you-go system.

Although it is understandable, this concern is misplaced. An effective retirement policy must focus on the long term—and over the course of a contributor's working life there is little question that a funded system will deliver higher returns and larger benefits than a pay-as-you-go system can. To be sure, funded systems subject retirement benefits to the risks of ups and downs in financial markets. Economists largely agree, however, that workers nearing retirement can be protected from sudden financial downdrafts by prudent regulations that require them to move into fixed-income assets at older ages. The financial risk of a funded system, of course, can never be entirely eliminated. But neither can the “political risk” of a conventional pay-as-you-go public pension system—that is, the risk that future politicians will change its benefits. That risk will become overwhelming as China ages and the ratio of beneficiaries to workers soars.



Government reforms have begun to push China's retirement system in the right direction.

Over the past few years, a series of government reform initiatives have begun to push China's retirement system in the right direction. The government has stepped up efforts to broaden participation in the basic pension system beyond its original base among workers at state- and collectively owned enterprises—and it has set a goal of achieving universal coverage by 2020. It has also begun to increase funded retirement savings by creating a national pension reserve fund; by pumping central government subsidies into the basic pension system that allow a growing share of personal account contributions to be saved; and by laying the groundwork for a new supplementary system of employer-sponsored “enterprise annuities.”

Yet despite the progress, the government's recent initiatives fall short of a complete solution. Public pension coverage remains far from universal, even in the cities, and the government has yet to take serious steps toward extending it to the countryside. The basic pension system labors under large unfunded liabilities for legions of early retirees from China's downsized state-owned sector, which means that contribution rates, and consequently evasion, are high. Since its benefits are not fully portable, workers often face a stark trade-off between job mobility and retirement security. Its personal accounts, though now partially funded, earn such a low rate of return that they cannot possibly generate promised replacement rates.

China's Long March to Retirement Reform turns the spotlight on China's aging challenge. In chapter 1, we describe the coming demographic transformation and the economic and social challenges it poses. In chapter 2, we zero in on and evaluate the government's efforts to build a national pension system. In chapter 3, we turn to the CSIS reform plan. We describe how the floor of protection would be structured; how the transition from today's largely unfunded basic pension system to a new national personal accounts system could be managed; and what the architecture of the personal accounts system might look like. We also discuss the advantages of our reform and the obstacles that would have to be overcome to implement it. The current report builds on our analysis in *The Graying of the Middle Kingdom*, our 2004 study on China's aging challenge.

China's remarkable economic success has become an inspiration to countries around the world. That success is due, above all, to the hard work and sacrifice of the Chinese people and to sound government policies that have leveraged their initiative. Yet it has also been underpinned by favorable demographic trends that have leaned strongly with economic growth. Over the past 30 years, the demographic dependency burden in China has plummeted and the share of the population in the working years has soared, helping to push up labor-force participation, savings, investment, and living standard growth. Beginning around 2015, however, the demographic climate will change abruptly.

As this report goes to press, China finds itself in the midst of an economic crisis triggered by the deepening global recession. Its export sector is feeling the impact of contracting consumer demand in the United States and other developed-world economies, unemployment is rising, and economic growth is projected to slow dramatically in 2009 from the double-digit rates of recent years. In the midst of the near-term economic emergency, China's leaders may be tempted to defer action on the long-term aging challenge. That would be a mistake. China's age wave is approaching so fast—and its potential economic and social costs are so large—that delay is not an option. Concerted action on the long-term challenge is needed now to ensure that China's economic fundamentals remain strong when it emerges from the current crisis. It may even help mitigate the crisis by bolstering investor confidence in the government's economic stewardship.

How China navigates its coming demographic transformation will go a long way toward determining whether it becomes a prosperous and stable developed country.

How China navigates its coming demographic transformation will go a long way toward determining whether it achieves its aspiration of becoming a prosperous and stable developed country with an expanding role in the global economic and political order. The time to prepare is fast running out and the outcome still hangs in the balance. We are confident, however, that China will rise to the challenge.



The Dimensions of China's Aging Challenge

The magnitude of China's coming age wave is stunning by any measure. In 2005, there were just 16 elderly Chinese for every 100 working-age adults. This aged dependency ratio is due to double to 32 by 2025, then double again to 61 by 2050. By the mid-2020s, China will be adding 10 million elders to its population each year, even as it loses 7 million working-age adults. (See figure 3.) By 2050, there will be 438 million Chinese aged 60 and over, 103 million of whom will be aged 80 or older.

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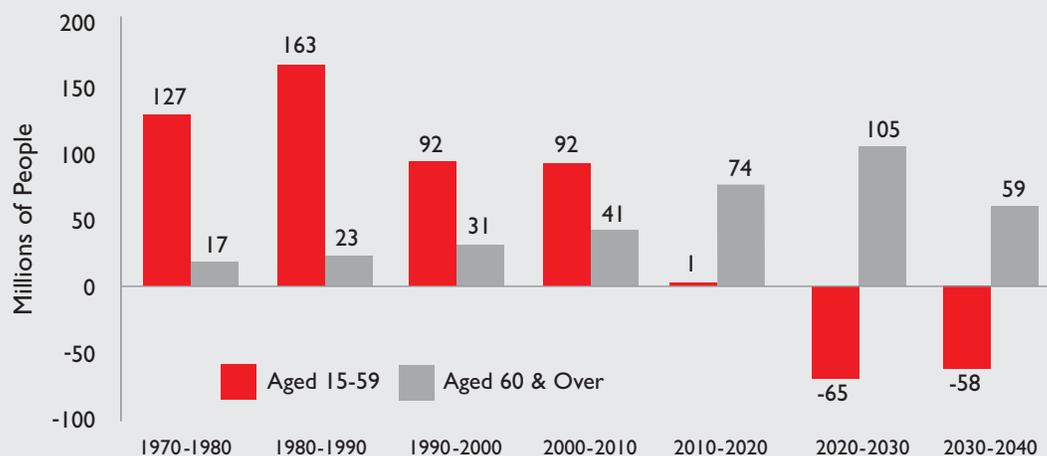
Populations are now aging throughout most of the world. China's age wave, however, poses an especially daunting challenge. China is not only traversing the entire distance from young and growing to old and stagnant or declining at a breathtaking pace—far more rapidly than most of the developed countries once did—but it is also aging at a much earlier stage of economic and

social development. When the elderly share of the population in the United States was the same as the share in China today, the U.S. per capita income was four times what China's now is. Even Japan and South Korea, which like China are experiencing extremely rapid aging, were much wealthier at the same stage in their demographic transformation. (See figure 4.) While today's developed countries became affluent societies before they became aging societies, China may be the first major country to grow old before it grows rich.

China is unprepared for the coming age wave. Its public pension system leaves large gaps in coverage and its private pension system is still in its infancy. Most elders depend heavily on informal family support networks, but these are coming under intense pressure even before the age wave rolls in. The “premature aging” of China's population, moreover, poses broader challenges that reach far beyond retirement policy. It threatens to impose a rising burden on the young, slow economic and living standard growth, and become a socially destabilizing force in a country where the stresses of rapid modernization are already straining the civic fabric.

China's working-age population will shrink even as its elderly population explodes.

Growth in Chinese Working-Age (Aged 15-59) and Elderly (Aged 60 & Over) Population, in Millions, by Decade, 1970-2040

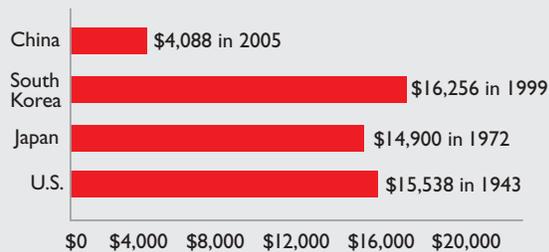


Source: UN (2007)

Figure 3

China's "premature aging": A larger elderly population at a lower income level.

GDP Per Capita (in 2005 PPP Dollars) in Selected Countries in the Year They Had the Same Elderly Population Share as China in 2005



Source: UN (2007); U.S. Census Bureau (2002); World Bank (2008); Maddison (2007); and CSIS calculations

Figure 4

China's Demographic Transformation

China may be the world's oldest living civilization, but for most of its history it has been a demographically young society. As recently as the mid-1960s, when Mao Zedong called on the nation's youth to launch the Cultural Revolution, China's median age was 20, meaning that half of the population were children or teenagers. The elderly made up just 7 percent of the population, about what they had since time immemorial.

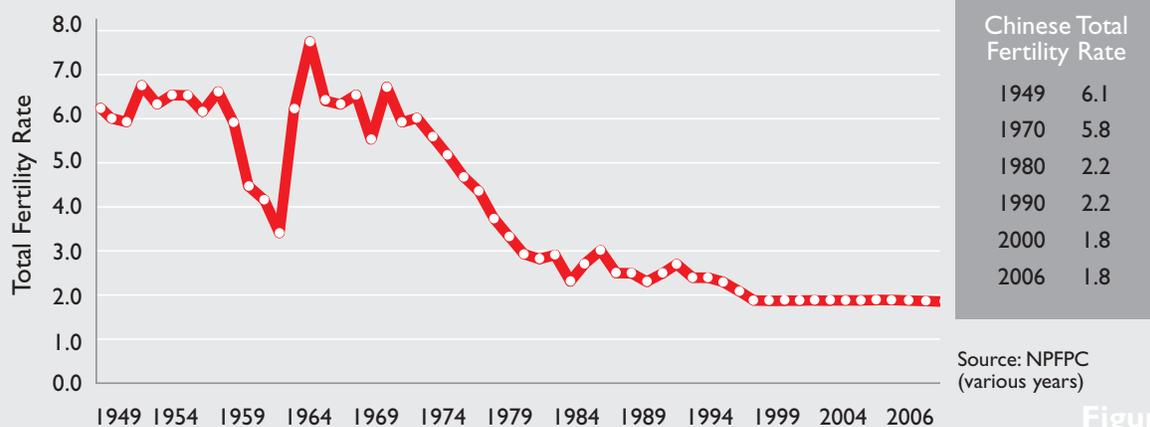
Over the past few decades, however, a far-reaching demographic transformation has been gathering momentum. The transformation, which will soon lead to a dramatic aging of China's population, is the result of two fundamental forces: falling fertility and rising longevity. The first force is decreasing the relative number of young in the population, while the second is increasing the relative number of old. Until the 1970s, China's fertility rate—that is, the average number of lifetime births per woman—still towered around 6.0. By the early 1990s, however, it had plunged to 1.8, where it remains today. (See figure 5.) Meanwhile, improved nutrition, sanitation, and health care have brought about an equally stunning increase in life expectancy. Since the founding of the People's Republic in 1949, life expectancy at birth has risen by 32 years. Nationwide, it now stands at 73. (See figure 6.) In Beijing it has reached 80 and in Shanghai 81—a higher life expectancy than in most developed countries.⁵

China is not the only developing country where fertility has fallen and life expectancy has risen in recent decades. Like the developed world before it, much of the developing world is now in the midst of what demographers call the "demographic transition"—the shift from high fertility and high mortality to low fertility and low mortality that inevitably accompanies economic and social development.

In China, however, the demographic transition has been accelerated by the government's strict family

Behind China's age wave: A dramatic decline in fertility rates.

Chinese Total Fertility Rate, 1949-2006



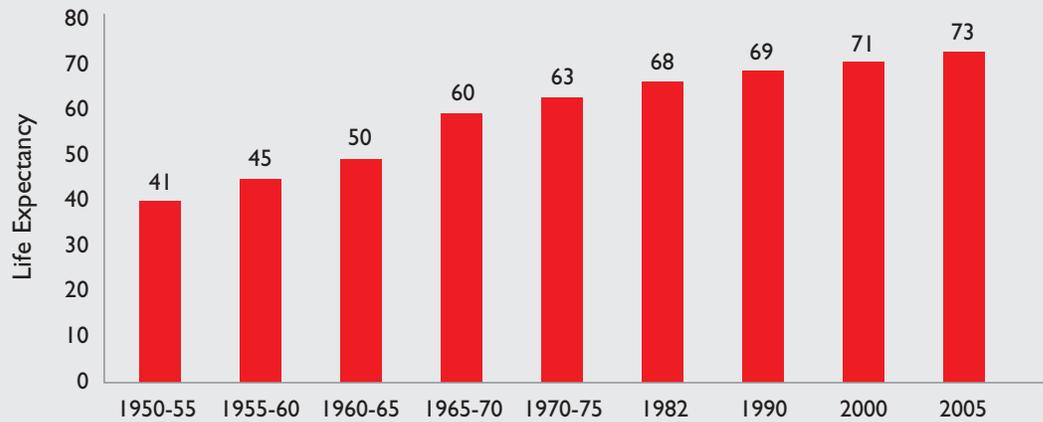
Source: NPPFC (various years)

Figure 5

⁵ "Shanghai Residents Live Longer, See Medical Bills Drop," *Shanghai Daily*, February 26, 2007; and "Life Expectancy of Beijing Residents Reaches 80 Years," Xinhua News Agency, March 10, 2007.

Behind China's age wave: An equally dramatic rise in life expectancy.

Chinese Life Expectancy at Birth, 1950-2005*



*UN five-year average data for 1950-1975 and Chinese census data for 1982-2005.
Source: MOH (2008); and UN (2007)

Figure 6

planning policies, which pulled down the fertility rate much sooner and faster than would otherwise have occurred. Beginning in the early 1970s, the government began encouraging couples to limit their family size to just two children. Then, in the early 1980s, it implemented the one-child policy, together with a system of targets, birth permits, and penalties to enforce it. In the countryside, where local authorities typically allow families whose first child is a girl to “try for a son,” fertility remains well above the official one-child target—though even here families are now barely replacing themselves. In the cities, fertility has fallen much further—and in Beijing and Shanghai, it has now dipped beneath 1.0.⁶

When China first put in place its strict birth policies, the nation faced a looming Malthusian crisis. With mortality rates falling rapidly, continued high fertility threatened to lead to runaway population growth and leave the country mired in poverty. China's leaders determined that they would have to lower birthrates drastically in order to lay the foundations for future prosperity. At the time, no one gave much thought to the inevitable sequel to a sudden and steep decline in fertility—the eventual dramatic aging of China's population and the social and economic challenges that it would bring. Those challenges lay over the horizon in a distant future.

