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by

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Abstract

In recent years, the share of elderly in the total population is increasing around the world. Rising proportionally are claims on public pension systems and health care expenditures. This places extra pressure on government budgets. As a result, countries which implement only pay-as-you-go pensions face fiscal deficits. This paper examines Uzbekistan's statutory pension system, which consists of two pillars: a public pay-as-you-go defined-benefit pension scheme, and a mandatory public funded defined-contribution scheme. We focus in particular on the funded scheme and evaluate ways to improve it by considering the achievements of other developing and transitioning countries in similar positions. The analysis focuses on the choice of fund ownership, contribution rates, investment returns, the population coverage rate, and the feasibility of further reforms.

1. Introduction

During the last few decades, both developed and developing countries have experienced major changes in the structure of their populations. The fraction of elderly people in the total population has been in persistent rise. This process - often referred to as population aging - is more advanced in developed countries, but in recent years its effects are similarly being felt by developing countries. Among the many consequences of population aging, its fiscal effect has been recognized as the most immediate and destabilizing.

As the share of the elderly in the total population increases, claims on public pension systems and the demand for health care expenditure similarly rise, placing extra pressure on government budgets. Such negative developments undermine the long-term sustainability of fiscal systems. International experience has shown that the destabilizing fiscal impact of population aging is particularly strong in the case of pay-as-you-go (PAYG) type public pension systems. Due to their specific design, in which current workers finance pension payments for current pensioners, these public pension systems are found to be the most vulnerable sections of government budgets.

As a consequence, a large number of developed and developing countries have implemented comprehensive pension reforms. These aim to create multi-pillar pension systems, which are considered to be less vulnerable to the fiscal effects of population aging.

Table 1
Demographic Projections for Uzbekistan, 2005-2050

	2005	2010	2020	2030	2040	2050
Total Population (millions)	26.6	28.6	32.5	35.3	37.5	38.6
Total fertility rate	2.74	2.27	1.94	1.85	1.85	1.85
Life Expectancy, Men	64	65.1	67.6	69.7	71.4	72.1
Life Expectancy, Women	70.4	71.5	73.8	75.6	77.1	77.7
% of Population Aged 60 +	6.2	6.2	8.7	12.3	15.8	21.1

Source: United Nations (2005)

Following this worldwide trend, in 2005, the government of Uzbekistan launched a major reform of the country's pension system. It created a two pillar pension system, with its current PAYG-type pension system serving as the first pillar, and a new funded system as the second pillar. This pension reform was launched mainly to prepare the country's pension system for the expected severe aging of the population. Based on United Nations demographic projections, Table 1 shows that the share of the elderly (aged 60 years and older) could increase from 6.2 percent in 2004 to 21.1 percent in 2050 (United Nations, 2005). The secondary reason for the introduction of the funded pillar was to increase the coverage of the pension system, by attracting those individuals working in the informal sector, who currently account for approximately half of the country's total workforce (NHDR, 2005).

Ganiev (2007) provides estimates of the impact of population aging on the financial state of the Uzbekistan's PAYG pension scheme. His actuarial projections for the PAYG pension scheme indicate that it would be in deficit by 2020 due to decreases in the support ratio caused by the elderly population growing faster than the population of contributors. Moreover, the baseline predictions indicate that by 2080 the PAYG system in Uzbekistan could experience accumulated pension liabilities which are as high as 316 percent of GDP.

The Uzbekistan reform of 2005 has been fueling debate among policymakers and academics since its introduction. Many worry about the future of both the funded pension scheme and the pension system as a whole. Some policymakers and academics have been calling for a drastic reform of the pension system based on successful pension reforms in neighboring Kazakhstan. This involves the replacement of the existing PAYG pension scheme with a more comprehensive funded pension scheme. Conversely, others have been calling for moderate reforms that will keep the both the PAYG and funded pillars, while allotting a greater role for the latter. Currently, the government does not yet have a clear idea of the pension system's future. Consequently, the future of the funded pension scheme in particular and the pension system in general remains in doubt.

This uncertainty raises a number of important questions about reform options. Should Uzbekistan follow the example set by neighboring Kazakhstan, and carry out a complete overhaul of the country's pension system? If so, are there necessary conditions for the successful operation of a large-scale funded pension scheme? What are the current funded pillar's main design flaws? In general, what role should the funded pillar play in the pension system? This paper aims to provide answers to these questions, by analyzing and utilizing the experience of developing countries in designing and running funded pension schemes. Taking into account Uzbekistan's economic development, the study will focus on the experience of developing countries in Latin America, Eastern Europe and former Soviet republics. We will present an appropriate set of reform measures to improve Uzbekistan's existing funded pillar and the pension system as a whole.

