

Pension Reform in Russia and Kazakhstan

In recent years, several countries have switched from a defined benefit public pension system to a defined contribution public pension system. These include several countries of the Soviet Union, many of which undertook pension reform as part of more general economic reform. In this paper, I shall take a look at pension reform in Kazakhstan and Russia. I start with an overview of the pre and post transition pension systems in Kazakhstan and Russia, and then move on to the possible reasons for the reform that was undertaken by these countries.

Kazakhstan

In 1998, Kazakhstan moved from a defined benefit to a multipillar plan dominated by a defined contribution element.

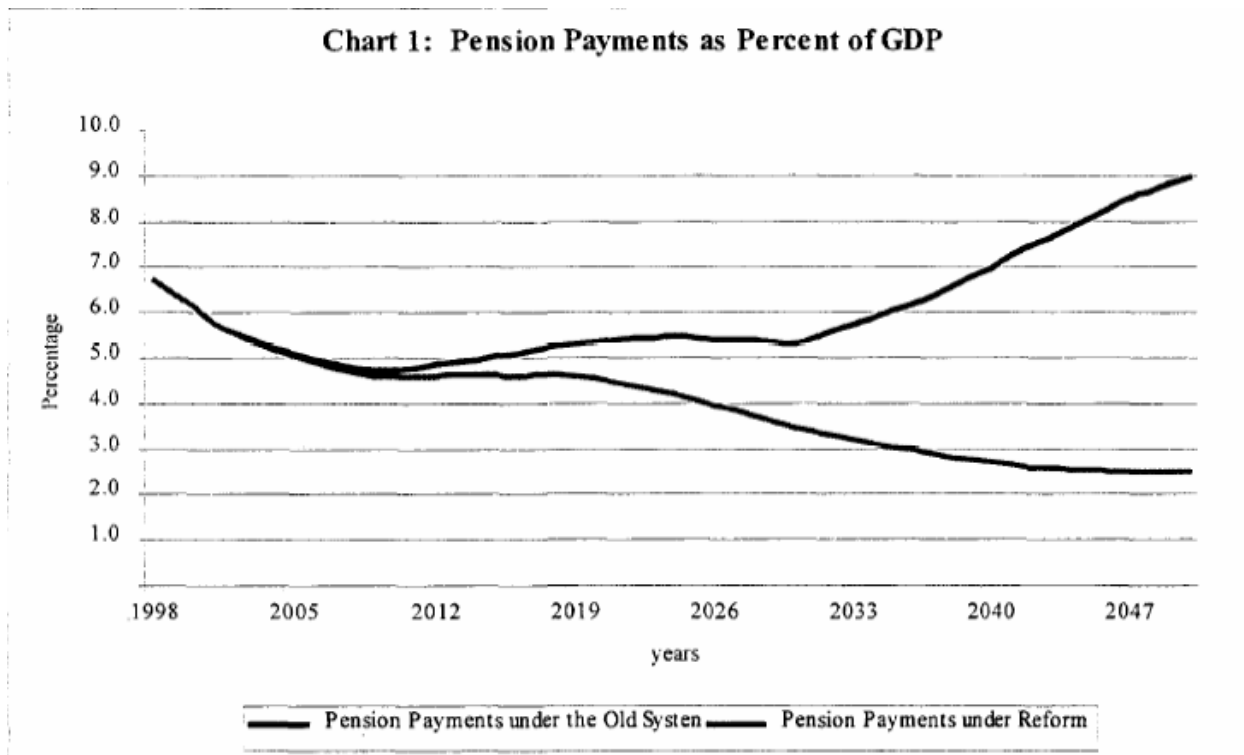
Pre-Transition

Kazakhstan's pension system was a legacy of the Soviet Union, and hence was relatively generous. It covered all employed residents of Kazakhstan, regardless of whether they were citizens. Retirement age was 60.5 years with at least 25 years of covered employment for men and 55.5 years with at least 20 years of covered employment for women.

Kazakhstan's pension payments were largely financed by employers (nominally at least), who contributed 30% of payroll, while employees contributed 1% of payroll. Payments were disbursed on a pay as you go basis, and the government undertook to finance any shortfalls out of general revenues. In 1996, pension expenditure was 5% of GDP and forecasted to rise further if the pension system wasn't reformed.

| | 1993 | 1994 | 1995 | 1996 |
|---------------------------------|------|------|------|------|
| Pension Expenditure in % of GDP | 4.4 | 3.8 | 4.5 | 5.0 |

Source: Cangiano, Marco, Carlo Cottarelli and Luis Cebbedu (1998)



Source: Projections for Annual Report of Ministry of Finance, PROUST model.

Source: Andrews, Emily (2001)

Benefits were determined as a fraction of earnings – 60% of highest wages averaged over 12 months plus 1% for every year of work exceeding the minimum number of years required to receive a pension (ie 25 years for men and 20 years for women) up to a 75% maximum. The total pension should be at least 100% of the social minimum set by the government (550 tenge as of January 1997 - about USD 7.25 (<http://www.oanda.com/convert/fxhistory>) and relative to the average wage?}), which was periodically adjusted on an ad hoc basis. Partial pensions were awarded to people who do not meet the employment pension, and was adjusted downward appropriately according to the number of years worked. Men aged 63.5 years and women aged 58.5 years and above were entitled to a special pension equivalent to 80% of the social minimum if they were not eligible for employment related pensions. This special pension was also paid to people of normal retirement age living in ecologically damaged regions of the country. There are also early retirement provisions for people who did hazardous or arduous work, who worked in ecologically damaged regions, for mothers of 5 or more children or of disabled children, and for the blind.