That once distant future is now fast approaching. Over the next few years, China's last large

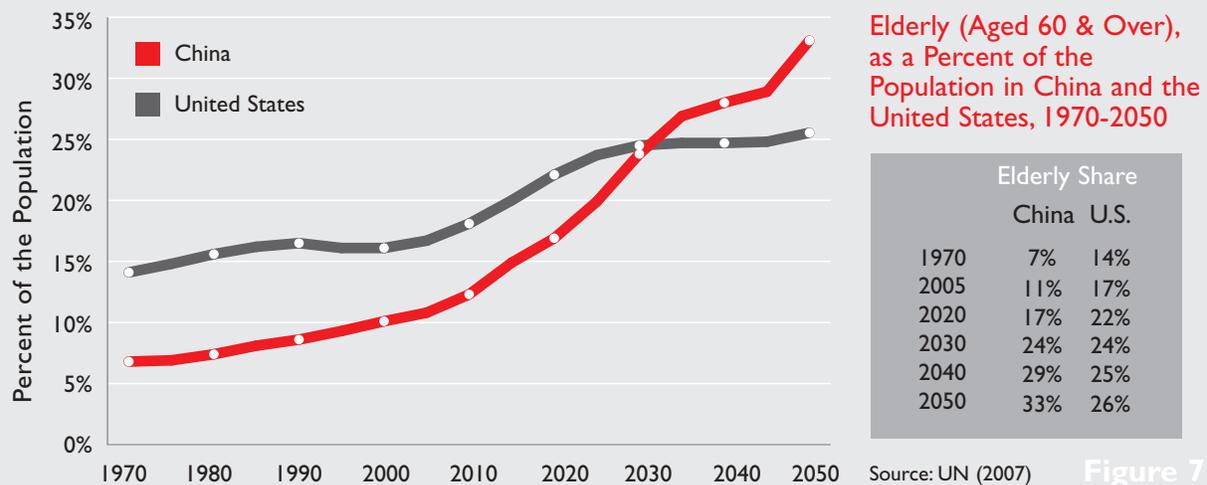
generation, born in the 1950s and 1960s, will begin to reach old age. As it does, the number of elderly will surge. In 2005, 11 percent of China's population was aged 60 or older, up significantly from the days of the Red Guards, but still barely half of the developed-country average. That share is due to rise to 15 percent in 2015, then leap to 24 percent in 2030 and 33 percent in 2050. By then, China's median age will be 47, more than twice what it was when the demographic transition began. An elderly share of 33 percent and a median age of 47 will not make China the oldest country in the world. But it will make it an older country than the United States. (See figure 7.)

China will not only have an aging population, but also a contracting one.

China will not only have an aging population, but also a contracting one. China's child population already peaked in the mid-1970s. Its working-age population is on track to peak by 2015, less than a decade from now. Between 2015 and 2050, assuming current demographic trends continue, China's overall working-age population will contract by 23 percent, with even larger declines among younger adults in their 20s and 30s. Its total population will continue to grow for a while longer, but only because the

⁶ *Tabulation of the 2000 Population Census of the People's Republic of China* (Beijing: Population Census Office and National Bureau of Statistics of China, 2002), 1696.

Within a generation, China will have an older population than the United States.



number of elderly Chinese will be increasing faster than the number of younger Chinese will be declining. By 2030, however, China's total population will also peak and enter a gathering decline. A decade before then, in 2020, India will overtake China as the world's most populous country—a position that China has held for most of human history.

Nondemographers may suppose that population projections so far into the future must be highly speculative. But in fact, the rapid aging of China's population is about as close as social science comes to a certain prediction about the future. Absent a catastrophic pandemic, longevity will continue to rise. The future trend in fertility is admittedly less certain, though a major surge is unlikely even if the government were to repeal the one-child policy.⁷ After several decades of low fertility, small families have become the new social norm in China. According to a recent survey of Chinese women, 35 percent now consider one child to be ideal—and though 57 percent would prefer to have two children, only 6 percent want more than two.⁸ In any case, higher fertility would have no impact on the size of the working-age population or the ratio of workers to retirees over the next 15 years and only a modest one over the next 25. Demography is like an ocean liner. Once it is steaming full speed ahead it takes a long time to turn around.

⁷ Comments by a high-ranking official at the National Population and Family Planning Commission recently fueled speculation that the policy would be repealed. The government, however, denies that any near-term change is under consideration. "China Denies Plan to Scrap One-Child Policy," Reuters, March 2, 2008; and Jim Yardley, "China Sticking with One-Child Policy," *The New York Times*, March 11, 2008.

⁸ National Population and Family Planning Commission of China, *Major Statistics of the 2006 Sampling Survey on National Population and Family Planning* [in Chinese], Statistical Bulletin of Population and Family Planning, no. 2, 2007.

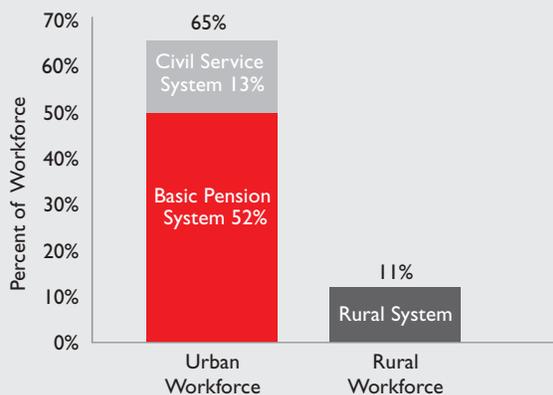
China's Looming Retirement Crisis

Its massive age wave is overtaking China at an awkward moment in its economic and social development. While the United States, Japan, and the countries of Western Europe were all fully developed economies with mature welfare states by the time they became aging societies, China's age wave is arriving in a society which, despite its rapid economic growth, is still in the midst of modernization. In the days of the planned economy, workers at China's state-owned enterprises, or SOEs, enjoyed extensive social benefits, including generous pensions. But these workers were always a privileged minority—and the system of cradle-to-grave social protection they once enjoyed has been largely dismantled. Meanwhile, industrialization and urbanization are weakening the traditional means of income support on which the vast majority of Chinese elderly have always relied: continued work and the extended family. Yet China has not yet had time to fashion adequate government and market substitutes.

China's "premature aging" threatens to subject a growing share of tomorrow's elders to economic hardship.

Even in the cities, the public pension system leaves large gaps in coverage.

Percent of Chinese Urban and Rural Workforce Covered by Public Pension Systems in 2007*



*Civil Service System data are for 2006.
Source: MOHRSS (2008); and Sin and Mao (2007)

Figure 8

Coverage under China's basic pension system is largely limited to workers at state- and collectively owned enterprises.

To be sure, China now has a mandatory “basic pension system” for urban workers, which the government created to replace the old SOE system. In principle, the system, which consists of a pay-as-you-go benefit and a personal retirement account, covers the entire urban workforce. In practice, however, coverage remains far from universal. As of 2007, just 65 percent of the urban workforce was contributing to and earning a benefit under the basic pension system or a separate system for civil servants. (See figure 8.) Coverage, moreover, is highly concentrated among workers at state- and collectively owned enterprises, who account for a dwindling share of total employment. Most of the fast-growing private-sector workforce, including China’s vast floating population of rural migrants, remains uncovered.

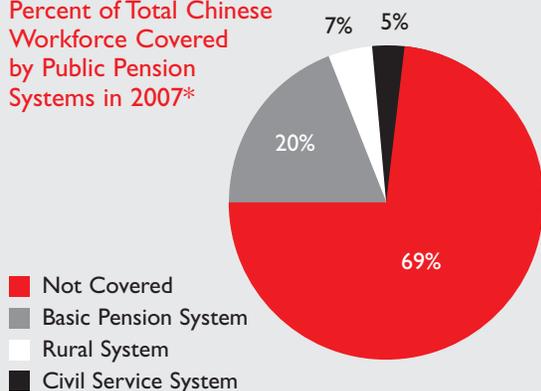
Beyond its low coverage, the basic pension system suffers from serious structural problems that make it a shaky foundation on which to build future retirement security. As we will see in the next chapter, it inherited large unfunded liabilities from the SOEs, which means that contribution rates are high and impose a heavy burden on workers. Although benefits for today’s retirees are generous, the system’s relatively small coverage base, low rate of return on contributions, and lack of portability mean that it cannot possibly provide adequate benefits to tomorrow’s.

As for the countryside, formal retirement protection is virtually nonexistent. Rural workers, including those employed in manufacturing at town and village enterprises (TVEs), are categorically excluded from the basic pension system. There is a special rural pension system that consists solely of personal accounts, but participation is voluntary and the benefits are tiny. Only 11 percent of rural workers now contribute to the system, and the share that does has been falling, not rising. Beneficiaries on average receive a pension of 85 yuan, or 12 dollars per month.

When we add up the public pension coverage numbers, the bottom line is stark. All told, just 31 percent of China’s total workforce, urban and rural combined, is now earning a public pension benefit of any kind. (See figure 9.)

Overall, just three in ten Chinese workers are earning any public pension benefit.

Percent of Total Chinese Workforce Covered by Public Pension Systems in 2007*



*Civil Service System data are for 2006.
Source: MOHRSS (2008); and Sin and Mao (2007)

Figure 9

China’s premature aging thus threatens to subject a growing share of tomorrow’s elders to economic hardship. The threat is greatest in the countryside, where living standards lag and the social safety net is rudimentary. But even in China’s relatively more affluent cities, the contours of a looming retirement crisis are beginning to take shape.

China's private "enterprise annuity" system is still in its infancy.

Enterprise Annuity Coverage in China in 2007



*"Enterprise workers" contributing to the basic pension system.
Source: MOHRSS (2008); and CSIS calculations

Figure 10

Meanwhile, China's private pension system is only beginning to take shape. Although employer-sponsored "enterprise annuities," as China's private pensions are known, may eventually become a significant source of retirement income, they now cover just a tiny minority of workers, all of whom already participate in the basic pension system. In 2007, 9.3 million employees contributed to an enterprise annuity, or 3.2 percent of China's urban workforce and 1.2 percent of its total workforce. (See figure 10.)

Social assistance provides some help to the most needy elders. Like all Chinese, the elderly are covered by the minimum living standard guarantee, a means-tested benefit which tops up the income of qualifying households to the poverty line. In addition, there has long been a special program called the "three no's" for rural elders who have no relatives, no income, and no ability to work. More recently, the government has added a new benefit payable to poor rural elders who have no sons. The poverty line in China, however, is set at such a low level—just 20 percent of per capita rural income and 16 percent of per capita urban income—that relatively few elders qualify for assistance.

Older workers have little place in China's new economic order.

Continuing to work is an obvious way to maintain adequate income when pensions are lacking, but older workers seem to have little place in China's new economic order. Elderly labor-force participation

remains relatively high in the countryside—76 percent among men aged 60 to 64 and 38 percent past age 65. In the cities, however, it is very low by developing-country standards. Rates of labor-force participation fall precipitously beginning in the early 50s. Among urban men aged 60 to 64, just 34 percent are employed—and past age 65, a mere 13 percent are.

Part of the explanation for low levels of elder employment lies in the history of SOE restructuring. Over the past decade, China has witnessed a mass wave of early retirement, with SOEs offloading men as young as age 50 and women as young as age 40—a development known as the "40-50 phenomenon." But longer-term economic and social trends are also undercutting the earnings potential of older workers. On the one hand, the low-wage agricultural and service sectors where most elders are employed are shrinking. On the other, as Chinese industry moves up the global value-added scale, the speed with which the skills of the workforce become obsolete is accelerating—rendering older workers unemployable even as they are becoming more numerous.

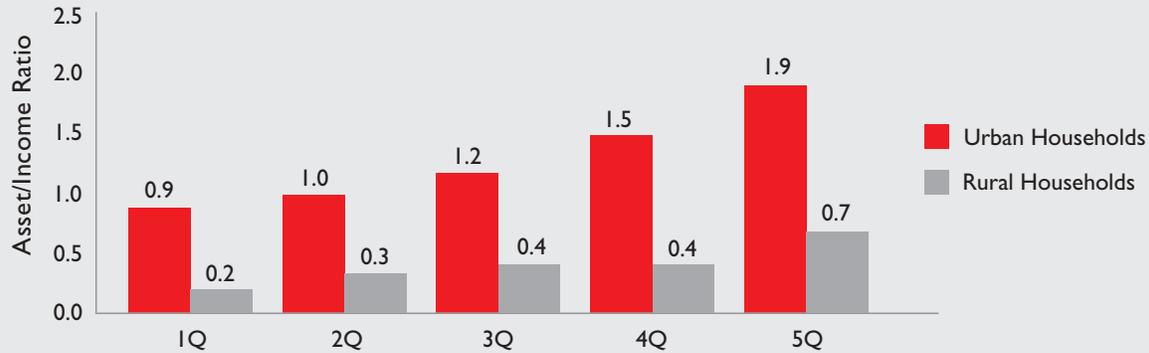
One might suppose that a substantial share of elders will be able to finance their retirement out of personal savings. After all, Chinese savings rates are famously high, in part because the social safety net is inadequate and workers understand that they may have to provide themselves for much of their own support in old age.

The typical urban household possesses financial assets equal to just one year's income.

Yet here too, the outlook is worrisome. Most household savings is invested in the family home or the family business, and may be difficult to cash out in retirement. Despite the recent development of China's stock markets, the vast majority of financial savings—over two-thirds—still languishes in bank deposits that pay low nominal interest rates which, in recent years, have not even exceeded the inflation rate. As of 2002, the typical urban household in the middle of the income distribution possessed financial assets equivalent to about one year's income—nowhere near what would be needed to finance a retirement that may last 20 years or more. The circumstances of the typical rural household, with financial assets equivalent to less than six months of income, are even more precarious. (See figure 11.)

Relatively few elders will be able to count on personal savings to finance their retirement years.

Ratio of Financial Assets to Average Annual Income, by Quintile in 2002



Source: CDRF and UNDP (2005); NBS (2007); and CSIS calculations

Figure 11

To be sure, the wealth of younger generations is now growing rapidly in China. In contrast to most developed countries, where household wealth peaks in the 50s or 60s, in China it now peaks in the late 30s, suggesting that a powerful cohort effect may improve the economic circumstances of tomorrow's elderly.⁹ It will take decades, however, for this effect to translate into widespread retirement security—if indeed it ever does. The social safety net for the young in China is just as inadequate as that for the old. Savings for retirement will thus have to compete with many other needs—especially education and health care, whose huge out-of-pocket cost routinely bankrupts families.

As things stand, tens of millions of elders retiring over the next few decades will have little to fall back on but the family. As in most East Asian societies, China's Confucian ethic of filial piety requires children to care for their aged parents. The majority of elders—59 percent in 2006—live with their grown children or other relatives.¹⁰ Even those who do not often depend on the extended family for financial support.

Yet as China modernizes, this pillar of old-age support is weakening. Multigenerational families, though still the norm, are less common than they were a generation ago. Mass rural-urban migration is separating children from their parents, disrupting the lifelong care networks that elders have traditionally

relied on for assistance. China's floating population already numbers 150 million, and, according to government estimates, could grow by another 300 million over the next two decades.¹¹ Meanwhile, as individualistic or "Western" values gain currency, the ethic of filial piety is itself waning. In 1996, the National People's Congress passed a law obligating children to support their aged parents—a sure sign that the family is in trouble. The government now encourages rural families to draw up family support agreements that specify how elderly members are to be cared for. As of the end of 2005, more than 13 million of these agreements had been signed.¹² Increasingly, parents are turning to the courts to enforce their rights. In 2005, rural elders filed more than 2,000 suits in Beijing's courts against migrant children who had defaulted on their filial obligations.¹³

China's informal family support networks are weakening even before the age wave rolls in.

The rapid aging of China's population threatens to place a heavy new burden on China's already weakening families. As the number of children per family declines, it will become ever less likely that an

⁹ *Urban Household Asset Survey* [in Chinese], National Bureau of Statistics of China, 2002, <http://www.stats.gov.cn/tjfx/ztxf/csjtccdc/index.htm>.