We proceed as follows. Part 2 provides an overview of Uzbekistan's current pension system in terms of its main parameters, legal framework and recent developments. Part 3 presents background information on pension schemes in developing countries. Part 4 evaluates Uzbekistan's existing funded pillar through the application of lessons drawn from other developing countries. Important issues include the choice of fund ownership, contribution rates, investment returns, the coverage rate, and feasibility of further reforms. Part 5 closes this study with conclusions and policy recommendations.

2. The pension system of Uzbekistan – An overview

Uzbekistan's statutory pension system consists of two pillars: a pay-as-you-go (PAYG) defined-benefit pension scheme, and a mandatory funded defined-contribution scheme. Under current law, the PAYG scheme plays a dominant role in old-age income provision, accounting for most pensioner income. The funded pillar, on the other hand, is relatively small, thereby playing a negligible role.

The PAYG pension scheme

Uzbekistan inherited its current PAYG scheme from the Soviet Union after gaining independence in 1991. Until 2005, this was the country's only pension scheme. Currently, the PAYG pillar provides pension income to about 2.8 million individuals, or about 10.4 percent of the country's population, which is much smaller than in Russia (27 percent), and many European countries (above 25 percent) (Islamov and Shadiev, 2003). The PAYG pillar provides three types of pensions: old-age pensions to 1.9 million individuals (67.0 percent of the total); disability pensions to 0.6 million individuals (20.5 percent); and survivors' pensions to 0.3 million individuals (12.5 percent). For men, the statutory retirement age is set at 60, and pension receipt requires 25 years of covered employment. Women can retire at age 55 with 20 years of covered employment.

The current pension law also provides generous pension privileges in the form of early retirement schemes. These allow certain categories (both men and women) to retire 5 or 10 years earlier than regular retirement ages. According to informal assessments conducted by the Ministry of Finance of Uzbekistan, at present, there about 800,000 early retirees in the pension system, who account for about 27 percent of all pensioners. In general, such early retirement privileges are awarded to individuals who have been occupied for full workdays in underground work, or with extra-harmful and extra-strenuous working conditions. These generous early retirement schemes further threaten the financial stability of the PAYG pension scheme by reducing the number of workers making contributions, and by increasing the number of retirees receiving pension benefits.

From the revenue side, the PAYG pillar relies on three sources. Payroll contributions are made by employers with a tax rate of 23.5 percent (this provides about 77.0 percent of total revenues), a 0.7 percent tax on the value of gross sales (goods and services) or gross revenue of businesses (14.2 percent of the revenues), and contributions made by employees with a tax rate of 2.5 percent. According to unpublished data from the Ministry of Finance of Uzbekistan, there are currently 4.7 million individuals actively contributing to the PAYG pillar, which accounts for about half of the country's employed population. The other half of the employed population not contributing, mostly work in unofficial sectors of the economy.

The funded pension scheme

In 2005, the government of Uzbekistan launched a major reform of the country's pension structure. The reform aimed to create a multi-pillar pension system, with the current PAYG pension scheme serving as the first pillar and a newly established funded scheme as the second pillar. A specific characteristic of the newly introduced funded pillar is that it is fully owned and managed by a state-owned commercial bank – the People's Bank of Uzbekistan. In fact, the law, "On Cumulative Pension Provision for the Citizens of the Republic of Uzbekistan" approved by the parliament in 2004 specifically prohibits the establishment of privately-owned funded pension schemes.

The law mandates participation of all active PAYG scheme contributors in the funded scheme, while the rest of the workforce (self-employed, farmers, and others) may participate on a voluntary basis. Currently, there are about 4.7 million individuals actively contributing to the funded pillar. Since this is about the same as the PAYG pillar, few individuals are participating in the funded pillar on a voluntary basis.

At present, the contribution rate is set at only one percent of personal income. Contributions are automatically withheld and deposited in personal accounts. Extra contributions beyond the minimum one percent are allowed on a voluntary basis.

Regarding investment options, the law stipulates that, for purposes of protecting the funds from inflation and increasing their real value, accumulated funds can be used to provide credit or to invest in financial instruments. The law further requires the People's Bank to make investment decisions in coordination with the Ministry of Finance.