Special provisions were also made for government employees, teachers, professional athletes, truck drivers, machine operators, railway employees, test pilots and certain categories of performing artists.

Transition

In 1998, Kazakhstan underwent a reform to a multi pillar system. During the transition, current retirees continued to receive benefits according to the old system, to be funded by employer contributions of 15.5% which were to be gradually reduced to 0% as the transition

progressed, with the remainder being funded by the government out of general revenues. Current workers who have accumulated pension rights under the old system for at least 6 months will also receive a pro-rated portion of the PAYGO pension (60% of average monthly earnings over any three successive years of work after 1 January 1995) according to their work history. However, some special privileges were suspended, and the retirement age was raised.

Post-Transition

Post-transition, Kazakhstan's pension system still covered all employed residents of Kazakhstan, regardless of citizenship. However, the retirement age was increased to 63 with at least 35 years of covered employment for men, and 55 years with at least 35 years of covered employment for women. However, there are early retirement provisions for people who live in ecologically damaged zones or were subject to radiation risk – these people could retire at 55. So could women in rural areas with at least 5 children older than the age of 8.

This pension system took the form of individual accounts to be supplemented by a social allowance.

Tier 1

Tier 1 of the pension plan is essentially a very much slimmed down version of the old pay as you go plan. It pays 100% of the social minimum (2400 tenge as of 1998; 3500 tenge in 2000; 4336 tenge as of January 2002) to retirees whose pensions fall below this level. It is funded by the government, and its real value is not to fall below the 1998 value of 2400 tenge. In practice, the adjustments have outpaced the rate of inflation and the real value of the social minimum has risen.

Tier 2

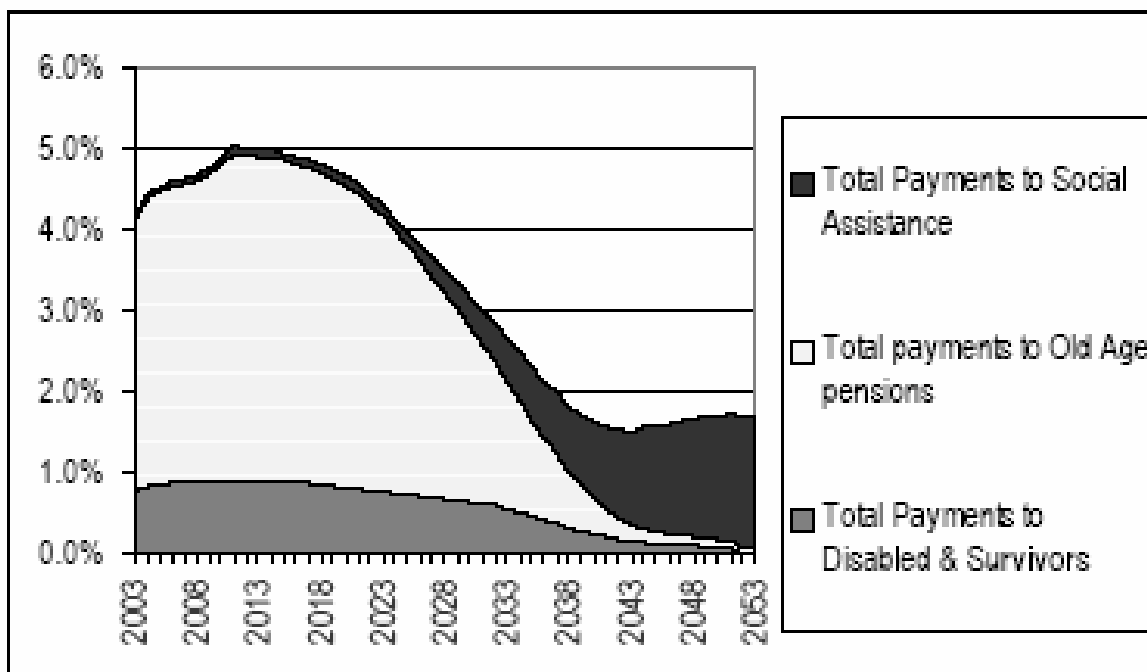
Tier 2 of the pension plan is a system of individual accounts. Employees pay 10% of their income into individual accounts. Retirees receive benefits of their individual contributions plus the returns on investments made. This means that their benefits are not known with any certainty beforehand.

Employees have a choice 15 funds to choose from, to manage their accounts. This includes one state managed fund, and 14 private funds. The default choice is the state managed fund, meaning that employees who do not specify a private fund will be automatically enrolled in the state managed fund. At the inception of this new pension plan, 85% of workers opted for the state managed fund. (1 Jan 1999 - just over 76%; June 2000 - 45%; October 2000 – 42%) By the end of 2000, this has fallen to 39%. This is in line with the government's aim to decrease the state managed fund's share of the funds to an insignificant level, at which point the fund may be privatized. However, closer examination of the data also reveals concerns that most of the workers still in the state managed fund have lower earnings on average and/or have more earnings from the informal sector, and hence are not as invested in the system.

Workers can switch funds with no penalty up to twice a year.

It is hoped that Tier 1 shall provide a negligible portion of the pensions (less than 2% of GDP), with Tier 2 being sufficient for the needs of most pensioners.