¹⁰ China National Committee on Aging, *Research Report on the Follow-Up Study of the State of the Elderly Population in Urban and Rural China* [in Chinese], December 17, 2007.

¹¹ "300 Million Chinese Farmers to Move into Cities in Next 20 Years," Xinhua News Agency, January 12, 2007.

¹² The State Council of China, *The Development of China's Undertakings for the Aged*, December 2006.

¹³ "Elderly Deserted by Own Families," AFP, December 4, 2006.

adult child or in-law will be available to care for an elder. According to demographer Xiaochun Qiao, rural women now turning 65 on average have 3.7 surviving children, while urban women have 3.0. By 2025, rural women turning 65 will on average have 2.2 surviving children, while urban women will have just 1.3.¹⁴ The Chinese call this the “4-2-1 problem”—the prospect that one child will have to support two parents and four grandparents.

The ability of families to care for the elderly, especially the burgeoning number of “old old” aged 80 and over, may be further strained by China’s large gender imbalance. Chinese families have always exhibited a strong preference for sons, in part because, in Confucian culture, it is the son who is obligated to care for his parents in old age. In a normal population, there are roughly 105 baby boys born for every 100 girls. In China in 2005, there were 119.¹⁵ Alarmed by the trend, the government has launched a major educational campaign to persuade parents that daughters and sons are equally valuable. As yet, however, the gender imbalance shows no signs of narrowing.

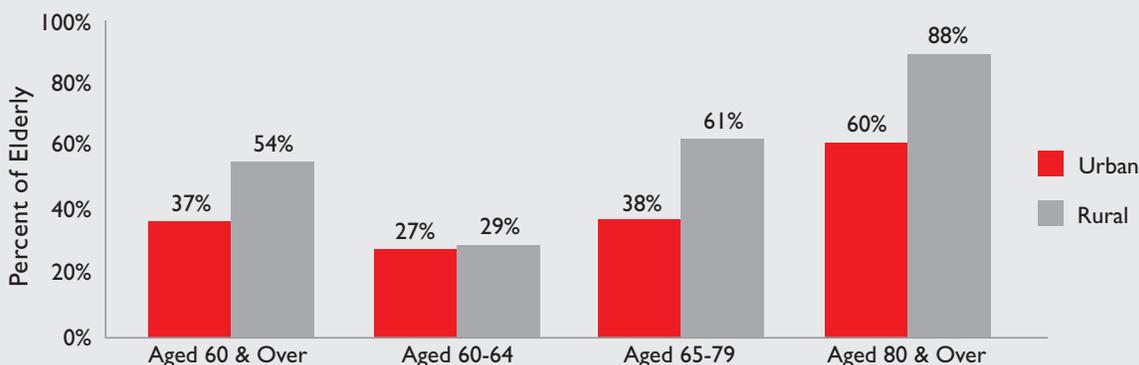
China’s large gender imbalance will exacerbate the challenge of caring for the elderly.

This imbalance has ominous social implications. Today’s “missing girls,” as they are called in China, are already giving rise to large bride shortages and bachelor surpluses. By 2020, the government estimates that there will be 30 million surplus men of marriageable age.¹⁶ It is not hard to imagine that these growing legions of undomesticated males could become a socially disruptive force, especially in a society like China’s where the expectation of marriage is nearly universal. Even more worrisome than the shortage of brides, however, is the looming shortage of daughters-in-law. Ironically, the missing brides of today will become the missing caregivers of tomorrow. After all, while it is the son who bears responsibility for caring for his aged parents in Confucian culture, it is the daughter-in-law who actually does the caring.

A young China with a predominantly rural economy and strong extended families could get by with a retirement system that leaves large gaps in coverage. A rapidly developing and rapidly aging China with weakening families cannot. The Chinese people understand this. According to a recent survey of urban residents, the overwhelming majority—87 percent—believe that society as a whole should assume the main responsibility for supporting the elderly.¹⁷ Yet 37 percent of urban elders and 54 percent of rural elders report that the family remains their primary source of support. Among elders aged 80 and over, these shares rise to 60 and

A large share of Chinese still depend on the extended family for support in old age.

Percent of Chinese Elderly Whose Primary Income Source Is the Extended Family, by Age and Residence in 2005



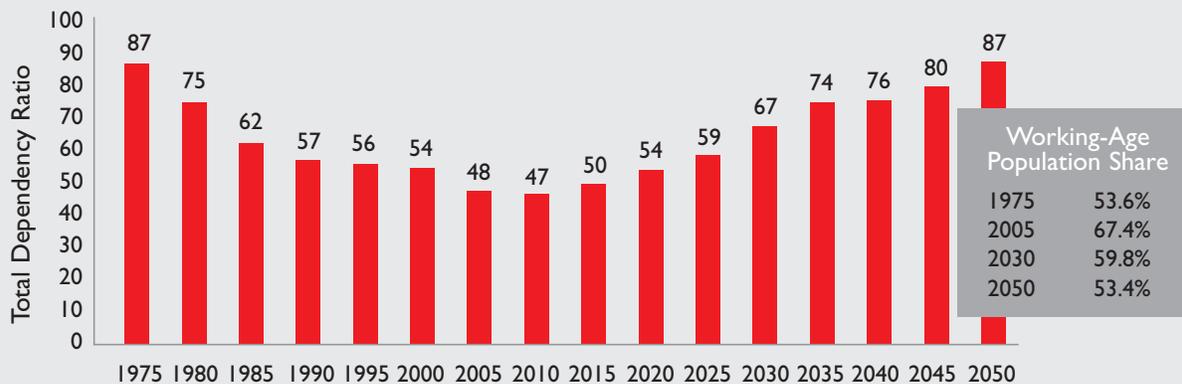
Source: NBS (2006)

Figure 12

¹⁴ Xiaochun Qiao, “From Decline of Fertility to Transition of Age Structure: Aging and Its Policy Implications in China,” *Genus* 57, no. 1 (2001).
¹⁵ National Population and Family Planning Commission of China, *Research Report on the National Demographic Development Strategy* [in Chinese], January 11, 2007, http://www.chinapop.gov.cn/fzgh/zlyj/200806/t20080626_154129.htm.
¹⁶ “China: 30 Million Men Face Bleak Future as Singles,” Xinhua News Agency, January 10, 2007.
¹⁷ Raymond Zhang, “Views on Filial Piety See Change,” *China Daily*, December 7, 2004.

China's period of "demographic dividend" is now coming to an end.

Total Dependency Ratio of Children (Aged 0-14) and Elderly (Aged 60 & Over) per 100 Working-Age Adults (Aged 15-59), 1975-2050



Source: UN (2007)

Figure 13

88 percent, respectively.¹⁸ (See figure 12.) This huge disjuncture between the retirement system that China has and the system that it needs not only threatens the material security of the elderly, but also increases the risks of social—and perhaps even political—crisis in an aging China.

The Broader Economic Outlook

For the past several decades, China's demographics have been leaning strongly with economic growth. When fertility first falls, societies enjoy a temporary "demographic dividend," a period of time in which the number of children declines faster than the number of elderly grows and the share of the population in the working years rises. A larger share of the population in the working years, all other things being equal, means a higher per capita living standard. The falling dependency burden, together with rising longevity, also tends to boost living standard growth by raising savings rates, encouraging investment in human capital, and freeing up adult time, especially the time of women, for market employment. The demographic transition thus opens up a window of opportunity for countries to boost economic growth.

China's "demographic dividend" has helped to underpin its stunning economic rise.

Economists who have studied the demographic transition agree that China's unusually large demographic dividend has underpinned its stunning economic rise. Between 1975 and 2005, the total dependency ratio of children and elderly to working-age adults in China plummeted from 87 to 48, among the largest drops of any country in the world. Meanwhile, the share of the population in the working years surged from 54 percent to 67 percent. (See figure 13.) Many studies have concluded that between one-quarter and one-third of the total growth in China's per capita GDP since the mid-1970s can be attributed to the shift in the age structure of its population.¹⁹

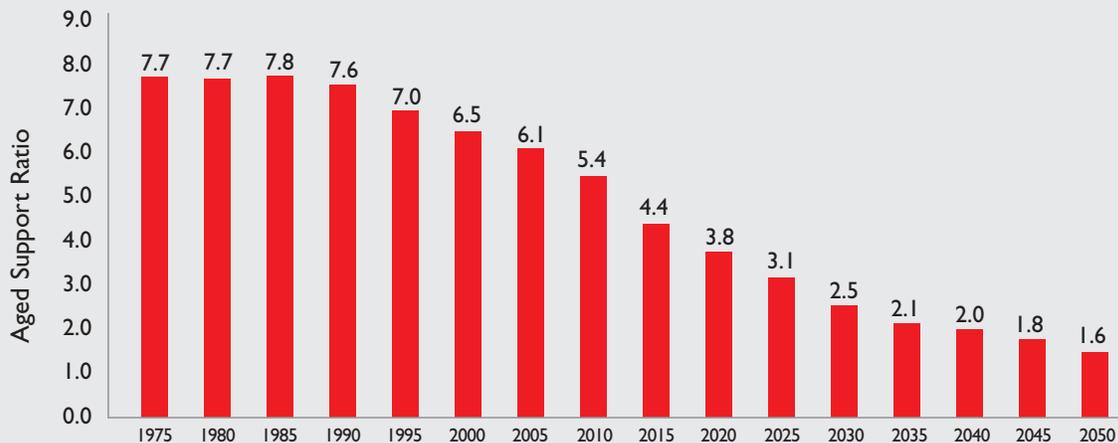
Beginning around 2015, China's favorable demographics will be thrown into reverse.

¹⁸ 2005 National 1% Sampling Survey, National Bureau of Statistics of China, March 16, 2006, <http://www.stats.gov.cn/tjsj/ndsj/renkou/2005/renkou.htm>.

¹⁹ See, for instance, Fang Cai, "Demographic Transition, Demographic Dividend, and the Sustainability of Economic Growth" [in Chinese], *Population Research* 128, no. 12 (2004); and Feng Wang and Andrew Mason, "Demographic Dividend and Prospects for Economic Development in China" (paper presented at the UN Expert Group Meeting on Social and Economic Implications of Changing Population Age Structures, Mexico City, August 31–September 2, 2005).

There will be far fewer working-age adults to support each elder.

Chinese Aged Support Ratio of Working-Age Adults (Aged 15-59) to Elderly (Aged 60 & Over), 1975-2050



Source: UN (2007)

Figure 14

Beginning around 2015, however, China's favorable demographics will be thrown into reverse. As the relative growth in the number of elderly finally overtakes the relative decline in the number of children, the total dependency ratio will bottom out and once again begin to rise. At the same time, the working-age population will peak and begin to decline. While China's demographic transformation has so far been leaning with economic growth, it will soon be leaning against it.

A rising share of workers' incomes will have to be transferred to nonworking elders.

As China ages, a rising share of workers' incomes will have to be transferred to nonworking elders. In 2005, there were 6.1 working-age adults in China available to support each elder. (See figure 14.) That ratio is due to fall to 2.5 by 2030 and to just 1.6 by 2050—which means that the average burden that must be shouldered by each worker will nearly quadruple. As we have seen, much of the burden of supporting the elderly is now handled informally through families, which explains why China spends just 3 percent of GDP on public pensions. As China ages and develops, however, a larger share will inevitably show up in public budgets. If financed on a pay-as-you-go basis, a pension system that offered all workers the same average benefit as today's basic pension

system would cost at least 10 percent of GDP by 2030 and at least 15 percent by 2050.²⁰ The rising cost of health care for the elderly would come on top of this.

Along with its growing old-age dependency burden, the contraction of China's working-age population could also become a drag on economic growth. Over the three decades of China's economic reform era, the expansion of its working-age population has on average added 1.8 percentage points per year to its GDP growth rate. By the 2030s, the contraction of its working-age population will be subtracting 0.7 percentage points per year—a dramatic swing of 2.5 percentage points.

An aging China may face a future of capital shortages.

An aging China may also face a future of capital shortages. With China now awash in excess savings, running huge current account surpluses, and accumulating massive foreign exchange reserves, this prospect may seem remote. Yet numerous studies have confirmed that the classic lifecycle motivation for savings—accumulating assets during the working years to be drawn down during the retirement years—functions far more powerfully in China than in the developed countries, in part because the social insurance system is not yet well developed and in part because the Confucian ethic that traditionally allowed elders to rely on their children for support in old age is

²⁰ This illustrative projection assumes, first, that the average pension benefit will remain unchanged (at its 2007 level) relative to GDP per worker; and second, that two-thirds of the future elderly will qualify for a pension benefit based on their employment and contribution history.

weakening. This means that savings rates, which have risen dramatically in recent decades as youth dependency has declined and the share of the population in the working years has surged, could fall just as dramatically once elder dependency begins to climb.

The decline in domestic savings could be accompanied by a decline in the availability of affordable foreign capital.²¹ Most of today's rich countries face towering age waves that are peaking even sooner than China's. Most also have expensive pay-as-you-go pension and health benefit programs whose costs will climb steeply in coming decades. They too are therefore likely to experience a sharp drop in savings rates, both private and public. For China, the result could be to curtail the massive inflows of foreign direct investment that have played such a central role in fueling its economic growth.

All of this means that China's continued economic success will hinge on its ability to efficiently allocate savings to investment. Yet this is China's greatest economic weakness. Although China's labor markets and product markets are now more liberal than those in many capitalist economies, reform of its capital markets has lagged. In effect, most of the capital in China is still allocated by the government through the state-owned banks. History has proven, time and again, that no administrative process can approach the efficiency of decentralized markets in allowing investment resources to seek out the highest return. Today in China many large favored enterprises are awash in investment funds despite poor expected returns and prospects, while many small unnoticed enterprises are starved for funding despite excellent expected returns and prospects.

Over the past three decades, the underdevelopment of China's capital markets has not done much to hinder its economic performance—in part because of the large inflows of foreign direct investment, and in part because so much of its stellar gains in real GDP have been generated by the mass internal migration of workers from the country to the city. Underemployed workers from nonmarket rural sectors who once hardly participated in the national economy have been taking full-time, low-skilled manufacturing jobs that are integrated with the global economy. With the migration comes a huge leap in the productivity of the workers, even when the firms offering the jobs are not accountable to financial markets (for example, SOEs engaged in primary production) or rely mainly on foreign capital (the so-called manufacturing platforms).

China's development agenda will increasingly depend on the vitality of its capital markets.

Reliance on foreign direct investment, however, is a risky long-term strategy—and migration cannot continue indefinitely as a major source of productivity growth. China is losing its competitive advantage in low-skilled manufacturing. As its industries move up the global value-added scale, a mismatch is emerging between the skills of its remaining surplus rural labor and the demands of the jobs being created in the growth sectors of its economy. In the decades to come, gains in productivity and living standards will depend increasingly on workers with good jobs finding better jobs—and on firms with established markets finding innovative ways to win new markets. China's development agenda will, in other words, depend increasingly on the vitality of its capital markets.

The social stresses of breakneck development may become less tolerable in an aging China.