Under the law, the People's Bank is obliged to pay interest on accumulated funds at a rate that exceeds the inflation rate. The interest rate is determined by the People's Bank, in coordination with the Central Bank and the Ministry of Finance. Contributions made by individuals to their personal accounts and interest income earned on those accumulated funds are exempt from taxation.

On the payment side, individuals gain access to their pension savings upon reaching the statutory retirement age. At that point, individuals may choose to receive benefits on a monthly basis over a fixed period, or withdraw the full amount at once. In case of the account holder's death, the full amount of the accumulated funds is paid to his or her heirs.

3. Background

For the last three decades, a widespread shift to multi-pillar pension schemes that include advanced funding in both developed and developing countries has fuelled academic research on the optimal design of pension schemes. The main objectives of such research have been to identify shortcomings in existing funded schemes, explore common problems encountered by countries in designing and running the funded schemes, and ascertain best practices for them.

Setting common ground are two World Bank reports, World Bank (1994) and Holzmann and Hinz (2005). World Bank (1994) defines three pillars as potential components of a country's pension system, which has proved to provide a very useful framework. The original three-pillar concept was advocated by the Bank based on the notion that such a system would result in better financial security for the elderly. In such a system, the first pillar, a publicly-managed unfunded defined-benefit system with mandatory participation, would have the limited goal of reducing poverty among the elderly and redistributing income. The second pillar, a mandatory, fully-funded pension with defined contributions, would facilitate income-smoothing and accumulation of savings among all income groups. The third pillar, a voluntary savings system, would provide additional protection for individuals who want more income and insurance during their old age. However, this three pillar system often fails to provide universal old-age income security, particularly in developing countries where large portions of the work force are not covered by formal schemes.

As such, Holzmann and Hinz (2005) extend the World Bank's approach to include five pillars. The two additional pillars are a basic (zero) pillar, to address poverty alleviation more explicitly with a universal non-contributory pension, and a non-financial (fourth) pillar, to include the broader context of social protection policy, such as family support, access to health care, and housing.

The other important change to the Bank's perspective was the recognition that initial conditions must be taken into account in considering reform options. These include the setup of the inherited pension system, as well as the economic, institutional, financial, and political environment of a country. The Bank now recognizes that there is no universally applicable prescription for reforming pension systems. Some pension systems function effectively with a zero pillar (in the form of a universal social pension) plus a third pillar of voluntary savings. The political economy of other countries, on the other hand, allows operation of first-pillar public pension system along with voluntary savings schemes. Pension reforms must be country-specific.

Beyond defining the pension pillars, the World Bank also describes essential goals for any pension system. These include, first, the provision of adequate retirement income. This involves the provision of benefits to the elderly at levels that are sufficient to prevent old-age poverty, in addition to providing a reliable means to smooth lifetime consumption for the majority of the population. Second, it is essential to provide a retirement income within the financing capacity of individuals, thereby avoiding fiscal burden on the society, and which is sustainable over a long period of time. Finally, retirement incomes must be robust, as a pension system needs to be able to withstand major economic, demographic and political volatility shocks. Meeting these goals also requires that the pension system contributes to economic growth and development, since pension benefits represent claims against future economic output. This requires increasing the level of national savings and developing the country's financial markets.

By observing the experience of its client countries in providing old-age income security, the Bank also concludes that multi-pillar pension schemes are better-suited for achieving the discussed set of goals. Holzmann and Hinz (2005) confirm that most PAYG-type pension systems fail to provide an adequate level of old-age income and are financially unsustainable. However, the Bank also recognizes that not all countries are ready to introduce and successfully operate a funded pillar. The report also stresses that the introduction of a funded pillar does not require perfect conditions, namely the existence of fully-functioning financial and capital markets. Instead, funded pillars should be introduced gradually, to enable them to facilitate financial market development. Some minimum necessary conditions for a funded pillar include the existence of a core of stable banks and other financial institutions capable of offering reliable administrative and asset management services, long-term government commitment to pursue sound macroeconomic policies and related financial sector reforms, and commitment to establishing a sound regulatory framework.

The pension reform experiences of developing countries in Latin America, Europe and Central Asia are of particular interest to this study, as a number of those developing countries have socio-economic conditions similar to Uzbekistan. Regarding the pension reforms in Latin America, Holzmann and Hinz (2005) note that as of the first half of 2004, ten Latin American countries had introduced mandatory funded pillars to accompany

PAYG systems of various sizes. As a part of reform, these countries were also tending to unify their fragmented pension systems and expand coverage to the whole formal labor market.