Pension Costs as Share of GDP



Source: WB paper (Fig 16)

Rules governing funds

Administrative fees are limited to no more than 1 percent of contributions and 10 percent of investment income. These fees are shared by the asset management companies and private funds – with the asset management companies getting up to 0.15% of contributions and 5 percent of investment income.

The state pensions fund’s solvency is guaranteed by the government. This is because the fund needs to meet a minimum return requirement whatever its actual return may be.

Initially, private pension funds had to meet minimum charter capital requirements of 55 million tenge for open funds, and 10 million tenge for closed funds. In 1999, this was increased to 90 million tenge for open funds and 20 million tenge for closed funds. This charter capital is legally separate from contributor accounts but is not to be used to make up for bad investment returns. These funds are licensed by the National Pension Agency.

As of October 2000, there were 14 licensed private funds. The number of licensed private funds have changed since 1998 because of the issuance of new licenses, and consolidation within the industry itself.

Non-State Accumulation Funds as of October 2000

| Pension Funds | Contributors | Net Pension Assets (tenge) |
|----------------------------|---------------------|-----------------------------------|
| Narodny Pension Fund | 96,697 | 1452996.685 |
| CaspimunaiGas Pension Fund | 41,533 | 1639669.687 |
| Nefte-Gas-Dem Pension Fund | 53,582 | 1909010.097 |
| ABN AMRO Pension Fund | 25,266 | 3442657.616 |
| Ular Pension Fund | 238,474 | 7586884.832 |

| | | |
|-----------------------------|------------------|---------------------|
| Kazakhmys Pension Fund | 73,327 | 3802816.513 |
| Narodny Bank Pension Fund | 563,089 | 18215151.073 |
| Umit Pension Fund | 271,737 | 7426625.650 |
| Kazakhstan Pension Fund | 46,010 | 2222825.276 |
| Kurmet Pension Fund | 90,257 | 2266485.145 |
| Valyut Tranzit Pension Fund | 80,273 | 1266849.225 |
| Kunaev's Pension Fund | 24,744 | 334321.706 |
| Senim Pension Fund | 89,353 | 4521364.539 |
| Korgau Pension Fund | 20,471 | 378654.425 |
| <i>Subtotal</i> | <i>1,714,813</i> | <i>56466312.469</i> |

Source: Andrews, Emily (2001)

The state managed fund may invest in:

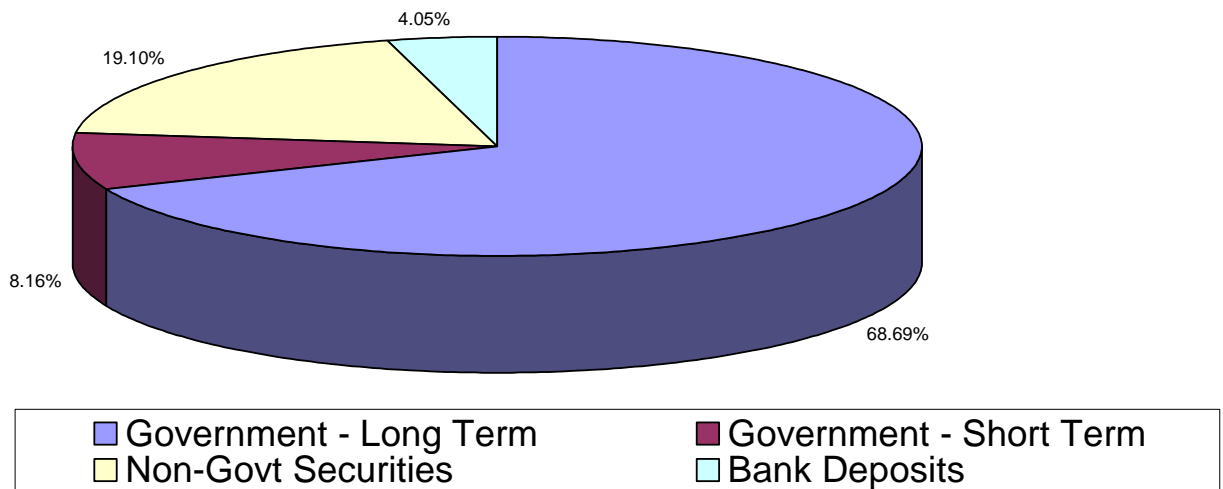
- state securities (at least 50%)
- state banks' deposits (up to 40%)
- international financial agencies (World Bank, Asian Development Bank) (up to 10%)

In addition to the above, private funds may also invest in:

- Class A securities: listed on Kazakhstan Stock Exchange, have had at least one year of financial statements audited according to international standards (up to 30%).

In July 2004, new regulation was put in place that permitted pension funds to invest in investment grade foreign government securities and assets of foreign mutual funds. Following that, in January 2005, pension funds were allowed to invest in large domestic infrastructure projects and use foreign asset management companies. Pension funds could also invest up to 20% of their funds in domestic mortgage securities, 15% in commercial banks, and bank deposits of up to 1 year.

Kazakhstan: Distribution of Private Fund Assets, October 1, 2000



Source: Andrews, Emily (2001)

In addition, pension funds must yield a minimum of either 50% of the average real return of all asset management companies or the index of the average real rate of return of all companies minus 2%, whichever is lower. The index for the previous month is published by the National Securities Commission before the 15th of the current month. Any shortfall must be made up from reserves or equity.