The rapid pace of China's economic development and the sweeping social changes that accompany it have sometimes been likened to a speeding bicycle that has to keep going just to keep from falling over. China's aging increases the pressure. On the one hand, it makes rapid economic growth even more essential, since workers will have to transfer a rising share of their incomes to nonworking elders. On the other hand, it makes rapid growth more difficult to achieve. The social stresses of breakneck development, from widening income gaps to weakening families, have been bearable in a youthful China in which incomes have been rising rapidly. They may become less tolerable in an aging China in which economic growth is slowing.

Throughout China's long history, periods of strong central authority and growing economic prosperity have alternated with periods of social and political chaos—or what the Chinese call *luan*. Whether China's aging ushers in the next turn of the cycle may well depend on how successful China is in meeting its aging challenge.

²¹ For a summary of the literature on demographics, savings, and global capital flows, see Richard Jackson and Neil Howe, *The Graying of the Great Powers: Demography and Geopolitics in the 21st Century* (Washington, DC: Center for Strategic and International Studies, 2008), 97-108.



The Evolution of China's Retirement System

China's retirement system, like many of its social and economic institutions, is still evolving. The government began to lay the foundations of the "basic pension system" for urban workers in the early 1990s. In 1997, it initiated a transition from the original pay-as-you-go plan to a two-tiered system consisting of a scaled-back pay-as-you-go benefit and a personal retirement account. Since then, it has repeatedly adjusted the system's design—testing reforms in provincial-level pilot projects before introducing them nationally.

The government understands that a rapidly developing and rapidly aging China needs a public pension system capable of providing a decent level of support to the old without imposing a crushing burden on the young. It understands that the system must be national in scope, and in November 2007 it set a goal of extending coverage to all Chinese, both urban and rural, by 2020.²² It also understands the potential advantages that a fully funded retirement system can confer in achieving these goals.

China's basic pension system suffers from serious structural problems.

Today's basic pension system is supposed to be the foundation on which tomorrow's national system will ultimately be built. The basic pension system, however, suffers from serious structural problems that make it difficult for it to fulfill its mission. Although the system is relatively new, it took over the obligations of preexisting SOE pension plans, and therefore has large unfunded liabilities. Contribution rates are prohibitively high—generally 28 percent of workers' taxable payroll—which encourages evasion and makes expanding coverage difficult. The system operates within central government guidelines, but contributions are collected and benefits are paid by local social security bureaus at the municipal, district, or (in some cases) provincial level, which means that pensions are not fully portable. Until recently, contributions to the personal account tier of the

system were routinely diverted to cover deficits in the pay-as-you-go tier, leaving the accounts largely unfunded. Even when contributions are saved, moreover, they earn far less than a market return, which means that the accounts cannot generate adequate replacement rates.

Over the past few years, the government has stepped up its efforts to build an adequate and sustainable retirement system. It has enacted a series of reforms that begin to address the shortcomings of the basic pension system; it is building up a national pension reserve fund; and it has launched a new system of supplementary private pensions. Although these initiatives have pushed China's retirement system in the right direction, more fundamental reform is required. In this chapter, we take a close look at the progress that China has made in its long march to retirement reform. In the next chapter, we outline a plan that would allow the government to achieve its long-term goals.

From Iron Rice Bowl to Empty Accounts

To understand the challenges facing China's retirement system, we must begin by taking a look back at the history of market reform and SOE restructuring. In the days of China's planned economy, most SOE workers enjoyed cradle-to-grave social protection. Wages were low, but the state-owned enterprises guaranteed lifetime employment along with social benefits, including pensions, health care, and housing. China's "iron rice bowl" was based on the work unit, but backed up by the government, which subsidized the SOEs—and thus effectively guaranteed pensions.



²² Hu Jintao's Report at the 17th National Congress of the Communist Party of China [in Chinese], October 15, 2007.

When China launched its market reform in 1978, it broke the old SOE “iron rice bowl.”

When China launched its market reform in 1978, it broke the iron rice bowl. As each SOE assumed responsibility for its own bottom line, the security of its pension benefits came to depend on its financial status. Unprofitable enterprises delayed or canceled pension payments, throwing millions of retirees into poverty.

Beginning in the early 1990s, the central government attempted to alleviate the crisis by establishing local social security bureaus to collect and “pool” SOE pension contributions. These pools, which ultimately formed the basis of today’s basic pension system, served two purposes. They facilitated SOE restructuring, since workers could now leave unprofitable enterprises for profitable ones without losing their accrued pension benefits—at least so long as they remained within the state-owned sector and the local pool. They also improved retirement security, since pension payments no longer depended directly on the solvency of a retiree’s former employer.

Pooling alone, however, was not enough to shore up the pension system. As the state-owned sector downsized, millions of younger workers left for the private sector, while millions of older workers were forced into early retirement. In less than a decade

between 1989 and 1997, the basic pension system’s support ratio of contributing workers to retired beneficiaries plummeted from 5.4 to 3.4, far beneath China’s demographic aged support ratio of working-age adults to elderly. (See figure 15.) In some heavily industrialized provinces, the system support ratio dropped even further. In Liaoning province in China’s rust belt, it sank beneath 3.0, and in Shanghai it sank beneath 2.5. Without a bailout, the system faced near-term financial collapse.

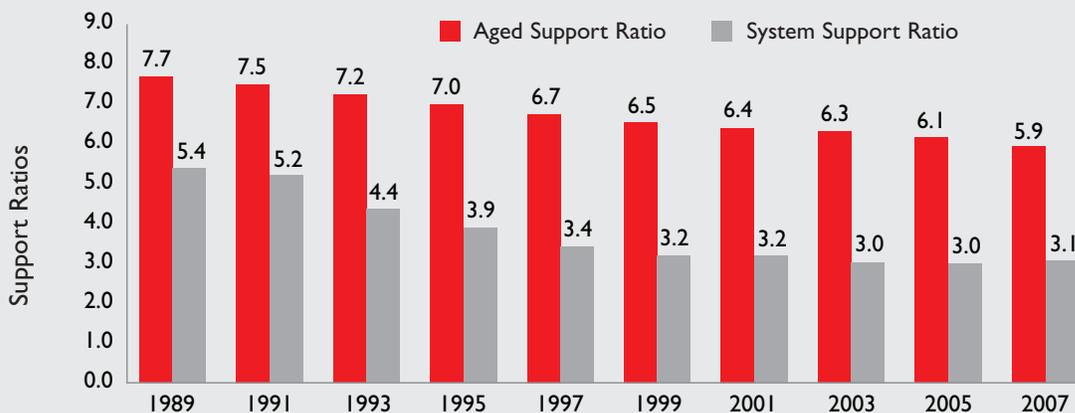
In 1997, the State Council settled on a blueprint for a new pension system for urban workers.

Meanwhile, China’s leaders were beginning to focus on the long-term aging challenge. During the mid-1990s, the central government consulted extensively with foreign pension experts, including teams from the Asian Development Bank and the World Bank. It also encouraged the provinces to stage pension reform pilot projects. In 1997, the State Council, China’s highest executive body, settled on a blueprint for a new pension system that seemed to address both the near-term and long-term challenges.

The 1997 reform for the first time extended coverage under the basic pension system to private-sector workers. At the same time, it replaced the existing pay-as-you-go pension system with a new two-tiered

The demographics of China’s basic pension system are much older than those of the nation as a whole.

Aged Support Ratio of Working-Age Adults (Aged 15-59) to Elderly (Aged 60 & Over) versus System Support Ratio of Covered Workers to Retirees in the Basic Pension System, 1989-2007



Source: MOHRSS (2008); and NBS (2007)

Figure 15

system consisting of a scaled-back pay-as-you-go (or social pool) benefit and a personal retirement account. Under the reform, the “old men,” those who were already retired in 1997, continued to receive pre-reform benefits that typically replaced about 80 percent of wages. The “new men,” those who joined after 1997, were promised a considerably less generous 60 percent replacement rate, consisting of a social pool benefit that replaced 20 percent of wages and a personal account benefit that the government estimated would replace another 40 percent. The “middle men,” those who were contributing workers in 1997, were promised pro rata benefits based on years spent participating in the old and new systems. Although the generosity of the pension system was reduced for future retirees, retirement ages remained low: just 60 for men and 55 for women.

Because the new system took over the unfunded liabilities of the financially troubled SOE system, its contribution rate had to be set at a high level. The central government’s guidelines called for a total contribution rate of 24 percent of taxable payroll. Of this, 13 percent of payroll (contributed by employers) was intended for the first-tier and 11 percent (3 percent contributed by employers and 8 percent by employees) for the personal accounts. In many provinces, the actual contribution rate was even higher.

Nearly half of contributions to the basic pension system simply go to defray the legacy cost of pensions under the old SOE system.

The reform was clearly an effort to help the SOEs by bringing new contributors into the pension system. The newly covered private-sector workers, after all, were disproportionately young men and women with years of contributions to make before they could claim a benefit. Even the personal accounts, with their promise of personally owned savings, were intended to attract new contributors. Yet the reform also represented a major step toward addressing China’s looming old-age dependency challenge. The private sector, which was nonexistent in 1978, now accounts for over half of urban employment and an even larger share of urban output. Excluding it from the pension system made no long-term policy sense.

At the same time, the personal accounts were expected to take pressure off government budgets as China aged.

It soon became apparent, however, that the reform was not working out as expected. Coverage under the basic pension system failed to rise, which meant that its support ratio of contributors to beneficiaries continued to deteriorate. Private enterprises and workers had little incentive to join the system, since a large share of their contributions—according to the World Bank, nearly half²³—simply go to defray the legacy cost of prior pension promises to SOE retirees. In effect, the government was asking the new men from the private sector to finance two retirements: their own and those of the participants in the pre-reform system, with its more generous benefits. The new men, for their part, were refusing to join.

The basic pension system’s high contribution rate has made it difficult to expand coverage.

The failure to increase coverage meant that it was impossible to fund the personal accounts. Since social pool contributions in most provinces were insufficient to cover current benefit payments, the local social security bureaus diverted personal account contributions to cover the shortfall. There was no legal or even procedural obstacle to doing so,



²³ *China: Evaluation of the Liaoning Social Security Pilot*, Report no. 38183-CN (Washington, DC: The World Bank, December 2006).

since contributions to both tiers of the pension system were deposited in the same social security bureau bank accounts. In many provinces, the social pool deficits exceeded the combined contributions to both tiers of the pension system, which meant that all personal account contributions were diverted—while still leaving a cash shortfall that had to be plugged by central government subsidies.

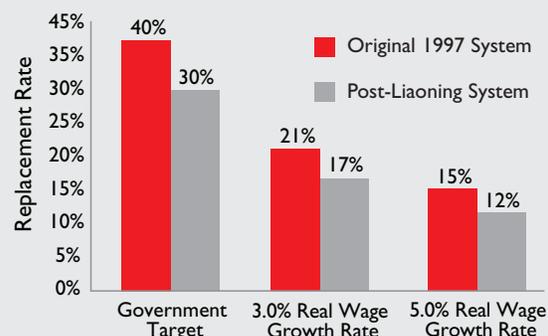
The personal retirement accounts set up by the 1997 reform turned out to be entirely unfunded.

To be sure, personal account contributions were still credited to workers' accounts. The accounts, however, were purely “notional”—or, as the Chinese media came to describe them, “empty.” Like the U.S. Social Security trust fund, they represented a claim on future tax revenues, not real assets that could finance future retirement benefits. The administratively determined rate of return on the accounts, moreover, was far too low to generate the promised 40 percent replacement rate. As a rule, the social security bureaus set the return equal to the bank interest rate on one-year term deposits, which in real terms averaged 1.7 percent between 1997 and 2007, far beneath the rate of real wage growth. Since 2000, the bank interest rate has averaged just 0.5 percent. Even if we generously assume a 2.0 percent real rate of return, the personal accounts would in reality generate replacement rates of no more than 15 to 20 percent for full-career workers. (See figure 16.) Rather than the promised 60 percent, replacement rates for both tiers of the system combined were unlikely to be more than 35 to 40 percent. Understandably, workers came to view their personal account contributions as a tax, which further exacerbated the evasion problem.

Along with its high contribution rates and low returns, the system's limited portability also discouraged potential new joiners. Workers must contribute to the basic pension system for 15 years before they qualify for a first-tier benefit, and even then the benefit is forfeit if they leave their social pool. Although personal account balances vest immediately, there is no provision for transferring them between social security bureaus in different social pools. If workers move, their only option is to request a lump-sum payout from their social security bureau, which, to the extent the account is unfunded, must draw on the social pool to come up with the cash.

China's current personal accounts system cannot possibly deliver on its promises.

Basic Pension System Personal Accounts:
Government Target Replacement Rate versus Potential Replacement Rates under Different Real Wage Growth Assumptions*



*Contribution rates are 11 percent for original 1997 system and 8 percent for post-Liaoning system. Projections assume a 2.0 percent real rate of return, a 40-year career, and a retirement age of 60.
Source: CSIS calculations

Figure 16

Liaoning and Beyond

In the decade since its landmark 1997 reform, the government has launched a wide range of reform initiatives designed to strengthen China's retirement system. Although the government has made significant progress, fundamental problems remain.

Although recent government reforms have helped to strengthen China's retirement system, fundamental problems remain.

The new round of reforms began with the 2001–2004 Liaoning province pilot project, which tested a plan to bolster the basic pension system's finances and allow its empty personal accounts to be saved. The plan involved two steps, the first being to eliminate the social pool deficits. The government began by raising the basic pension system's first-tier contribution rate and downsizing its personal accounts. Specifically, the first-tier contribution rate was raised from 13 to 20 percent (still paid entirely by employers), while the personal account contribution rate was lowered from 11 to 8 percent (now paid entirely by employees). The overall contribution rate for both tiers was thus increased from 24 to 28 percent. At the same time, the

government provided for increased subsidies to close any remaining deficit in the social pools. The second step was to create a “firewall” between the personal accounts and the social pools. The responsibility for collecting contributions was transferred from the local social security bureaus to the local tax bureaus, which deposit contributions earmarked for each tier in separate accounts at different banks. The social security bureaus then draw on the accounts to cover first-tier benefit payments and personal account withdrawals.

Between 2004 and 2006, the new framework tested in the Liaoning pilot project, including the revised contribution rates and personal accounts firewall, was in principle extended to the rest of the country. However, in some highly industrialized provinces with low system support ratios, as well as some poor provinces, the State Council concluded that fully funding even the downsized personal accounts might not be a feasible near-term goal. These provinces include Heilongjiang, Henan, Hubei, Hunan, Jilin, Shandong, Shanghai, Shanxi, Tianjin, and Xinjiang. Here the central government and provincial authorities signed explicit subsidy agreements designed to ensure that at least 5 percent of the 8 percent personal account contribution is saved.

While the personal accounts are now partially funded, they earn too low a return to generate targeted replacement rates.

The “reform of the 1997 reform” has succeeded in raising the basic pension system’s overall balance and reducing the share of personal account contributions that is diverted to pay first-tier benefits. The reform, however, did nothing to improve the dismal rate of return on the accounts. Although the personal accounts are now partially funded, central government policy requires that the local tax and social security bureaus invest saved contributions almost exclusively in bank deposits. The interest on these deposits may be somewhat higher than the one-year term deposit rate, but the personal accounts are generally credited with the latter just as they always have been.²⁴ Moreover, because the personal account

contribution rate was reduced from 11 to 8 percent, future personal account replacement rates (again, see figure 16) will be even lower than before.