These reforms were substantially improving fiscal sustainability while maintaining an adequate level of projected benefits. According to the World Bank's simulations, after a short period of increases in deficit levels, the reformed pension systems had much lower deficits. In Bolivia and Mexico, for example, deficits projected for the year 2050 will decrease from 8.5 percent and 2.3 percent of GDP without reform to 0.9 percent and 0.6 percent with reform, respectively. The Bank subsequently warns that during the transition period, higher deficits can make fiscal management exceedingly difficult, and stresses the need for an extended period of preparation prior to the introduction of the funded pillar. This had been a critical factor in Chile's famous success with its implementation of a funded pension pillar.

As for the robustness of the reformed systems, the Bank calls attention to lessons learned from Argentina during its economic crisis in 2001-2002. Argentina's experience showed that funded pillars with portfolios highly concentrated in government securities may collapse in times of economic crisis that lead to government insolvency. Buying government debt with a funded pillar does not diversify risks, and the funded pension still relies on the domestic government's solvency, implying that pension systems as a whole do not take advantage of a multi-pillar structure's main benefits.

Reviewing the pension reforms in Europe and Central Asia, the World Bank in Holzmann and Hinz (2005) divided countries into two groups. The first group consisted of countries such as Albania, Azerbaijan, Armenia, Georgia and Tajikistan, which did not introduce funded pillars to their pension systems, owing to a lack of financial resources. Bolder reforms undertaken by the second group of ten countries, conversely, resulted in the introduction of funded pillars. This group included Hungary, Poland, Latvia, Lithuania, Bulgaria, Russia, Kazakhstan, Croatia and Kosovo. Multi-pillar reforms in this region were similar, but less radical, to those in Latin America; the pension systems of eight of the above-listed countries were still dominated by the PAYG pillar, while only Kazakhstan and Kosovo had pension systems dominated by the funded pillar.

As a neighboring country of Uzbekistan, it is especially worthwhile to consider the pension reform in Kazakhstan, as among Central Asian countries, Kazakhstan has been the pioneer of multi-pillar reforms. In 1998, Kazakhstan carried out radical pension reforms, effectively replacing the country's old PAYG pension scheme with a funded pension system. Andrews (2001) provides a comprehensive review of the multi-pillar reforms in Kazakhstan.

Discussing the motives behind the reforms, Andrews notes that the main impetus was the deteriorating financial state of the country's PAYG system, which had a relatively low worker-to-pensioner ratio and a large stock of accumulated pension liabilities. The shift to a funded pension system was carried out to send a strong signal to the population that individuals, instead of the government, would hence be responsible for their old-age income security. Additionally, the shift was meant to reduce government expenditures, encourage private savings, and promote capital market development.

Kazakhstan adopted an approach similar to Chile. But their reform differed from those in Chile and other transition countries because it provided full coverage to all workers, regardless of age. The specific feature of the reforms in Kazakhstan was that under the new system, accrued entitlements from the old PAYG systems were maintained. These are financed by a 15 percent payroll tax, compared with the prior 25.5 percent. However, the payroll tax is expected to be reduced further, as payment of accrued PAYG entitlements decline.

Describing the specific features of the new funded pension system, Andrews notes that several institutions have played crucial roles in the operation of the new system. These include, first, private pension and state accumulation funds, whose primary responsibilities are to collect contributions, administer contributors' accounts, and calculate and pay benefits. Each fund is limited to one contract per asset management company. Second, asset management companies, whose primary responsibility is to provide investment services for pension funds. Finally, custodian banks, who are to ensure the appropriate use of finances by pension funds and asset management companies. Each fund keeps the accumulated assets of fund contributors with one authorized custodian bank. Andrews (2001) indicates that the incorporation of these three actors is meant to ensure the provision of transparent investment services by pension funds and asset management companies, based on fraud- and abuse-free business practices.