Each private fund must hire an asset management company which can manage the assets of more than one private fund. The asset management company is in charge of day to day transactions, while the private fund and asset management company work together to decide overall asset allocation. The assets, in turn, are kept at a custodian bank – one to each fund. Often these banks also act as brokers for investment transactions.

The asset management companies must have a minimum charter capital of 80 million tenge, with the company's equity rising in proportion to the amount of assets under management. As of January 2001, these are the companies with licenses (from the National Securities Commission) for pension fund management :

Asset Management Companies

| Asset Management Company | Pension Fund Assets under Management | Charter Capital of AMC (tenge) | Own Capital of AMC (tenge) | Net Pension Assets (tenge) |
|--------------------------|--------------------------------------|--------------------------------|----------------------------|----------------------------|
| ABN AMRO Asset | Narodny Pension Fund; | 80000 | 200875.177 | 844334.085 |

| | | | | |
|--------------------------------------|---|-----------|------------|-------------|
| Management | CaspiMunaiGas Pension Fund; Nefte-Gas-Dem Pension Fund; ABN AMRO Pension Fund | | | |
| Zhetysu | Ular Pension Fund; Kazakhmys Pension Fund | 152000000 | 245910.67 | 11389701.35 |
| Narodny Bank | Narodny Bank Pension Fund | 180100000 | 250121.671 | 18215151.07 |
| AK Niet | Umit Pension Fund | 150000000 | 149389.358 | 7426625.65 |
| BTA Asset Management | Kazakhstan Pension Fund; Kurmet Pension Fund | 80000000 | 253299.322 | 4489310.421 |
| Aktiv-Invest | Valyut Tranzit Pension Fund; Kunaev's Pension Fund | 110000000 | 123706.6 | 1601170.931 |
| Bestinvest | Senim Pension Fund; Korgan Pension Fund | 80000000 | 101152.04 | 4900018.964 |
| <i>Source: Andrews, Emily (2001)</i> | | | | |

There are eight licensed custodial banks as of March 1999, including the National Bank of Kazakhstan which serves a custodian bank for the state managed pension fund. They are licensed by the National Bank of Kazakhstan and National Securities Commission. As of October 2000, there were 11 licensed custodian banks including the NBK, however, only 5 (excluding the NBK) were active.

Custodian Banks, October 1, 2000

| Custodian Bank | Pension Fund | Net Pension Assets (tenge) |
|-----------------------|-----------------------------|-----------------------------------|
| Narodny Bank | Narodny Pension Fund | 1452996.685 |
| | CaspiMunaiGas Pension Fund | 1639669.687 |
| | Nefte-Gas-Dem Pension Fund | 1909010.097 |
| | ABN AMRO Pension Fund | 3442657.616 |
| | Ular Pension Fund | 7586884.832 |
| | Kazakhmys Pension Fund | 3802816.513 |
| | Umit Pension Fund | 7426625.65 |
| | <i>Total</i> | <i>27260661.08</i> |
| Almaty Merchant Bank | Narodny Bank Pension Fund | 18215151.073 |
| | Kunaev's Pension Fund | 334321.706 |
| | Korgau Pension Fund | 378654.425 |
| | <i>Total</i> | <i>18928127.204</i> |
| | | |
| Kazcommercbank | Kazakhstan Pension Fund | 2222825.276 |
| Temirbank | Kurmet Pension Fund | 2266485.145 |
| | Valyut Tranzit Pension Fund | 1266849.225 |
| | <i>Total</i> | <i>3533334.37</i> |
| | | |
| Eurasian Bank | Senim Pension Fund | 4521364.539 |

Source: Andrews, Emily (2001)

The custodian banks' main role is as a safeguard against fraudulent and irresponsible behavior by the private banks and asset management companies.

Russia

In 2001, Russia moved from a defined benefit pension system to one dominated by a notional defined contribution pension plan.

Pre-Transition

Russia's pension system was also a legacy of the Soviet Union, and hence bore a lot of similarity to Kazakhstan's pre-reform pension system.

This pension system covered employed citizens, self-employed people and independent farmers. Normal retirement age was 60 years with 25 years of covered employment for men, and 55 years with 20 years of covered employment for women.

In order to fund these obligations, most employers contributed 28% of payroll. Small and agricultural enterprises contributed 20.6%, while organizations of and for the disabled and pensioners were exempted from making any contributions.

On the other hand, most employees had to pay only 1% of their earnings; excepting self-employed people and independent farmers who had to contribute 20.6% of their earnings. The government will make up any shortfall in these contributions when disbursing pension checks to retirees.

Retirees' pensions were calculated as a portion of the wage base, which was defined as gross average earnings in the two years preceding retirement or any continuous five year period. Retirees would receive 55% of their wage base in addition to another 1% for each year of work exceeding the legal minimum required to qualify for a pension. This sum is subject to a maximum of 75% of the wage base, or three times the minimum pension, whichever is lower. Retirees who do not meet the employment requirement for a pension receive a partial pension which is adjusted downward in proportion to the number of years below the required years of coverage. They were entitled to receive at least two thirds of the minimum old age pension. Retirement requirements were loosened for work in the far north region, hazardous work, and mothers of five or more children, or disabled children.