It is true that some workers will now earn a larger first-tier benefit. Under the original 1997 reform, the minimum and maximum first-tier replacement rates were the same. Workers earned a 20 percent replacement rate after 15 years of contributions, but received no further credit for additional contribution years. Under the new post-Liaoning benefit rules, workers will need to contribute to the system for 20 years to earn a 20 percent replacement rate, but their replacement rate will continue to rise by 1 percent for each additional year of contributions. The potentially higher first-tier replacement rate, however, comes at the cost of a higher first-tier contribution rate.

The National Pension Fund will be able to defray only a small fraction of the basic pension system’s unfunded liabilities.

As part of its efforts to strengthen the basic pension system’s finances, the government in 2000 established a reserve fund known as the National Pension Fund, or NPF. The NPF, which is supposed to serve as a “fund of last resort” when China’s age wave begins to push up pension costs, is financed through a combination of central government subsidies, revenue raised from the sale of shares in state-owned enterprises, and the profits of China’s national lottery. Initially, NPF assets were invested almost entirely in government bonds and bank deposits. However, the fund’s investment guidelines have been gradually liberalized as the government has come to view it as a potentially valuable policy tool for bolstering strategic industries and developing capital markets. As of the end of 2007, 47 percent of NPF assets were outsourced to external fund managers, who handle the fund’s growing investments in domestic and international securities. Although the NPF is increasing in size, its total assets still amount to just 2.1 percent of GDP—a tiny fraction of the basic pension system’s estimated unfunded liabilities of some 120 to 140 percent of GDP.²⁵

²⁴ See Bingwen Zheng, “The Origin of China’s Partially Funded Social Security Scheme and Its Future Direction,” *The Chinese Economy* 40, no. 4 (July/August 2007); and Bingwen Zheng, “Assessment for Social Security Pilot in Jilin and Heilongjiang of China,” *China and World Economy* 14, no. 5 (2006).

²⁵ Yvonne Sin, “China: Pension Liabilities and Reform Options for Old-Age Insurance,” World Bank Working Paper Series no. 2005-1 (Washington, DC: The World Bank, May 2005), 33.

Since 2006, the central government has encouraged provincial governments to entrust the management of personal account assets to the National Pension Fund. The policy was in part a reaction to that year's pension fund scandal in Shanghai, where the diversion of personal account assets into speculative real estate investments that benefited the party chief's family members and close associates shook confidence in the ability of local governments to manage pension funds. The NPF now manages a portion of the personal account assets of nine provinces—or more precisely, the central government subsidies that in effect fund the personal accounts. As is typically the case with locally managed personal accounts, the accounts managed by the NPF are credited with less than actual investment returns—in this case, far less. In the agreement between the NPF and the provinces, which runs from 2006 through 2010, the accounts are to be credited with interest calculated at a contractually fixed 3.5 percent nominal rate—which means that, thus far, the real rate of return earned by the accounts has actually been negative. Meanwhile, in 2006 and 2007, which were boom years for China's stock market, the NPF earned a real return of 20 percent on its investment portfolio.

The government has begun to offer migrants and other informal-sector workers special incentives to join the basic pension system.

The central government is also trying to increase coverage under the basic pension system by encouraging local authorities to offer informal-sector workers special incentives to join. In some provinces and municipalities, migrants, self-employed workers, and even workers at small and medium enterprises are being allowed to contribute to the system at a lower 18 percent rate (10 percent to the social pool and 8 percent to a personal account), while earning the same benefits as those who contribute at the 28 percent rate.²⁶ The contribution discounts appear to be having some impact. After hovering between 45 and 46 percent of the urban workforce between 2000 and 2004, coverage under the basic pension system rose to 52 percent in 2007.

China's new 2008 labor law, which requires all employers and employees to sign labor contracts, may further raise coverage by improving the government's enforcement capabilities. It is doubtful, however, whether a large increase beyond today's level is feasible without more fundamental reform of the pension system itself. Even with the special new deals for informal-sector workers, the system still offers a poor payback on contributions, which means that many enterprises and workers will continue to find ways to evade participation. This is especially true for migrants, only a tiny fraction of whom will ever qualify for a first-tier benefit. Most are also likely to cash in their personal accounts long before they reach old age, which means that their savings “leaks” from the system and contributes little or nothing to retirement security. The Chinese media recently coined the term “cash-in phenomenon” (*tuibao*) to describe the long lines of migrants waiting in front of local social security bureaus to collect their account balances before returning home at the end of the year.²⁷ In view of the obstacles to integrating migrants into the two-tiered basic pension system, the government is studying the feasibility of creating a separate stand-alone personal accounts system for migrants whose benefits, at least in principle, would be portable.²⁸

To be sure, the government has made some progress in improving portability for all workers by encouraging local governments to consolidate municipal and district social pools at the provincial level. The progress, however, has been slow. Out of China's 31 provinces, just 13 (including Beijing, Shanghai, and two other cities that are administratively treated as provinces) had achieved provincial-level pooling as of the end of 2007. National-level pooling, which is essential to ensure both worker mobility and retirement security in a rapidly modernizing China, remains a distant goal.

National-level pooling of pension contributions, and hence full portability, remains a distant goal.

²⁶ The World Bank, *Liaoning Social Security Pilot*, 27.

²⁷ “Social Insurance Policy Has Become Worthless: A Wave of Migrant Workers Resign and Cash-in Their Pension” [in Chinese], *People's Daily*, January 8, 2008; and “Another Wave of Pension Cash-ins Emerges: Non-Transferable Pensions Have Become ‘Local Food Coupons?’” [in Chinese], *South Yangtze Times*, February 27, 2008.

²⁸ “China to Cover 200m Migrant Workers with Portable Pension System,” *ChinaStakes.com*, August 11, 2008; and Shan He, “A Large Social Safety Net Spun for 1.3 Billion,” *China.org.cn*, October 5, 2008.

In addition to reforming the public pension system, the government launched a new voluntary system of private employer-sponsored enterprise annuities, or EAs, in 2004—or more precisely, it restructured and rebaptized the small existing system. Any firm that contributes regularly to the basic pension system can set up a plan, and any of the firm's employees can choose to participate. The scheme, however, is primarily intended to provide supplementary retirement income to higher earners with wages over the basic pension system's contributable wage ceiling. Since this ceiling is relatively low (300 percent of the local average wage), higher earners' basic pension benefits may replace no more than a tiny fraction of their total wages.

Enterprise annuities are defined-contribution plans similar to U.S. 401(k)s. Annual contributions, which are split evenly between employers and employees, are capped at one-sixth of the previous year's wage bill for all employees. Benefits can be paid either as a lump sum or in monthly installments when an employee reaches the minimum retirement age of 60 for men and 55 for women, the same eligibility ages for basic pension benefits. Although so-called legacy EAs set up before 2004 were often managed by the local social security bureaus, following the Shanghai pension scandal the government mandated that all assets be transferred to licensed independent fund managers—a process that is still underway.

China's new system of private enterprise annuities faces considerable obstacles to growth.

The new enterprise annuity system meets an important need, but also faces considerable obstacles to growth. The setup costs are high, since trustee, custodian, administrator, and fund manager functions must be performed by separate financial institutions. Each EA service provider must obtain approval from its own supervisory agency—a bank from the China Banking Regulatory Commission, an insurer from the China Insurance Regulatory Commission, and an investment firm from the China Securities Regulatory Commission. Each must then obtain a license from the Ministry of Human Resources and Social Security. The tax treatment of EAs is also inadequate, haphazard, and ill-defined. Only a fraction of employer contributions are tax deductible, and the amount varies from province to province. There are as yet no clear government guidelines on the tax treatment of employee contributions, investment earnings, and

withdrawals. Investment rules are highly restrictive, forcing fund managers to overweight portfolios with low-return fixed-income assets. There is no provision for master trust arrangements, which allow small and medium enterprises to pool contributions in the same plan, thus economizing on setup and maintenance costs. All of this helps to explain the low coverage rates noted in the previous chapter.

The Unfinished Agenda

China is clearly better prepared for the aging of its population than it was just a few years ago. The Liaoning pilot project and its subsequent extension to the rest of China, the establishment of the National Pension Fund, and the launch of the new enterprise annuity system are all helping to increase funded retirement savings. At the same time, the government has begun to increase subsidies to the basic pension system, thus assuming the burden for at least a part of its unfunded liabilities. Coverage under the system has also begun to rise, and its benefits are gradually becoming more portable as pooling is consolidated at the provincial level.

The recent reforms, however, fall well short of a complete solution. The basic pension system's personal accounts, though now partially funded, still earn far less than a market rate of return. The increase in central government subsidies, though a step in the right direction, has been too small to allow the government to lower the system's prohibitive contribution rate. Indeed, the contribution rate is higher today than it was in 1997. Despite the progress toward provincial-level pooling, tens of millions of workers still face a stark trade-off between job mobility and retirement security. Pension coverage remains far from universal, even in the cities. Meanwhile, the government has yet to take serious steps toward realizing its promised extension of coverage to the countryside.

Successfully confronting the aging challenge will require a more radical restructuring of China's retirement system.

In short, though the outlook for retirement security has begun to improve, the government's incremental approach to reform appears to be approaching its limits. To successfully confront the aging challenge, it will have to undertake a more radical restructuring of the retirement system.



A New Direction for Retirement Reform

The challenge of building a national pension system in China could hardly be more daunting. China faces the same obstacles to ensuring universal coverage that other developing countries do: a large informal sector, high levels of self-employment, and limited government enforcement capabilities. But in addition, China faces unique hurdles that greatly complicate the challenge. It is aging much faster than most developing countries are, which means that it has less time to prepare. And, as a legacy of the old iron rice bowl, its basic pension system has large unfunded liabilities that render it unsustainable.

The CSIS reform plan would require a significant up-front investment, but would bring vast benefits as China ages.

To meet the challenge, CSIS proposes a four-step reform plan. The first step is to create a universal floor of protection against poverty in old age that would cover all Chinese, whether or not they have contributed to the basic pension system. The second step is to lower the basic pension system's contribution rate by socializing the cost of its unfunded liabilities—that is, by having the central government directly assume the burden. The legacy cost of the SOEs is a collective problem, and should be paid out of general government tax revenues, not workers' payroll contributions. An aging China can no longer afford to hold retirement reform hostage to SOE restructuring. The third step is to gradually transform today's two-tiered basic pension system into a national system of publicly regulated but privately managed and invested personal accounts. Unlike today's personal accounts, the reformed accounts would be fully funded, fully portable, and offer participants a market rate of return. The fourth step is to expand supplementary retirement coverage under China's new enterprise annuity system.

The reform we propose would require a significant up-front investment, but would cost far less in the long term than today's system and would bring vast benefits as China ages. The floor of protection would spare tens of millions of elders from a destitute old age—and might even avert widespread social and

political unrest in an aging China. The national system of fully funded personal accounts would, over time, allow the majority of tomorrow's growing elderly population to enjoy a comfortable retirement without overburdening tomorrow's workers. It would also help an aging China to meet its long-term development goals by broadening and deepening capital markets and maintaining adequate rates of savings and investment. Along the way, it would turn most workers into property-owning stakeholders in China's continued economic rise.

The government would have to overcome considerable obstacles to build the floor of protection and create a genuinely funded personal accounts system, from the lack of administrative infrastructure to the immaturity of China's capital markets. But the reform is feasible, affordable, and offers great advantages over the alternatives.

Building the Floor of Protection

The foundation of the retirement system must be a universal floor of protection against poverty in old age. In developed countries, this floor is often provided by redistributive benefit rules built into the regular contributory public pension system. In China, however, it is nearly impossible for a contributory system to achieve universal coverage. China is by no means unique in this regard. Developing countries around the world must grapple with the same problem: Workers in the informal sector often fail to contribute to the public pension system—and even when they do contribute, they do so irregularly, which means that the ultimate benefits they earn may be inadequate.

The foundation of the retirement system must be a universal floor of protection against poverty in old age.

What China needs is a general-revenue financed floor of old-age income support—or what is sometimes called a “social pension” or “zero tier.” This floor of protection, which would be jointly financed by the

central and provincial governments, would guarantee a minimum level of income to all Chinese elders, regardless of their employment history or contribution record. The eligibility age would initially be set at 60, but might be raised over time. Given the huge regional disparities in living standards across China, benefits would have to vary depending on residence. A reasonable solution might be to peg the floor to 20 percent of the average local wage, which until recently was the fixed replacement rate for the first tier of China's basic pension system. Twenty percent of the average local wage is somewhat higher than the government's minimum living standard guarantee for urban workers and almost precisely equal to the World Bank's dollar-a-day threshold of abject poverty for rural workers.

The poverty floor would provide larger benefits and help far more elders than the current minimum living standard guarantee.

The floor of protection would be means-tested to keep its cost manageable. Benefits, however, would be phased out gradually as incomes rise in order to minimize disincentives to participate in the contributory pension system. Elders aged 60 and over who have no other source of income would be eligible for a full zero-tier benefit equal to 20 percent of the average local wage. The zero-tier benefit would be reduced by 1 yuan for every 5 yuan in other household income, so that it falls to zero for elders with incomes equal to the average local wage. This gradual phase-out means that our floor of protection would provide larger benefits and help far more elders than the current minimum living standard guarantee, which merely tops up income to the poverty threshold.

In principle, the zero tier could be a universal flat benefit—that is, the same fixed yuan amount for all elders. Some pension experts argue that flat-benefit poverty backstops are superior to means-tested ones, since they avoid the incentive problems inherent in any means-tested system. But in fact, even a flat benefit might create disincentives to participate in the contributory pension system, especially for workers with wages near the poverty line. In any case, a flat benefit would be much more expensive. We estimate that a universal flat benefit for all elders aged 60 and over equal to 20 percent of the local average wage would cost roughly 3 percent of GDP today and at

least double that by 2030. The means-tested benefit that we propose could provide the same level of poverty protection at about one-third of the near-term cost—1 percent of GDP—and an even smaller fraction of the long-term cost if our restructuring of the basic pension system encourages higher participation rates. Even this more economical approach, of course, represents an extra burden on the budget. The floor of protection would therefore be phased in gradually between 2010 and 2020.

Increasing Funded Retirement Savings

Beyond a broad floor of old-age poverty protection, China needs a contributory pension system that, over time, will allow most elders to enjoy something approaching their preretirement standard of living. The current basic pension system is supposed to perform this function, but as currently structured it cannot fulfill its mission. Its coverage remains uneven, its benefits are not fully portable, and its personal accounts earn far less than a market rate of return. Yet despite the system's inadequate benefits, it places a heavy burden on workers that can only grow as China ages.

Above the floor of protection, China will have to rely more heavily on funded pensions.

Financing a more adequate national pension system on a pay-as-you-go basis is not a viable long-term option. An aging China will have to rely more heavily on fully funded pensions that allow elders to finance a larger share of their own retirement income through savings set aside during the working years. The choice is simple: Does China want to pay for its age wave by imposing a rising tax burden on low-wage workers? Or does China want to pay for it out of the new wealth that a funded retirement system will create?