Andrews also notes that despite satisfactory reform progress in Kazakhstan, additional measures are needed to achieve the original reform goals, particularly in the areas of portfolio diversification, regulation, and benefit levels. As in many developing countries, the investment portfolio of Kazakhstan's funded system is composed mainly of government securities, with more than 90 percent of funds invested in Eurobonds. Such a portfolio composition, according to the study, explained high rates of return on investments. However, the author claimed that such a heavy reliance on foreign currency-denominated securities does not contribute to the growth of the local economy in the long run, a major shortcoming of the country's funded pension system. Also, the current regulatory setup does not guarantee the absence of interlocking financial interests between different types of players in the system (pension funds, management companies, and custodian banks). This shortcoming in the regulatory base created opportunities to abuse the contributions system. The contribution rate should also be increased (from the current 10 percent of earnings) to achieve the targeted 60 percent replacement rate. As the stock market develops, the share of government securities in the investment portfolios will shrink, and fluctuations in rates of return will increase, owing to the volatility of equities. Consequently, more contributions may be needed to maintain the targeted replacement rate.

Overall, in Kazakhstan, there is a steady increase in the public's confidence for private pension funds. The state pension fund was initially offered as an alternative to private funds, with the majority of workers choosing private funds that provide greater portfolio diversification and higher rates of return. However, in the early years of the reform, the state pension fund accounted for more than 70 percent of the pension system's total assets. This was due to widespread distrust in the private sector. Workers believed that their savings were safer with state pension funds, as the contributions were guaranteed by the government. By October 2000, however, the share of the state pension fund fell to 42 percent, suggesting the perceived superiority of private over state funds.

4. Evaluation of the existing funded pillar in Uzbekistan

The evaluation of the current funded pillar in Uzbekistan will be carried out for four key issues, the choice on ownership of funds, contribution rates and investment returns, the coverage rate, and the feasibility of further reforms.

Ownership of funds (public vs. private)

In contrast to Uzbekistan, almost the all countries reviewed in the preceding section have funded pension systems that rely heavily on private sector participation. Chile, Argentina, Colombia, Bolivia, Peru, Uruguay, Canada and Mexico in the Americas, and Sweden, Hungary, Poland, Macedonia, Latvia in Central and Eastern Europe are among those countries. In neighboring Kazakhstan, about two dozen private pension funds are currently functioning alongside a publicly-owned funded scheme.

This clear preference toward private ownership of funded pension schemes raises the important question of whether sole public ownership and management of Uzbekistan's funded pillar pension system is justifiable. To consider this, public and private funded pension schemes are often compared on the issues of operational/administrative costs, and on political risks and the rate of return on investments.

International experience in running funded pension schemes has shown that private pension funds are far more costly to manage than a single government fund. The average administrative cost of existing funded systems exceeds 5 percent of annual contributions, compared to 0.7 percent in case of the United States' Social Security System (Baker and Kar, 2003). According to Queisser (1998) and Baker and Kar (2003), the main cause of the high operating costs in such systems is the frequent transfer of members' accounts between the different fund management companies. Queisser (1998) reports that 50 percent of all contributors switched fund management companies in Chile annually, while 30 percent did so in Argentina. In Peru, where switching was initially prohibited, the number of transfers is now rising rapidly as well.

In these countries, the principle of free choice was supposed to foster stiff competition between the fund management companies, resulting in the provision of the highest quality of services at the lowest prices for participants. Instead, the mechanism produced excessive competition through extensive marketing and advertisement campaigns, which in turn increased operation costs substantially.

According to Queisser (1998), two factors reportedly have strong influence on the decision-making of funded scheme participants. The first factor is the very high degree of similarity in investment behavior among competing fund management companies, which translates into nearly identical investment portfolios. The other factor is the strong tendency among participants to choose their fund management companies based on advertising campaigns, promotional gifts, and cash payments, as well as peer advice.

Countries are finding ways to address the high funded private pension system operating costs. A number of proposals have been made so far to reduce operating costs. Among the most popular measures proposed and implemented include limiting the number of account switches per year (Mexico), allowing more than one account per worker to reduce the competition for accounts, and allowing fund management companies to charge exit fees (Peru) to discourage excessive account switching (Queisser, 1998). These measures, if implemented, can lower the operation costs of funded private pension systems, making them more feasible, both financially and politically.

It is obvious that the causes of high operating costs of private funds can be easily avoided by setting up a funded pension system with a single publicly-owned scheme such as that in Uzbekistan. However, sole public ownership over the funded pension system has its own shortcomings and problems. One of the major shortcomings of publicly-owned funded systems is that they are highly vulnerable to political interference. Political factors can certainly affect the composition of public pension fund investment portfolios, with most of the funds being invested in government bonds or in unproductive and infeasible public projects. As a result of such political risks, publicly managed pension funds often earn lower rates of return on their investments than privately managed funds. Iglesias and Palacios (2000) find that most public pension funds in developing countries had negative real returns on their investments. Moreover, in a number of countries in Latin America, Asia, and even in Europe, public pension funds were depleted through misuse and corruption, making the originally promised benefits impossible to deliver. These findings show that political risks in the case of publicly managed funded pension systems are real.