Transition

In 2001 Russia undertook a reform of its pension system, switching to a multi pillar system with notional defined contributions accounts supplemented by a social allowance. Pension rights earned as of January 1, 2002 were converted into Notional Defined Capital using the following formula:

Notional Defined Capital = (Est. Old Age Pension – Basic Part (450 rubles)) * expected period of retirement pensions

For men with at least 25 years of employment and women with at least 20 years of employment as of January 1, 2002, the estimated old age pension is calculated as follows:

Est. Old Age Pension = Service Ratio * (Average Monthly Earnings in 2000 and 2001 or any 5 years of continuous employment subject to a maximum of 1.2 or 1.9 for residents or workers in

the Extreme North / Countrywide Average Monthly Wage in the same period) * Countrywide Average Monthly Wage in Q3 2001 (1671 rubles)

The service ratio is calculated as:

Service Ratio = 0.55 for 25 years of service for men and 20 years of service for women; to be increased by 0.01 for each additional full year of service, but to be increased by no more than 0.2
 = 0.55 * ratio of available service to required one in case of incomplete service record

This is deemed equivalent to all insurance contributions paid in 1991 – 2001 and all contributions to public social insurance paid before 1991.

Post-transition

Post-transition, the new system covered all employed citizens, self-employed people and independent farmers born in and after 1967. The retirement age remained at 60 for men and 55 for women, with a minimum of five years of insurance coverage. This is not taking into account a plethora of exemptions for workers in special circumstances. For example, men aged 50 with 20 years of work including 10 in an unhealthy environment such as underground or in hot shops, or women aged 45 years with at least 15 years of work including 10 years in such environments were allowed to retire. In addition, men aged 55 with 25 years of work including 12.5 years in unhealthy environments, geological work, in the railway service, as drivers in mines, dock workers, sailors or as aircraft ground crew, or women aged 50 with 20 years of work including 12.5 in such environments were allowed to retire too. There was also no retirement age limit for teachers of children who have worked more than 25 years, medical workers employed for more than 30 years in cities or 25 years in village, regardless of gender.

Civil servants, military personnel, police officers and war veterans are entitled to additional pensions if they have worked for more than 15 years. In addition, a pensioner is still entitled to his pension even if he continues to work. A state social pension is also paid to all disabled persons and men aged 65 and above and women aged 60 and above.

Self employed persons contribute a fixed 150 rubles a month, while the government pays the full cost of social pensions, service pensions for state employees, military personnel, police officers and other specified groups.

Tier 1

Tier 1 of the plan consists of a social insurance plan that pays a basic flat rate according to different categories of beneficiaries. There is also a top up pension, meaning that the total amount of pension from both the basic flat rate pension and NDC (Tier 2) should be at least 660 rubles i.e. all pensioners would have at least 660 rubles a month (about USD 22).. This is financed by a contribution of 14% of payroll by employers.

Basic Flat Rate

| Pension type and category of beneficiary | Without dependents | With dependents | | |
|--|--------------------|-----------------|------------|----------------|
| | | <i>one</i> | <i>two</i> | <i>three +</i> |
| <i>Old age</i> | | | | |

| | | | | |
|--------------------------|-------------|---------|---------|---------|
| Regular | Rb 450 | Rb 600 | Rb 750 | Rb 900 |
| Elderly (80+) | Rb 900 | Rb 1050 | Rb 1200 | Rb 1350 |
| Diabled I Group | Rb 900 | Rb 1050 | Rb 1200 | Rb 1350 |
| <i>Disability</i> | | | | |
| I Group | Rb 900 | Rb 1050 | Rb 1200 | Rb 1350 |
| II Group | Rb 450 | Rb 600 | Rb 750 | Rb 900 |
| III Group | Rb 225 | Rb 375 | Rb 525 | Rb 675 |
| <i>Survivor pensions</i> | | | | |
| Full orphans | Rb 450 each | | | |
| Other family members | Rb 225 each | | | |

Source: Afanasiev, S A (2003)

This amount is adjusted for inflation taking into account the amount available for this purpose. The ratio of the basic flat rate among different groups of beneficiaries will remain constant. The previous adjustments are as follows:

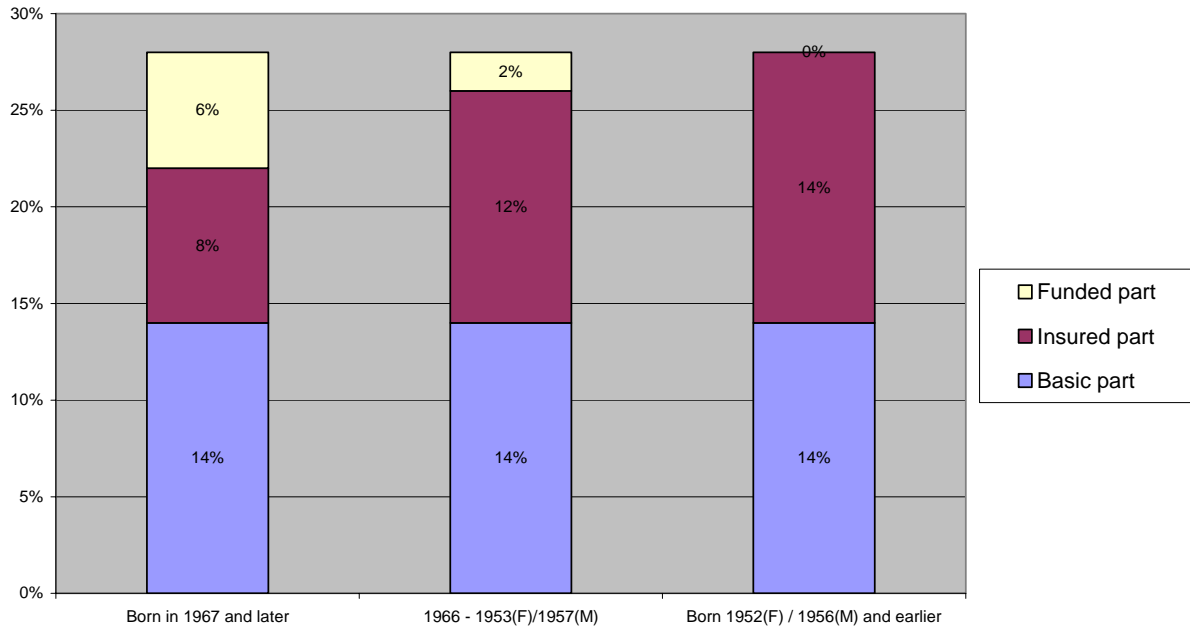
| | |
|------------------|------|
| February 1, 2002 | 6.5% |
| August 1, 2002 | 9% |
| February 1, 2003 | 6% |