We believe that the best solution is to transform the current basic pension system into a national system of publicly regulated but privately managed and invested personal accounts. The first pay-as-you-go tier of the basic pension system would be phased out, since its primary purpose—providing a secure base of old-age income support—can be accomplished more efficiently through our plan's new means-tested floor of protection. Meanwhile, the second personal account tier of the system would be enlarged.

When the transition is complete, the total contribution rate for the new pension system would be 18 percent of covered payroll, roughly one-third less than the current 28 percent rate. Of this, 16 percent would flow to the personal accounts to finance retiree and aged survivors benefits. The remaining 2 percent would be earmarked for purchasing insurance to cover disability and young survivors benefits. Unlike benefits to retirees and aged survivors, these benefits necessarily require risk-pooling and cannot be financed through a savings-based personal accounts system.

The best solution may be to transform the basic pension system into a national system of fully funded personal accounts.

The transition to the new system would be financed as follows. Central government subsidies to the local social security bureaus, which now cover about 15 percent of current basic pension benefits, would be gradually increased between 2010 and 2020 until they cover 100 percent of current benefits, except for funded payouts from personal accounts. Workers would continue to contribute 8 percent of wages to their personal accounts, just as they do today. As the government subsidies grow, the current 20 percent employer contribution rate would be gradually reduced to 10 percent, of which 8 percent would flow to the personal accounts, leaving 2 percent to finance disability and young survivors benefits. Current retirees would continue to receive benefits through their local social security bureaus. Following the example of Chile, Mexico, and a number of other countries, the accrued benefits of workers who have not yet retired—or perhaps just of workers younger than a certain age—would be credited to their personal accounts in the form of interest-earning government “recognition bonds.” The advantage of this approach is that it avoids a lengthy transition lasting 75 years or more for a residual pay-as-you-go system that eventually would be paying out modest benefits.

The transition cost would be a manageable burden.

While the transition cost would be a burden, the burden would be manageable. We estimate that the

extra central government subsidies to the basic pension system would amount to between 2.0 and 2.5 percent of GDP a decade from now when they are fully phased in. Adding in the new poverty floor, the total cost of the reform would come to between 3.0 and 3.5 percent of GDP at its peak. Although this sum is not trivial, it is not an impossible burden for an economy that is growing at 10 percent per year. By way of comparison, the \$586 billion fiscal stimulus package that the Chinese government announced in November 2008 is equivalent to 14 percent of China’s GDP. The transition cost, moreover, would be rapidly declining by the 2020s as current beneficiaries and workers who have accrued substantial benefits under the old system begin to die off.

The CSIS plan would realize the government’s vision of achieving universal coverage by 2020.

Our plan would not only transform the basic pension system into a new system of privately managed and invested personal accounts, it would extend the system to the countryside. Coverage would be made immediately mandatory for wage and salary workers at town and village enterprises, or TVEs. The combined employer-employee contribution rate would begin at 8 percent and be increased by 1 percent per year until it reaches the full 18 percent rate. To minimize what would be a substantial new burden on TVE employers and employees, the central government might consider requiring local governments to subsidize part of their contributions.²⁹ Non-TVE rural workers, most of whom are farmers, would initially be encouraged to participate in the system on a voluntary basis—just as some now do in the existing rural pension system, which our personal accounts system would replace. By 2020, however, coverage would be made mandatory for these workers as well, perhaps at a lower or subsidized contribution rate. With their incorporation into the new national pension system, the government’s vision of achieving universal coverage by 2020 would be realized.

The new national system of mandatory personal retirement accounts would, over time, ensure an adequate retirement income to the majority of Chinese workers. Higher-earning workers, however, will need to accumulate supplementary retirement savings. It is thus crucial that China also strengthen

²⁹ The central government might also consider requiring local urban governments to similarly subsidize a part of the contributions of migrants and other low-income informal-sector workers.

incentives for employers and employees to participate in the new private enterprise annuity system.

The enterprise annuity system could become an important source of supplementary retirement income for China's middle class.

The place to start is to streamline the burdensome licensing process and to simplify the system's structure by allowing trustee, custodian, and administrator functions to be combined, as they frequently are in developed-country pension systems. The government will also need to improve, clarify, and standardize the system's tax treatment. The usual practice in developed countries is to tax pension savings when it is withdrawn upon retirement, but to make contributions (both employer and employee) fully tax-deductible and to allow investment earnings to accumulate tax-free. The government will also need to liberalize investment rules and authorize master trust arrangements that ease the burden on small and medium employers. Industry experts agree that the enterprise annuity system has considerable potential for growth and that, with the right regulatory and tax rules, it could become an important source of supplementary retirement income for China's emerging middle class.³⁰

Designing a National Personal Accounts System

Let us be clear: Our plan to restructure the basic pension system is not a plan to privatize it. Assets in the personal accounts would be personally owned and privately managed and invested. The system, however, would remain a public social insurance program regulated and supervised by government.

Funded personal accounts systems can be structured in a variety of ways. One option is the “provident fund,” or Singapore model, in which personal account assets are centrally managed and invested by government. Following this model, China could establish a personal account for each worker within the National Pension Fund. The NPF would both

administer the accounts and manage their investment, either directly or by contracting with certified fund managers. The advantage of this approach is that it builds directly on recent pension pilot projects which, as we have seen, have already shifted the management of a portion of personal account assets to the NPF. It would thus be relatively easy to implement. The disadvantage is that a centrally managed system invites political interference, rarely generates market returns for contributors, and creates considerable ambiguity about who really owns the assets—workers or government.

Independent management of personal account assets is essential for the success of reform.

We believe that independent management of personal account assets is essential for the long-term success of reform. Here there are two basic models that China could follow: the Chilean or the Swedish. In a Chilean-model reform, workers would choose among competing personal accounts (or PA) management companies set up by participating financial services firms. Contributions would be routed directly to the management companies, which would both administer and invest workers' accounts. In a Swedish-model reform, workers would choose among a menu of investment funds. Contributions would be routed to the funds through a central government “clearinghouse,” which would handle account administration. Each model has its pros and cons that the government would need to carefully weigh. The centralized administration of the Swedish model offers important cost efficiencies, but also requires more sophisticated data management. The decentralized Chilean model sacrifices these efficiencies, but would be easier to set up—which is why it has been adopted by many developing countries in Latin America and Eastern Europe.³¹

Beyond the choice of administrative model for the personal accounts system, the government will have to address many other difficult design issues. In the following bullets, we describe what the basic architecture of a workable system might look like.

³⁰ Yvonne Sin and Leslie Mao, “Hidden Pot of Gold: Responding to China's Pension Burden,” CLSA-U Speaker Series (Shanghai: CLSA, October 2007); and Donald R. Forest, “The Promise of Enterprise Annuities,” *China Business Review* (November/December 2007).

³¹ Hong Kong's Mandatory Provident Fund scheme, or MPF, resembles the Chilean model in many respects. Although the term “provident fund” typically refers to a publicly managed scheme, the MPF personal retirement accounts, like the Chilean accounts, are administered and invested by private pension management companies, known as “trustees” in Hong Kong. The most important difference is that in Hong Kong employers select the management company, whereas in the Chilean model workers do.



- **Pension regulator.** China will need a strong government pension regulator to supervise the operation of the personal accounts system. Ideally, the regulator would be constituted as an independent agency. The agency would have its own professional staff, but would draw on the expertise of the Ministry of Finance, the Ministry of Human Resources and Social Security, the People’s Bank of China, and the China Securities Regulatory Commission, Insurance Regulatory Commission, and Banking Regulatory Commission. The pension regulator would have broad functions. It would be responsible for certifying fund managers; for establishing guidelines for portfolio allocation, fee structure, and reporting rules; and for policing the system. Under a Swedish-model reform, it would also operate a contributions clearinghouse and administer the personal accounts.

China will need a strong government regulator to supervise the personal accounts system.

- **Fund managers.** To receive certification as fund managers, financial services firms would have to meet minimum standards for business experience, assets under management, and past investment performance. Once participating in the system, they would be subject to strict capital requirements, fiduciary obligations, and reporting rules. A wide range of financial services firms, from “trust companies” to insurance companies, would be eligible to set up a PA management company or investment fund—provided that they meet the certification standards. To ensure that personal accounts are fully portable, fund managers would be required to operate nationwide. The type of system we propose would require relaxing some current barriers to market entry. This is necessary to promote efficient competition and ensure that the system is national in scope.

Participating fund managers would be subject to strict capital requirements, fiduciary obligations, and reporting rules.

- **Fund selection.** Workers would register their choice of fund manager with their local tax bureau, either directly or through their employer. Splitting contributions among multiple fund managers would not be permitted, though in a Swedish-model reform

this restriction could be relaxed as the capabilities of the clearinghouse grow. Workers who fail to choose a fund manager would be assigned to a default fund. This might be the PA management company or investment fund with the lowest administrative fees or the highest net rate of return. Alternatively, it could be a special government default fund, which might be managed by the National Pension Fund. The regulator would establish rules for how frequently workers can change fund managers. Initially, changes would be limited to once per year to minimize the administrative burden.

- **Routing system.** The personal accounts routing system would make use of existing channels. Contributions would be withheld by employers and deposited to special local tax bureau holding accounts at a commercial bank. The self-employed would be responsible for making their own deposits. The local tax bureau would match deposits against employment and wage records to ensure compliance. It would then transfer contributions to the PA management company of the worker’s choice or to the central clearinghouse for allocation to the investment fund of the worker’s choice. In principle, collection and routing of contributions could also be handled by the local social security bureaus. There are several advantages, however, to using the tax bureaus. It would maintain a firewall between the personal accounts and the rest of the basic pension system, which will still be receiving government subsidies and paying benefits over the next few decades. The tax bureaus also have greater enforcement capabilities and can make use of an existing national bank wire transfer system.

The new personal accounts system would be fully portable.

- **Account administration.** Local tax bureaus would maintain a database with a record for each registered worker employed within their jurisdiction. The record would include the worker’s social security number, residence, employer, and wage and contribution history. These records would be shared electronically with the worker’s PA management company or the central clearinghouse. The management companies or clearinghouse would maintain their own databases, which would include complete information on account balances and transactions. This system would be fully portable. When workers move between tax jurisdictions, they would simply register with their new tax bureau, which would



reconnect them with their PA management company or the central clearinghouse. The new tax bureau in turn could access the worker's prior tax bureau records through his or her account administrator. Alternatively, these records could be transferred directly to the new tax bureau using the "third generation" IC social security card now being tested by the Shenzhen city government.³² In a Chilean-model reform, fund balances and personal account records could, at the worker's request, be transferred directly between PA management companies. In a Swedish-model reform, fund balances would be transferred through the clearinghouse; there would be no need to transfer account records.

- **Administrative fees.** The personal accounts system would be subject to regulations designed to limit excessive administrative fees. Fees could be capped directly by the regulator, either as a percent of contribution flows or account balances. Alternatively, the regulator could institute measures that promote efficiency-enhancing competition among fund managers. This could be done in a variety of ways—for instance, by keeping barriers to entry low; by allowing fund managers to offer loyalty discounts; by assigning workers who fail to choose a fund manager to the fund with the lowest fees; or by allowing workers to switch fund managers more frequently so long as they move to the fund with the lowest fees. Either way, the regulator would need to establish a standardized fee structure that allows workers to easily compare net investment returns.
- **Reporting requirements.** The personal accounts system would also be subject to strict reporting requirements designed to ensure that participants have adequate information to make informed decisions. The regulator would compile comparative

data on the performance of fund managers and publish it regularly in user-friendly form in print and on the internet. Workers would also receive periodic account statements in a standardized format, either from their PA management company or, in a Swedish-model reform, from the pension regulator.

- **Disability and survivors insurance.** The regulator would establish guidelines for disability and young survivors insurance policies. Under a Chilean-model reform, PA management companies would be required to purchase a standardized policy from a commercial insurer for each enrolled worker. Under a Swedish-model reform, the regulator would purchase the policies for workers. As an alternative to purchasing private insurance, it would also be possible under this model to finance disability and young survivors benefits on a pay-as-you-go basis.

All contributions would be invested in lifecycle funds.

- **Portfolio guidelines.** While personal account assets that are invested in capital markets are inevitably subject to market risk, financial experts agree that this risk can be minimized by regulations that require workers to maintain an adequate spread in their portfolios and to move into fixed-income assets at older ages. The CSIS plan would require each fund manager to offer three to five lifecycle investment funds with varying degrees of risk that workers would be assigned to based on their age. Initially, the regulator would establish broad guidelines for allowable investments, with minima and maxima for different asset classes. Over time, however, the restrictions would be relaxed as China's capital markets develop and the experience of fund managers grows. Ultimately, the reform's success will require moving toward a "prudent man" investment rule that allows contributions to flow to the investments with the highest risk-adjusted returns. This is another way of saying that the Chinese government would have to allow the personal accounts to hold a globally diversified portfolio.
- **Withdrawal rules.** Personal account balances would be subject to strict rules governing their use. Until the minimum retirement age, no worker will be allowed to withdraw personal account funds. After the minimum age, all funds withdrawn must be used to purchase an inflation-indexed annuity until the following condition is met: The annuity, together with any zero-tier benefit,

³² Tingting Zhang, "Nationwide Applicable Social Security System Urged," China.org.cn, March 4, 2008; and "New Social Security Scheme on Cards in Shenzhen," *China Daily*, March 26, 2008.



ensures that the worker possesses an income for life equal to some minimum threshold—perhaps 50 percent of the local average wage, or two and one-half times the plan’s poverty backstop. Couples would have to purchase a joint and survivor annuity. The annuities would be purchased from insurance companies or, if it is determined that companies cannot price them fairly, from the regulator. Fund balances in excess of those required to purchase the minimum annuity will be subject to no use restrictions and may be consumed or passed on to heirs. As an alternative to the annuity rule, workers might be allowed to make annual withdrawals, with the allowable amount of the withdrawal determined by remaining life expectancy.

The plan would require mandatory annuitization of account balances to protect against longevity risk.

- **Retirement age.** The minimum retirement age would initially be set at 60 for men and 55 for women, just as it is in the current basic pension system. These low retirement ages are necessary because today’s older workers often do not have the skills to compete in China’s rapidly modernizing economy. But as these workers are replaced by younger and higher-skilled cohorts and as China’s population ages, longer work lives will not only become feasible, but essential. Our plan therefore provides for gradually raising the minimum retirement age for both sexes to age 65 by 2030, after which it would be indexed to longevity.
- **Benefit guarantees.** Many personal accounts systems have minimum benefit guarantees that are pegged to the minimum wage or some other poverty threshold. Under our plan, this safety net protection would instead be provided by the noncontributory poverty floor. Many systems also have relative rate of return guarantees backed up by fund managers’ capital reserves. The advantage of these guarantees is that they protect workers when their fund manager performs much worse than the average fund manager. The disadvantage is that they encourage overly conservative investment strategies by all fund managers which may result in smaller account balances and retirement benefits for all workers. The government will have to carefully weigh the costs and benefits of this design feature.

³³ The following projections compare the performance of our personal accounts system with a hypothetical reformed pay-as-you-go system which, like our personal accounts system, has been unburdened of the cost of the basic pension system’s unfunded liabilities. They also assume that coverage under the pay-as-you-go system will be universal. Under China’s existing basic pension system, replacement rates would be much lower—or contribution rates much higher—than those projected here.