Private funded pension schemes, on the other hand, are considered to be less susceptible to political interference. This is one of the main arguments of the World Bank's pension reform policy (World Bank, 1994). Proponents of private ownership over funded pension systems, including the World Bank, argue that private ownership ensures a higher rate of return on investments, with a reasonable level of investment risk, provided the governments impose strict rules on the types of investment instruments that are appropriate for these funds. Common rules include prohibitions of investments in complex and speculative financial instruments, and investments only in equities that meet certain criteria (being listed on the stock exchange, or stocks of a certain grade, etc.).

Contribution Rates and Investment Returns

In Uzbekistan, individuals are only required to contribute one percent of their incomes to the funded pension. Table 2 provides a simple simulation to show the inadequacy of such a small contribution rate. The table considers the accumulated savings of a worker earning the average wage throughout their career in order to show how these savings will compare to earnings upon retirement. For purposes of making the table, we assume that real wages grow at 2 percent, while pension assets enjoy an average real return of 4.5 percent, meaning also that pension assets grow faster than real wages. These assumptions should be thought of as optimistic, as they imply much better economic and pension performance than has been possible with many developing country pension funds, but the results nonetheless show how small pensions will be. The nest egg ratio presents the total accumulated pension assets as a percentage of the real wage at different points in one's career. From the simulation, we can see that even with these generous assumptions, a worker who contributes only one percent of their income over a career lasting 40 years will have total pension assets that match only 66.7 percent of their final salary. Various rules of thumb are available for how to spend down one's assets if annuities are not available, and for example, if the retiree plans to spend 5 percent of their accumulated assets in each year of retirement, this would imply a pension replacement rate of only 3.3 percent, which is much too small to help fund retirements.

Table 2
Projected Pension Savings From the Uzbekistan Funded Pension System
For an Average Wage Male Worker, 2008-2047

Year	Length of covered employment	Real Annual Wage (base=2008)	Contribution rate (as percent of payroll)	Annual contri-butions	Real Accumulated Pension Savings (base=2008)	Nest Egg Ratio
2008	1	2,280	1	22.8	22.8	1.0%
2009	2	2,326	1	23.3	47.1	2.0%
2010	3	2,372	1	23.7	72.9	3.1%
2011	4	2,420	1	24.2	100.4	4.1%
2012	5	2,468	1	24.7	129.6	5.3%
2013	6	2,517	1	25.2	160.6	6.4%
2014	7	2,568	1	25.7	193.5	7.5%
2015	8	2,619	1	26.2	228.4	8.7%
2016	9	2,671	1	26.7	265.4	9.9%
2017	10	2,725	1	27.2	304.6	11.2%
2022	15	3,008	1	30.1	537.5	17.9%
2027	20	3,322	1	33.2	844.3	**25.4%**
2032	25	3,667	1	36.7	1244.7	**33.9%**
2037	30	4,049	1	40.5	1763.8	**43.6%**
2042	35	4,470	1	44.7	2432.7	**54.4%**
2047	40	4,936	1	49.4	3290.8	**66.7%**

Note: Other Assumptions: Real Income growth = 2 percent; Real investment returns = 4.5 percent.
Source: Own calculations.

The above simulations imply that the funded pension system will play a very small role in financing elderly retirements. In fact, Uzbekistan's funded pension scheme has the smallest contribution rate among those currently in operation worldwide. For instance, in Chile, Colombia, Bolivia and El-Salvador, the contribution rate is set at 10 percent of payroll, while in Uruguay it is 12.27 percent, 12.07 percent in Mexico, 8 percent in Peru, and in Argentina it is 7.72 percent of payroll. Among Eastern European countries, the contribution rate in 7.2 percent in Poland, 6 percent in Hungary, and 5 percent in Croatia. In Kazakhstan, individuals contribute 15 percent of their income to their personal accounts.

To further consider the expected returns on pension assets in Uzbekistan, the present law obliges the People's Bank to pay interest on accumulated funds at a rate that exceeds the inflation rate. This requirement sends a positive message about the funded pension scheme, as it implies that pension savings are protected against inflation. However, in reality there is a big difference between the interest rate stipulated in the law and the actual level. The problem lies with how the government measures inflation. There are two main indicators of inflation, namely changes in the Consumer Price Index (CPI) and changes in the Gross Domestic Product (GDP) deflator.