The basic flat rate portion provided a replacement rate of 14.5% in 2002, but this is expected to fall to between 2 and 6% in the next 50 years, depending on different macroeconomic scenarios.

Tier 2

Tier 2 is a notional defined contribution plan, funded by employer contributions of 14% of payroll. This 14% is divided between the funded (Tier 3) and insured (Tier 2) portions depending on the age of the contributor. Hence, a person who was born in 1967 or later would contribute 6% to the funded part and 8% to the insured part. A man born between 1953 and 1966 or a woman born between 1957 and 1966 would contribute 2% to the funded part and 12% to the insured part, while a man born before 1953 or a woman born before 1957 would contribute all 14% to the insured part, meaning that they do not participate in the funded portion (Tier 3) of the pension system.

Distribution of Payroll Taxes



Source: Afanasiev, S A (2003)

Benefits are to be paid based on contributions plus an interest amount to be paid beginning in 2013. Monthly benefits are calculated as (Notional Defined Capital / Number of months of expected payment). This benefit is inflation adjusted with respect to the price increase and the growth rate of the average monthly wage. However, this benefit will only be adjusted if the price increase is more than 6% over the time period (quarter, half year of full year) since the last adjustment. Hence, no adjustment was recorded on February 1, 2003 since the price increase over the previous six months was only 5.55%.

| | |
|------------------|------|
| February 1, 2002 | 6.5% |
| August 1, 2002 | 9% |
| February 1, 2003 | 0% |

The expected period for pension payment after retirement is currently 13.5 years or 162 months, to be increased to 19 years or 228 months by 2013. The beneficiary can also choose to postpone payment for one to five years, which will then reduce the expected period over which the pension is to be paid out, earning them a higher monthly pension.

Legislatively established value of the expected period of payment of old age pensions until 2013

| Period | T, Years | T, Months |
|-----------------|----------|-----------|
| from 01.01.2002 | 12 | 144 |
| from 01.01.2003 | 12.5 | 150 |
| from 01.01.2004 | 13 | 156 |

| | | |
|-----------------|------|-----|
| from 01.01.2005 | 13.5 | 162 |
| from 01.01.2006 | 14 | 168 |
| from 01.01.2007 | 14.5 | 174 |
| from 01.01.2008 | 15 | 180 |
| from 01.01.2009 | 15.5 | 186 |
| from 01.01.2010 | 16 | 192 |
| from 01.01.2011 | 17 | 204 |
| from 01.01.2012 | 18 | 216 |
| from 01.01.2013 | 19 | 228 |

Source: Afanasiev, S A (2003)

Notional defined capital is calculated as the total amount of contributions from January 1, 2002 plus the equivalent cash amount for pension rights earned before January 1, 2002. The equivalent cash amount is calculated as outlined in the section above.

Tier 3

Tier 3 is the funded portion of the pension system, and is what is known generally as a standard defined contribution account. A worker becomes eligible to withdraw his accumulated assets at retirement. Beneficiaries receive payments of (pension assets/ expected period of payment) for life where the expected period of payment may differ from that for the insured portion. However, because the annuity market is not developed as yet, payments to people who have left the system (emigrants etc) have so far been made as a lump sum. In case of death, the pension assets are paid lump sum to the family members supported by the deceased; or to other relatives of the deceased; or accounted as pension reserves for all other insured individuals, thus in a sense reallocated to all other insured individuals. This pension amount is subject to an adjustment for inflation from revenues earned on invested pension assets over the year from July 1 of the following year.

Investment of Pension Funds for Tier 3

Workers may choose to have a state managed company manage their funds or a private asset management company (out of 55 licensed ones). The default choice is the state managed company. They may change asset management companies once a year.

The state managed company may invest in:

- government securities of the Russian Federation or constituent members of the Russian Federation
- state-guaranteed mortgages
- ruble cash balances and deposits
- foreign exchange balances with credit organizations (dollars and euros)

In addition, private asset management companies may invest in:

- Russian stocks and corporate bonds
- Russian index funds
- Foreign index funds - stocks of index investment funds investing in foreign government securities, bonds and shares

No single security issue is to exceed 35% of funds under management. As of July 1, 2004, no more than 20% of assets is to be invested in foreign assets of any kind.