The Advantages of Funding

The kind of personal accounts system we propose would have decisive advantages over a pay-as-you-go system as China ages. To begin with, it could deliver adequate benefits at a lower contribution rate. While the rate of return to contributions to a pay-as-you-go system is limited to the rate of economic growth—or more precisely, the rate of growth in taxable payroll—the rate of return in a genuinely funded personal accounts system would be equal to the rate of return to capital, which, as China ages and its economy develops, will almost certainly be higher. It is true that this might not be true in the near term. After all, real wages—and along with them the payroll tax base on which pay-as-you-go financing depends—are now growing at double-digit rates as China’s economy modernizes and employment shifts en masse from nonproductive to productive sectors. At the same time, the return to capital is relatively low because China is saving prodigiously and investing inefficiently.

A genuinely funded pension system can deliver higher benefits at a lower contribution rate than a pay-as-you-go system can.

In any success story for the Chinese economy, however, both of these circumstances will change. As China’s economy matures and the potential for huge leaps in productivity is exhausted, real wage growth will inevitably slow to something closer to developed-world levels. At the same time, China will also see a slowdown in employment growth as its working-age population peaks and begins to contract. Together, these trends will dramatically lower the potential rate of return on a pay-as-you-go retirement system. Meanwhile, the rate of return to capital is bound to rise as China’s capital markets develop—and would be given a big extra push by the type of funded personal accounts system we propose.

Indeed, it is difficult to imagine a plausible long-term scenario in which a genuinely funded personal accounts system would not outperform a pay-as-you-go system.³³ Consider a worker who joins the workforce in 2010, contributes 16 percent of covered wages to the retirement component of a personal

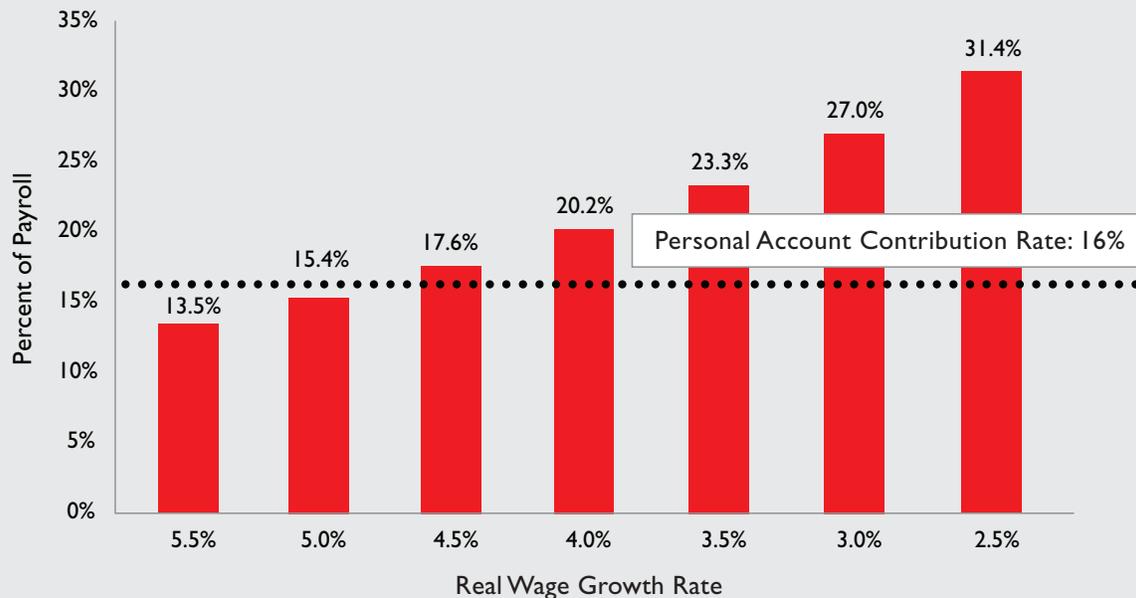
As China ages and develops, a funded pension system will almost certainly outperform a pay-as-you-go system.

Personal Account Replacement Rates in 2050 under Different Real Wage Growth and Rate of Return Assumptions versus PAYGO Replacement Rates at the Same 16 Percent Contribution Rate*

		Real Wage Growth Rate							} Outperforms PAYGO
		5.5%	5.0%	4.5%	4.0%	3.5%	3.0%	2.5%	
Real Rate of Return	3.0%	26%	28%	30%	33%	36%	39%	43%	
	3.5%	30%	32%	35%	38%	41%	45%	50%	
	4.0%	33%	36%	40%	43%	47%	52%	58%	
	4.5%	38%	41%	45%	50%	55%	60%	67%	
	5.0%	43%	47%	52%	57%	63%	70%	78%	
	5.5%	50%	54%	60%	66%	73%	81%	90%	
	6.0%	57%	62%	69%	76%	84%	94%	105%	
PAYGO		52%	49%	47%	45%	43%	41%	39%	

Figure 17a

Pay-As-You-Go Contribution Rates Required in 2050 to Match Personal Account Replacement Rates under Different Real Wage Growth Assumptions: 5.0 Percent Real Rate of Return Scenario



*PAYGO calculations assume universal coverage and a retirement age of 65; personal account calculations assume a 40-year career, a retirement age of 65, and administrative charges equal to 0.5 percent of assets.

Source: CSIS calculations

Figure 17b

account throughout a 40-year career, and earns an average real rate of return of 5.0 percent, a reasonable long-term assumption for a prudently diversified global portfolio of stocks and bonds. For a pay-as-you-go system with the same contribution rate to beat the personal accounts system's replacement rate, real wage growth would have to indefinitely average 5.0 percent or higher, quadruple the average developed-country performance of the past quarter-century. Even if the worker were to earn a real rate of return of just 3.0 percent, what many economists consider the long-term, risk-free rate of return, real wage growth would have to average 3.0 percent or higher for the pay-as-you-go system to beat the personal accounts system's replacement rate. (See figure 17a.)

This is of course equivalent to saying that contribution rates would, in almost any plausible long-term scenario, have to be higher under a pay-as-you-go system to match the replacement rates that could be delivered by a funded system. Consider again the worker who contributes 16 percent of wages to a personal account and earns a 5.0 percent real rate of return. If real wage growth averages 5.0 percent or higher over the next 40 years, the pay-as-you-go system would enjoy a modest cost advantage. But if real wage growth averages less than 5.0 percent, the pay-as-you-go contribution rate would have to rise steeply to deliver the same benefits as the funded system. At 3.0 percent real wage growth, the contribution rate would eventually have to rise to 27 percent—and at 2.5 percent real wage growth, it would have to rise to 31 percent. (See figure 17b.)

A system of funded personal accounts would make most workers stakeholders in China's long-term economic success.

Beyond its potential to deliver adequate benefits at a lower contribution rate, there are other important advantages to the system we propose. Because contributions would be personally owned, workers would be less likely to view them as a tax. Together with the lower contribution rate, this would improve incentives to participate, potentially broadening coverage and reducing the cost of the floor of protection as well. In the near term, the system would help to broaden and deepen China's capital markets, the crucial next step in its development agenda. In the long term, it would help to maintain

rates of savings, investment, and living standard growth as China ages. Over time, the system would make most workers direct stakeholders in China's economic success, foster middle-class values of thrift and stewardship, and perhaps even turn China into a more democratic society.

Reform and China's Capital Markets

To set up the personal accounts system, China will have to overcome considerable obstacles. To begin with, there are the administrative challenges. As we have seen, China will need to establish a new central regulatory agency that is both highly professional and enjoys a reasonable degree of independence. It will also have to put in place reliable routing, recordkeeping, and oversight systems. Although these challenges are manageable, building the infrastructure of the new retirement system will nonetheless require a significant investment of time and money.

China is laying the infrastructure of a modern financial system.

Then there are the even greater challenges posed by China's immature capital markets, which suffer from serious structural problems, from poor corporate governance and weak property rights to lack of liquidity, rampant speculation, and pervasive government control. Until a few years ago, many of the fundamental requirements for a funded personal accounts system were lacking. Since the release of the State Council's guidelines on capital market development in January 2004, however, the pace of reform has accelerated and the basic infrastructure of a modern financial system has begun to take shape.

Accountability and transparency, though still inadequate, are improving. China's new company law, which became effective in January 2006, more clearly defines executives' fiduciary responsibilities, bolsters the independence of auditors, and protects small shareholders' rights. Its new securities law, which became effective at the same time, strengthens safeguards against insider trading and establishes stricter disclosure requirements for publicly traded companies. Its new accounting and auditing standards, introduced in January 2007, are being hailed by international investors as an important first step toward aligning Chinese norms with global best practice.

The government is also strengthening property rights. In 2004, China took the epochal step of officially recognizing a general right to private property ownership in its constitution. Its 2007 property law spells out that private individuals and companies can own, buy, sell, bequeath, and inherit all types of property except land—and that they can sue in court to enforce disputed claims. To be sure, there remains considerable ambiguity about the practical divisions between state, collective, and privately owned property. Given the weakness and widespread corruption of the judicial system, moreover, enforcing property claims can still be difficult. As *The Economist* nicely puts it, “the passage of laws is not the rule of law.”³⁴ Still, China has made important progress in laying the most basic legal foundation of a developed market economy.



At the same time, government reforms are paving the way for a significant broadening of China’s capital markets. Beginning in 2005, the government launched a process that will triple the effective size of China’s stock markets by converting all nontradable shares (after a “lock-up period”) into tradable shares. In 2007, it liberalized the approval process for corporate bond issues and opened up the market to private firms, which had previously been excluded. Nor are the reforms restricted to broadening capital markets. The government is also encouraging deeper

³⁴ “China’s Next Revolution,” *The Economist*, March 8, 2007.

markets by authorizing new financial products, from currency swaps to stock index futures.

There has also been tentative movement toward easing capital controls. In 2002, the government established the Qualified Foreign Institutional Investors (QFII) program, which opened the door to foreign investment in Chinese capital markets. In 2006, faced with a growing mountain of foreign reserves, it established the counterpart Qualified Domestic Institutional Investors (QDII) program. By depositing funds with participating financial institutions authorized to purchase foreign currency from the government, Chinese households can now, for the first time, invest a part of their savings abroad.

Despite impressive progress, China’s capital markets are still relatively small and illiquid.

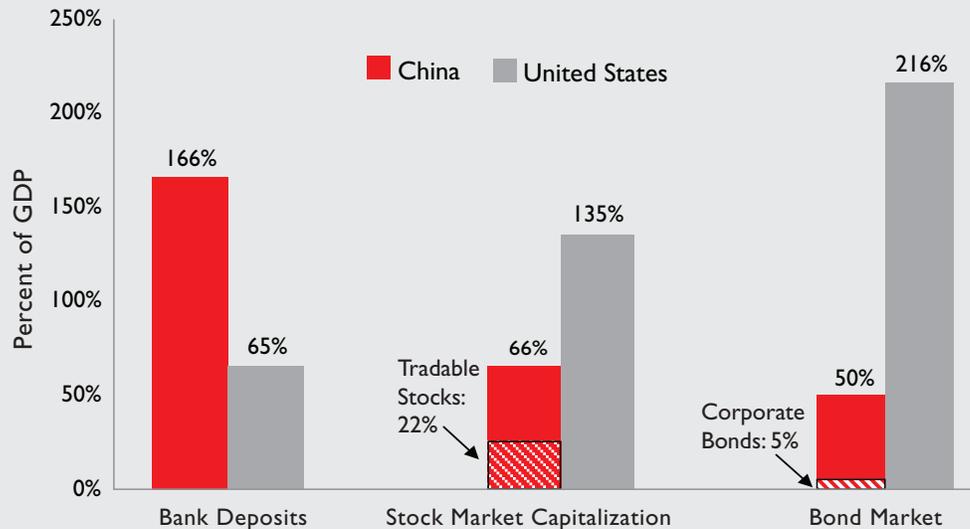
Despite impressive progress, all financial experts acknowledge that major problems remain. Although China’s stock markets are playing a growing role in business finance, they are still relatively small and illiquid. As of mid-2008, bank deposits in China outweighed the value of tradable stocks by nearly 8 to 1. In the United States, the ratio was 2 to 1 the other way around. (See figure 18.) Most small and medium-sized firms find it impossible to meet the capital and regulatory requirements for listing. Although private stock offerings have recently been authorized, there is still no market infrastructure in place for private placement. China’s bond market is if anything less developed. The market consists almost entirely of central government bonds with short-term maturities. Corporate bonds, whose issuance is subject to central government approval, account for just 10 percent of the market. Local government bonds, which are an important source of capital financing in many developed countries, do not exist.

China’s investment culture remains highly speculative.

China’s investment culture also remains short-term and highly speculative. The surging number of small individual investors—the number of Chinese investment accounts grew from 60 to 138 million in 2007 alone—helps to set the overall market tone.

In China, bank deposits still dwarf the stock and bond markets.

Assets by Type in China and the United States, as a Percent of GDP, at the End of June 2008*



*U.S. bond market data are for the end of 2007.

Source: ADB (2008); CSRC (2008); FRB (2008); PBC (2008); IMF (2008); and CSIS calculations

Figure 18

As of the end of 2007, individual investors owned roughly half (51 percent) of Chinese stocks by value, nearly double the individual investor share in the United States (26 percent).³⁵ Although institutional investors play a significant role in China's capital markets, pension funds and life insurance companies, the types most likely to foster a long-term investment culture, are still tiny players. In the United States, pension funds and life insurance companies together own 30 percent of all stocks. In China, the corresponding figure is just 3 percent, even including the National Pension Fund.³⁶

Perhaps the greatest obstacle, however, is the government's continued control of China's capital markets.³⁷ This control reaches far beyond the government's well-known interventions in exchange markets to keep the RMB from rising. Despite recent reforms, most savings in China is still allocated to investment by state-owned banks, often through a politically determined process. The government tries to guarantee the banks a large supply of low-cost capital by setting nominal interest rates for deposits far beneath the market rate, while regulating the

availability of alternative domestic investments and strictly controlling the flow of savings abroad. Over the past few years, with inflation rising, the real rate of return on bank deposits has actually been negative. Not surprisingly, Chinese investors are beginning to find ways around the government roadblocks—by shifting bank deposits into the stock market, purchasing higher-interest insurance products, and even investing their savings in black market loans to businesses denied access to cheap capital through the state-owned banks.

Although reform would have to be phased in gradually, China cannot afford to wait before launching a fully funded pension system.

All of this means that a fully funded personal accounts system would have to be phased in gradually. It might even make sense, as some

³⁵ China Securities Regulatory Commission, *China Capital Markets Development Report* (Beijing: China Financial Publishing House, 2008), 275; and *Flow of Funds Accounts of the United States* (Washington, DC: Board of Governors of the Federal Reserve System, September 18, 2008), 90.

³⁶ *Ibid.*

³⁷ For a discussion, see Nicholas R. Lardy, "Financial Repression in China," Policy Brief no. 08-8 (Washington, DC: Peterson Institute for International Economics, September 2008).

experts have suggested, for China to retain a hybrid system of notional and fully funded accounts for a while.³⁸ Rather than the bank interest rate, however, the notional accounts would be credited with an interest rate equal to real wage growth or GDP growth, the standard practice in notional accounts systems in developed countries. An even better option, proposed by the World Bank, would be for the government to issue special GDP-indexed bonds to the accounts that would eventually be made tradable when the system becomes fully funded.³⁹

Funded pensions could play a crucial role in broadening and deepening China's capital markets.