Normally, these two indicators nearly match in terms of magnitude. However, in Uzbekistan, the official CPI is normally much lower than the GDP deflator. For instance, in 2007, the GDP deflator was 24.0 percent, while the CPI was only 6.8 percent. In Uzbekistan, the government reports the inflation rate based on the CPI. Since this CPI serves as the base for determining the interest rate paid on pension savings, individuals' pension savings will lose their real value over time to the extent that the CPI understates actual price changes.

Another important issue associated with investment returns is the asset allocation of the pension fund portfolio. Currently, the People's Bank is allowed to invest pension funds only in domestic financial instruments such as government bonds, corporate bonds and deposits at commercial banks. Regarding the diversification of the investment portfolio of a funded pension scheme, Pfau (2007) argues for broader investment of Pakistan's pension portfolio into equities and international assets with simulations showing how such diversification leads to improvement in the long-term sustainability of the pension scheme. Only allowing investment in domestic fixed income securities exposes pension fund assets to too many idiosyncratic risks and also leads Uzbekistan workers to endure a high correlation between the general health of their economy and their retirement savings.

Coverage rate

As noted previously, the country's funded pension schemes currently serves about 4.7 million individuals, practically the same number served by the PAYG pillar. This implies that despite the openness of the funded pillar to voluntary participation of individuals engaged in the informal sector (which make up about half of the economically active population), almost all individuals engaged in the informal sector do not participate in the funded pension system. A similar situation has been observed in the majority of Latin American countries, where the rate of coverage was less than 50 percent of the economically active population.

One reason for the low participation may be common mistrust in the state-owned People's Bank, and in the government's commitment to provide safe handling of the pension savings. In fact, the People's Bank is not among the country's top banking institutions. Although the public's confidence in the banking system and the government is rising, apparently it has not reached a sufficiently high level.

The low level of participation in the funded pillar is also associated with a substantial gap between interest rates paid on bank deposits and interest paid by the People's Bank on pension savings. In 2007, the average annual interest rate on bank deposits amounted to 27.0 percent, while on pension savings the interest rate was based on CPI (6.8 percent). Such a considerable gap between rates clearly discourages voluntary deposits to the pension accounts in favor of deposits in commercial banks. In fact, according to informal data from the Ministry of Finance of Uzbekistan, the total sum of deposits made by individuals to commercial banks in 2007 increased by 53 percent, while the total sum of pension savings at the People's Bank increased by only 31 percent.

Feasibility of Further Expansion for the Funded Pension Scheme

Uzbekistan's existing funded pension scheme in its current setup is relatively small and provides negligible old-age income to those who participate in the current multi-pillar pension system. Moreover, the funded pension scheme is too small to produce significant amounts of additional savings for the national economy and to contribute to the economic development of the country. These facts raise important questions regarding the future of the funded pension scheme. Is it feasible to expand the current funded pillar? Does Uzbekistan have the necessary conditions that made similar reforms feasible in other developing countries?

In the process of reviewing the existing literature on the experience of developing countries in designing and running funded pension schemes, one finds a set of minimum conditions that need to be satisfied for the successful operation of a funded pillar. These include the existence of a core of sound banks and other financial institutions capable of offering reliable administrative and asset management services, a long-term commitment on the part of the government to pursue sound macroeconomic policies and related financial sector reforms, and the establishment of core regulatory and supervisory systems required for the operation of funded pension schemes, as well as long-term commitment for the support and continued development of a sound regulatory framework.

The banking sector of Uzbekistan is small by international standards, and the level of monetization and intermediation has been declining over the past several years. The ratio of broad money to GDP declined from 17.7 percent in 1995 to 10.3 percent in 2006 (ADB, 2007a). Despite its small size, the banking sector dominates the country's financial sector as other types of financial institutions such as credit unions and insurance companies are relatively new and their share in financial sector's total operations is insignificant.