The 55 private asset management companies were chosen by tender in August and September of 2003. They needed to meet these requirements in order to participate in the tender:

- be at least 5 years old
- no net loss in the past 2 years
- have no less than 100 million rubles under management
- have no less than 25 million rubles of equity
- insure at least 5% of funds under management

Pension funds may not be invested in securities issued by issuers undergoing bankruptcy or rehabilitation proceedings; and asset managers, brokers, credit and insurance organizations, and auditors contracted to provide services for the pension fund.

As of January 2004, 2% of eligible workers have signed up for private pension funds. This could be due to the confusion arising from the inability of the Russian postal system to handle the 37 million pieces of mail that would allow workers to choose their pension funds. Because of this, the deadline was pushed back to 31 December 2003, but was not reflected on the mailings which still stated the original deadline of 1 October 2003. Hence many workers did nothing, placing them in the state managed fund by default.

Among the three tiers, Tier 1 provided a replacement rate of 14.5% and Tier 2 provided a replacement rate of 22% in 2002. Within the next 50 years, Tier 1 will provide between 2 and 6% replacement rate, while Tier 2 will provide less than a 10% replacement rate. Accumulation in Tier 3 is expected to reach between 20 and 40% of GDP in 50 years' time.

Pension reform in Russia was also accompanied by a cut in benefits such as free health care, free transport and subsidised utilities. In theory, these benefits were monetized and hence pensioners received more in cash; however, pensioners quickly found out that the additional pension barely covered even transportation alone. This has led to protests in Russia related to the pensions reforms. More specifically, the protesters were calling for the maintenance of free transport passes and health benefits, as well as special rates for municipal services for retired people. This has led to some regional officials restoring some of these benefits for their respective regions. The government had also promised to look into the matter and raise pensions by 15% in February 2005, as well as adjusting pensions to inflation after January 2006. However, this may not be enough to offset living costs that would have risen by as much as 40%.

More recently they have been joined by university students, military officers and disabled survivors of Chernobyl. The issue is still ongoing.

Reasons

We will now examine the reasons for pension reform and the form of the pension reform in Kazakhstan and Russia.

1) Demographic Pressures

Under a pay as you go system, the amount of pensions that the government could afford is limited by the amount of taxes it collects. As such, the viability of such a plan depends on there being enough young working people to support the needs of retirees. To illustrate, we take the simplest hypothetical case where every worker pays taxes and earns the average wage. Assume that the government wishes to provide a pension that will provide a wage replacement rate of 50%. If there is one worker for every retiree, the worker will have to pay 50% in payroll taxes to pay the pension of the retiree. If there are two workers for every retiree, each worker would need to pay 25% in payroll taxes. If there are ten workers per retiree, then each worker will only need to pay 5% in payroll taxes. Hence, the more workers there are per retiree, the more viable the system.

In Kazakhstan, we find it actually had favorable demographics. Its' old age dependency ratio (ratio of persons aged 60 and over to persons aged 20 – 59) was only 0.18 in 1995. Hence it would seem that demographics did not provide an immediate reason for reform. However, according to World Bank projections, this ratio would increase to more than 0.3 in 2025 and continue to increase. Hence, indirectly, population pressures could have played a role, though probably not a significant one. (By comparison, the US had a old age dependency ratio of 0.3 and system dependency ratio of 0.31 in 1995).

Meanwhile, in Russia, we find that it has adverse demographics. In 2000, it had an old age dependency ratio of 0.3651. According to World Bank projections, this could reach as high as 0.66 in 2045. Obviously this means that a PAYGO system is probably not viable for Russia in the long run.

Old Age Dependency Ratios (Ratio of Aged 60+ to Aged between 20 - 59)

| Year | 2000 | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 | 2040 | 2045 |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| Kazakhstan | 0.2287 | 0.2033 | 0.2012 | 0.2262 | 0.2695 | 0.3133 | 0.3206 | 0.3310 | 0.3557 | 0.403472 |
| Russia | 0.3651 | 0.3042 | 0.3060 | 0.3438 | 0.4096 | 0.4656 | 0.4828 | 0.5169 | 0.5689 | 0.6600 |

Source: World Bank

2) Declining tax base due to evasion/ tax collection problems and growth of informal sector

We have already seen that in Kazakhstan, demographic pressures were not severe at the time of the reform. Nevertheless, the pension system was in trouble as evidenced by the arrears accumulating. For example, at the beginning of 1996, pension arrears stood at 26 billion tenge and rose to 32 billion tenge (or 2.5% of GDP) by June 1996. In response, the government transferred 36 billion tenge from the state budget in 1997 to cover these arrears. This is because not every working age person paid payroll taxes. Furthermore, both countries have inherited a plethora of special privileges for certain classes of workers (in the form of early retirement, special pensions etc) that increased the costs of the system while reducing or not adding to the contributions that flow into the system.

In fact, we find that in Kazakhstan, the system dependency ratio (number of retirees divided by number of workers paying taxes) was 0.56 in 1995 (as opposed to the old age dependency ratio of 0.18) and 0.57 in 1996 (*1996: de Castello*). This meant that 1.8 workers were supporting one retiree, clearly a huge burden on the workers. Among other things, this implies that tax evasion and/or tax collection problems were a factor.

Emily Andrews estimates in her 2001 paper that the pension fund only collected taxes from 5 million workers from a workforce of 7.8 million. In addition, underreporting of wages made the problem worse, and thus collection amounted to only 45 – 52% of potential revenues.