Yet China cannot afford to wait for the full development of its capital markets before launching a privately managed and invested pension system. In fact, such a system may be the key to ensuring that very development. In many countries, funded pensions have played a crucial role in broadening and deepening capital markets. This is true in the United States, the UK, and other developed countries with large employer pension systems. It is also true in Latin American and Eastern European countries that have established mandatory personal accounts systems similar to the one we propose. As China's funded personal accounts grow, so will the size and liquidity of its capital markets. Along with professional fund management will come greater accountability, transparency, and ultimately the long-term investment culture that China now lacks.

Over time, the new personal accounts system would also help to liberalize China's capital markets. Although the government is hesitant to relinquish control, it understands that China's long-term economic success demands broad and deep capital markets capable of allocating domestic savings efficiently to the most productive investments. It also understands that long-term economic success demands globally integrated capital markets. Chinese investors must be able to compare the return on any domestic industry or company with similar industries or companies abroad. Chinese firms must be able to "read" global markets to seek out new customers, diversify their exports, and make their own strategic

investments abroad. Several hundred million personal account owners demanding a true market rate of return—which by definition is the global rate of return to capital—could become a powerful force pushing government policy in the direction that the government already knows it needs to move.

A mandatory personal accounts system could help the government manage the transition to a "float."

Capital market integration would of course be a gradual process lasting many years. It would, eventually, require floating China's currency against most other nations. Transitioning to a float in turn raises concerns about the possibility of a large initial drop in the RMB as Chinese investors start moving into foreign securities. A mandatory personal accounts system could help manage this transition by giving the government a powerful tool for regulating the flow of Chinese savings abroad. For example, a cap on the foreign share of assets in each account could be gradually raised (or frozen, if necessary). Funded personal accounts thus furnish an ideal means to regulate a transition that most policy experts in any case believe is sooner or later unavoidable.

Funded pensions are the ground zero where China's development and aging challenges meet.

China needs broader and deeper capital markets to build the funded pension system on which a successful response to the aging of its population rests. But it also needs a funded pension system to build the broader and deeper capital markets on which its economic development agenda ultimately depends. Funded pensions are thus the ground zero where China's two greatest challenges meet.

³⁸ See, for instance, the "8-8-8 solution" proposed by Bingwen Zheng of the Chinese Academy of Social Sciences. Bingwen Zheng, "The Origin of China's Partially Funded Social Security Scheme and Its Future Direction," *The Chinese Economy* 40, no. 4 (July/August 2007).

³⁹ *China: Evaluation of the Liaoning Social Security Pilot*, Report no. 38183-CN (Washington, DC: The World Bank, December 2006).



China at a Crossroads

How China confronts its aging challenge will do much to determine the future shape of its economy, society, and role in the world order. If China succeeds in forging an effective retirement policy, the potential benefits of rapid economic development will be enlarged. If it fails, the costs will increase. Indeed, without an effective retirement policy, it is difficult to envision a prosperous long-term future for China.

China has been “peacefully rising” while its demographics have leaned with economic growth. But by the 2020s, demographic trends may be weakening the two principal pillars of the government’s political legitimacy—rapidly rising living standards and social stability. Not just a retirement crisis, but also a more general social and economic crisis may loom in China’s future. While it is difficult to gauge the risks, the Chinese government, with its new emphasis on “balanced development” and building a “harmonious society,” is clearly taking them seriously. Like many developing countries, China is experiencing the stresses of modernization, from rapid industrialization and urbanization to weakening families and widening income gaps. These stresses, which have been bearable in a youthful China in which incomes have been rising rapidly, may become less tolerable in an aging China in which economic growth is slowing.

With an effective retirement policy, the trajectory of China’s living standard will no longer be at the mercy of demography.

The CSIS plan can help to avert crisis and ensure future prosperity. With a universal floor of old-age poverty protection in place, elders will no longer have to fear that China’s overburdened family support networks will fail them. With a system of genuinely funded personal accounts in place, a growing share of the elderly will look forward to a comfortable retirement. Workers would not have to transfer an ever-larger share of their wages to nonworking elders. The trajectory of China’s living standard would no longer be at the mercy of demography.

Successful retirement reform would have many other benefits as well. If elders have a guaranteed minimum pension, young workers will be able to move away to take a better job without having to worry about their aging parents. If workers have a fully portable personal account, they will be able to take greater risks in starting a new job, career, or business without having to worry about their own future old-age security. The long-term economic result will be to increase economic mobility and dynamism. The political result may be to bolster popular support for the public planners and administrators who wisely prepared for China’s unprecedented demographic makeover.

Successful retirement reform would play an especially profound and positive role in fostering the growth of China’s capital markets. Nearly all economists agree that sooner or later a developing economy needs to build broad and deep capital markets. China is no different. It needs them to raise capital efficiently from the savings of the hundreds of millions of working families who today invest their money in unproductive housing or low-return bank deposits. China also needs broad and deep capital markets to allocate capital efficiently to the emerging industries and businesses that can move its economy up the global value-added scale in decades to come.

Clearly, many institutional reforms may be needed to prepare the way, including court-enforced due process that protects ownership rights and an expert regulatory administration with enforcement authority that codifies “fair” trading in capital markets and protects investors against deception and fraud. Once in operation, however, a national personal accounts system will become a vital source of strength. Beyond the sheer volume of funds that would be injected into China’s capital markets, the funded component of a reformed pension system could prove to be a powerful force behind the global integration of its capital markets. In effect, personal accounts would be the vehicle by which ordinary Chinese households help to diversify China’s portfolio. Personal accounts will also educate workers about how financial markets function. In the long run, workers will begin to see themselves as stakeholders in the existing economic system and—to the extent it protects and acts on behalf of that system—as property-owning supporters of the existing political regime.

Reform could help steer China toward a more dominant global role—and this would redound to the benefit of all nations.

The future of its capital markets will do much to determine the future of China's role in the world economy. Strong and globally integrated markets will ensure balanced economic growth and a more dominant world role. Weak and isolated markets may lead to unbalanced growth, overdependence on foreign direct investment, and a less important world role. Successful retirement reform could help steer China toward the more dominant role—and this would redound not just to its own benefit, but to the benefit of all nations.

If China is successful in meeting its aging challenge, the future will not only be one in which elders retire in greater comfort and families live with less worry, but it will also be a future in which capital formation is stronger, living standards are higher, and public trust in government is firmer. Most of all, it will be a future in which China's maturing role in the global economy undergoes a basic shift—from a vast reservoir of unskilled labor to a dynamic, high-saving, high-investing, high-value-added economy. The whole world thus has a stake in the outcome.

There are many reasons to be hopeful that China will successfully meet its aging challenge.

There are many reasons to be hopeful that China will steer a successful course. The government is committed to achieving universal pension coverage. It also recognizes the decisive advantages of funded retirement savings, which is why it has begun to fill the basic pension system's empty accounts, established a national pension reserve fund, and laid the groundwork for a supplementary system of employer-sponsored enterprise annuities. There is even a growing consensus, reinforced by the recent Shanghai pension scandal, that independent management of pension fund assets is preferable to

state management. At the same time, economic and institutional developments have made the type of reform we propose more feasible than it was just a few years ago. On the one hand, the central government's fiscal capacity to finance a poverty floor and socialize the cost of the basic pension system's unfunded liabilities is much greater. On the other hand, recent government reforms that have strengthened property rights and capital market oversight have removed many of the practical obstacles to a funded pension system.

China stands at a crossroads. Its age wave is fast approaching, and along with it the steep upward spiral in dependency costs that threatens to slow its economic rise. Now is the time—while there still is time—for China to take the next steps and put in place a retirement system that will allow it to confront the demographic gauntlet ahead.



A Note on Data and Sources

In researching and writing *China's Long March to Retirement Reform*, CSIS consulted dozens of studies on China's demography, economy, and, of course, retirement system. This note makes no attempt to review this rich secondary literature. Its purpose is more limited—to orient the reader to the basic data sources used in preparing the report.

Most demographic data, historical and projected, come from the UN Population Division and are published in *World Population Prospects*.¹ For some specific data series, however, the report relies on Chinese census data or other government surveys. These include population by urban or rural residence, which come from China's National Bureau of Statistics (NBS) and are published in the *China Statistical Yearbook*;² historical estimates of Chinese total fertility rates;³ historical estimates of Chinese life expectancy (for 1982–2005);⁴ and Chinese sex ratios at birth.⁵ All population projections refer to the UN's 2006 Revision “constant fertility” scenario. CSIS believes that this scenario constitutes a better baseline than the more commonly cited “medium variant” scenario, which arbitrarily assumes that fertility in all countries will converge at a rate of 1.85. The two scenarios differ substantially for some countries. In the case of China, however, the scenario choice is not critical, since China's current fertility rate is close to the assumed convergence rate. By 2050, the elderly share of China's population diverges by just 2 percent under the two scenarios—31.1 percent under the medium variant versus 32.8 percent under the constant variant.

Data on GDP (except in international comparisons), inflation, and household income come from NBS and are published in its *China Statistical Yearbook* and its *Statistical Bulletin*.⁶ Most data on the Chinese labor force, employment, and wages (total and by residence registration) come from the Ministry of Human Resources and Social Security (MOHRSS) and are published in its *China Labor Statistical Yearbook*⁷ and its *Statistical Bulletin*.⁸ Data on labor-force participation by age, however, come from an NBS survey.⁹ Data on Chinese financial markets come from the People's Bank of China (PBC), the China Securities Regulatory Commission (CSRC), and the Asian Development Bank (ADB). PBC data include total bank deposits, interest rates for one-year term deposits, and foreign exchange reserves. (The data are available at <http://www.pbc.gov.cn>.) CSRC data include stock market capitalization (both tradable and nontradable shares) and number of investor accounts. (The data are available at <http://www.csrc.gov.cn>.) ADB data include bond market capitalization (both private and public).¹⁰

¹ *World Population Prospects: The 2006 Revision* (New York: UN Population Division, 2007).

² National Bureau of Statistics of China, *China Statistical Yearbook 2007* (Beijing: China Statistics Press, 2007).

³ National Population and Family Planning Commission of China, *Statistical Bulletin of Family Planning* [in Chinese], various years, <http://www.npfpc.gov.cn>.

⁴ Ministry of Health of China, *China Health Statistical Yearbook 2008* [in Chinese] (Beijing: China Union Medical College Press, 2008).

⁵ National Population and Family Planning Commission of China, *Research Report on the National Demographic Development Strategy* [in Chinese], January 11, 2007, http://www.chinapop.gov.cn/fzgh/zlyj/200806/t20080626_154129.htm.

⁶ National Bureau of Statistics of China, *2007 Statistical Bulletin of National Economic and Social Development* [in Chinese], February 28, 2008, <http://www.stats.gov.cn>.

⁷ National Bureau of Statistics of China and Ministry of Human Resources and Social Security of China, *China Labor Statistical Yearbook 2007* (Beijing: China Statistics Press, 2007).

⁸ Ministry of Human Resources and Social Security of China, *2007 Statistical Bulletin of Labor and Social Security* [in Chinese], May 21, 2008, http://w1.mohrss.gov.cn/gb/zwxx/2008-06/05/content_240415.htm.

⁹ 2005 National 1% Sampling Survey, National Bureau of Statistics of China, March 16, 2006, <http://www.stats.gov.cn/tjsj/ndsj/renkou/2005/renkou.htm>.

¹⁰ Asian Bonds Online, Asian Development Bank, <http://www.asianbondsonline.adb.org>.

Data used in cross-country comparisons of GDP and GDP per capita (in exchange rate and purchasing power parity dollars) are from the World Bank's World Development Indicators database and are available at <http://www.worldbank.org>. Data on international trade, finance, and capital flows all come from standard international sources.

Data on China's basic pension system, including coverage and finances, are compiled by MOHRSS and NBS and are published in the *China Statistical Yearbook* and the MOHRSS *Statistical Bulletin*. Most of the data are available at <http://www.mohrss.gov.cn>. Data on China's rural pension system are from the same MOHRSS sources. Data on civil service pensions are from a specialized study.¹¹ Data on the minimum living standard guarantee and other welfare programs are from the Ministry of Civil Affairs and are available at <http://www.mca.gov.cn>. Data on the National Pension Fund are from the National Council for the Social Security Fund of China and are published in the *Annual Report of the National Social Security Fund*.¹² Most of the data are also available at <http://www.ssf.gov.cn>.

¹¹ Yvonne Sin and Leslie Mao, "Hidden Pot of Gold: Responding to China's Pension Burden," CLSA-U Speaker Series (Shanghai: CLSA, October 2007).

¹² National Council for the Social Security Fund of China, *2007 Annual Report of the National Social Security Fund* [in Chinese], June 30, 2008.

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Acknowledgments

The authors would like to thank a number of individuals and organizations for their contributions to *China's Long March to Retirement Reform*.

First mention must go to Jiangong Zhou, a Chinese financial market expert and consultant to the CSIS Global Aging Initiative (GAI), who made valuable contributions at all stages of the research and translated the report into Chinese. Without his assistance, the report would be much poorer. The authors are also grateful to Xiaoqing Lu, a research associate with the CSIS China Chair, who assisted with the translation; and to Xi Yang, an intern with GAI, whose dedicated efforts helped clarify many difficult research questions.

The authors wish to thank The Prudential Foundation for its generous financial support. They are grateful to Gregory M. Loder (Vice President, Issues Management, Prudential Financial) for believing in the project and shepherding the report through the production process; and to Linda Brnicevic (Project Manager, Advertising and Creative Services, Prudential Financial) and Robert Gary (Graphic Designer, Advertising and Creative Services, Prudential Financial) for the attractive design and graphics. They also appreciate the helpful input of Wei Jin (Vice President, New Markets, Prudential International Insurance) and Teh-Hsiu Fu (Director of the Board and Chief Executive Officer, Everbright Pramerica).

Along the way, the authors sought the advice of many experts. They owe a special debt of gratitude to Xiao Caiwei (Director, International Department, China National Committee on Aging); Yvonne Sin (Head of Investment Consulting, China and Director of China Market Development, Employee Benefits, Watson Wyatt Worldwide); and Bingwen Zheng (Senior Research Fellow, Institute of Latin American Studies, Chinese Academy of Social Sciences). All three gave generously of their time in answering our many questions. They would also like to thank Fang Cai (Director, Institute of Population and Labor Economics, Chinese Academy of Social Sciences); Jacky Chau-kiu Cheung (Associate Professor, Department of Applied Social Studies, City University of Hong Kong); Takeshi Jingu (Chief Representative in Beijing, Nomura Institute of Capital Markets Research); Alex Yui-huen Kwan (Head and Professor, Department of Applied Social Studies, City University of Hong Kong); Keping Li (Vice Chairman, National Council for the Social Security Fund); and Bin Qi (Director of the Research Center, China Securities Regulatory Commission).

While the authors gratefully acknowledge the assistance they received in researching the report, they are solely responsible for its content.



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