At present, Uzbekistan has a two-tier banking system, consisting of the Central Bank and 32 commercial banks. Three of the commercial banks are fully state-owned, namely the National Bank of Uzbekistan (NBU), the Asaka Bank, and the People's Bank. The rest of the banking sector consists of 5 joint-venture and subsidiary banks with foreign participation, 13 non-state-owned joint-stock commercial banks, and 11 private banks where private individuals own more than 51 percent of the charter capital. The presence of a large number of banks in the banking sector is a sign of high degree of competition in the market. However, closer analysis of the market by ownership structure reveals that the above information on the competitiveness of the market is misleading. The reason is that the country's commercial banking sector is dominated by the state-owned banks, where NBU and Asaka Bank account for about 70 percent of the total assets of the banking system (EBRD, 2005). As both these banks are fully state-owned, the overwhelming share of banks' activities remains under the government control.

In terms of efficiency, which is defined as the ability of the banking sector to provide high quality financial products and services at the lowest cost, the situation in the banking sector has been deteriorating over the past few years. In recent years, the nominal deposit and lending rates structure underwent little change, with the interest rates staying above the 30 percent level, despite the decline in the Central Bank's refinance rate from 40 percent in 1997 to 14 percent in 2007, and a decline in the GDP deflator from 66.1 percent in 1997 to 24 percent in 2007 (NHDR, 2005; ADB, 2007b). Although the average spread between deposit and lending rates has been broadly stable since 2000, the interest rate structure, which is the cost of banking sector products, has not been adjusted yet for the recent economic developments, making the banking sector operations less efficient.

Regarding the core regulatory and supervisory systems, during the last ten years there has not been any case of a bank collapse or bank run. Moreover, the number of commercial banks is increasing annually. However, the number of such entries is very small due to strict regulations and requirements for starting banks. All the above facts imply that in Uzbekistan core regulatory and supervisory systems are in place and functioning effectively. It should be possible to expand the funded pension scheme.

5. Concluding remarks and policy recommendations

This study has considered the international experience with funded pension schemes and compared it to the situation in Uzbekistan. The evaluation of the current funded pillar has produced the following main findings and policy recommendations.

First of all, the current policy choice of prohibiting the participation of the private sector in running the funded pension scheme is counterproductive, with its disadvantages outweighing its advantages. Private systems are found to be more costly to manage than public systems, but are less vulnerable to political interference and provide higher returns on investments. At the same time, private systems might be associated with higher investment risks than public ones. However, these shortcomings can be addressed by imposing appropriate regulations that prevent excessive competition among fund management companies (limiting the number of account switches per year, allowing more than one account per worker and allowing fund management companies to charge exit fees). Similarly, imposing strict rules on the investment of funds can prevent excessive risk-taking among fund management companies, though the restrictions should not prohibit the inclusion of various diverse asset classes. Participation of the private sector in running the country's funded pension scheme should be allowed and encouraged.

Another important finding is that the current funded pension scheme is too limited. Its contribution rate is one percent of payroll, which happens to be the world's smallest contribution rate. It is insufficient to provide an adequate level of additional pension income to that received from the PAYG pillar. At such rates, individuals will not be able to accumulate pension savings sufficient for their retirement years. The current funded pension scheme should be expanded, with a substantial increase in the contribution rate.

Moreover, the current setup of the funded pillar offers negative real returns on pension savings, as it bases its interest payments on the CPI, which in Uzbekistan is a downward biased measure of inflation. This means that an individual's pension savings will lose purchasing power over time. The method of interest rate determination should be modified, in order to ensure positive real rates of return on pension savings, in part by incorporating a wider range of assets into the investment portfolio.

This study also reveals that multi-pillar pension reforms have failed to expand the coverage rate of the pension system. Despite low contribution rates and openness of the funded pillar for voluntary participation from those engaged in the informal sector of the economy, currently only those participating in the PAYG pension are the ones involved with the funded pension. This implies that nearly half of the economically active population, or almost all individuals engaged in the economy's informal sector, do not participate in the funded pension system. Moreover, due to a substantial interest rate gap, individuals earn more by depositing their savings in commercial banks rather than in the pension fund, which pays less than a quarter of what commercial banks pay for deposits.

The last important finding of this study is that present conditions in Uzbekistan allow for further expansion of the funded pillar. Although the banking sector is dominated by state-owned banks, which allows the government to exercise strict control, and is underdeveloped by international standards, it is nevertheless solid, and offers relatively reliable administrative and asset management services. Moreover, the core regulatory and supervisory systems are in place, and the Central Bank is executing supervision over the banking sector effectively. This has produced a stable banking system, which has not experienced any bank collapse or bank run during its comparatively short period of history. More can still be done to further liberalize the banking sector though, in order to reduce government control and raise public confidence.

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