Pre-reform, Kazakhstan had a decentralized tax collection system. Each region (called an oblast) collected its taxes and paid local expenses out of those taxes, with the remainder to be sent to the central government. This, however, did not always happen. Regions that managed to collect enough taxes to covers its own expenses did not have an incentive to go after tax evaders. Hence, more arrears accumulated in some regions than in others. For example, in 1995, pensioners in Southern Kazakhstan received pensions of 39.6% of the average wage, while pensioners in Mangystau received pensions of only 15.2% of the average wage. By 1 January 1996, enterprises owed 40 billion tenge, which grew to 49.6 billion tenge by July 1996, enough for five months' worth of pensions.

In addition, Kazakhstan's official labor force participation rate has declined since the fall of the Soviet Union. During the Soviet era, Kazakhstan had a close to 80% labor force participation rate. This has since declined – 74.5% in 1990; 70.4% in 1992; 62.8% in 1993; 58.6% in 1994 and 54.6% in 1995. While part of this could be due to reduced employment opportunities, part of it could also be due to a growing informal sector. Either way, a growing percentage of the working age population was no longer paying taxes or contributing towards the pension system, thus reducing tax collections and increasing the burden on taxpayers.

In Russia as in Kazakhstan, the system dependency ratio is higher than the old age dependency ratio. In 1996, the system dependency ratio was 0.57 (*de Castello*). There has also been growing unemployment in Russia since the fall of the Soviet Union, with 69% of the labor force being employed in 1997. (*Muller*)

Average Annual Growth Rate

| | #Pensioners | #Contributors |
|------------|--------------------|----------------------|
| Kazakhstan | 3.6 (1992-1996) | -8.5 (1993-1997) |
| Russia | 1.9 (1992 - 1996) | -2.2 (1991 - 1996) |

Source: Mangiano, Marco (1998)

While we can only speculate as to the reason for this, there are a few reasons that seem highly plausible. Firstly, high payroll taxes meant that workers had an incentive to evade taxes as much as possible. This incentive would only grow as more workers evade taxes and the population ages. Secondly, the workers might not see any benefit from paying payroll taxes now, as it does not guarantee him or her a pension in the future. Workers of this generation have lived through a period of great upheaval and change, and quite probably distrust the longevity of the government, or even the government itself. Thirdly, a look at the pensioners around them would convince them that with inflation and ad hoc adjustments, pensions would be worthless by the time they really need it, which is when they are really old and sick. Nevertheless, this is all speculation that is not proven.

Furthermore, tax collection problems also meant that governments could ill afford to subsidize the pension system through budget transfers from general revenues. In fact, pension expenditures were already a huge part of government expenditures, despite inflation and pension arrears accumulation. In 1996, Kazakhstan spent 20.9% of its'

general government expenditures on pensions, while Russia spent 14.6%. (*de Castello*) This is compounded by the inefficient tax collection system, made worse by the privatization of state enterprises. Once in private hands, enterprises have a stronger incentive to evade taxes, and the government has less ability to collect taxes.

3) Economic crises – Asian Crisis, Russian crisis, decline in basic commodity prices, especially oil

In Kazakhstan, planning for pension reform was already underway when the Russian and Asian economic crises struck. Hence, while the crises were not driving factors behind the development of pension reform, they could have hastened the pace of reform. Kazakhstan's economy is heavily dependent on basic commodities such as oil, metals and agriculture. In 1997, oil prices dropped due to an OPEC 10% increase in production and a decline in demand from Asian countries due to the Asian financial crisis. This greatly affected Kazakhstan's GDP and tax revenues, and would have served to underline the importance of a self sufficient pension system.

Meanwhile, in 1998, Russia suffered a financial crisis. As a result, the ruble had to be devalued, and this affected the purchasing power of existing pensions. In 1999, the average pension fell to 60 – 70% of the subsistence minimum.

4) Arrears in pension payments / Low replacement rates

Due to inefficient tax collection, Kazakhstan was faced with a burgeoning pension arrears problem. At the beginning of 1996, 26 million tenge was owed to pensioners, ballooning to 32 million tenge in June 1996 (2.5% of GDP). This necessitated the transfer of 36 million tenge from general revenues to fund pensions. The arrears crisis made radical reform both necessary and possible. A more moderate reform might not have solved the problem, and might have taken just as much trouble to implement.

In addition to the arrears problem, the average pension replacement was also low to begin with. Throughout the 1980s and 1990s, average pension replacement rates ranged between 24% and 42% of the average wage. It was 36% in 1996. This was far short of the target of 60% of average wage.

Meanwhile, in Russia, the average pension replacement rate was also fairly low. Between the years 1987 and 1996, the average pension replacement rate ranged between 27% and 48% of the average wage. It was 38% in 1996. However, a lot of compensation wasn't in cash but in kind, through housing, healthcare etc. This served to decrease the average pension replacement rate but did not decrease the pensioners' quality of life. In addition, there were tax exemptions for self-employed workers.

There were also accumulations of pension arrears in order to deal with the contributions shortage in Russia.

5) Inflation

A related problem was that of hyperinflation in the mid-1990s. This led to the devaluation of pension payments in real terms since adjustment was ad hoc and not indexed to inflation. While this helped to reduce pension expenditures, in real terms, it also meant that pensioners were more dissatisfied with the PAYGO system.

Inflation

| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|------------|------|------|--------|--------|--------|-------|------|------|
| Kazakhstan | 5.6 | 91 | 1515.7 | 1662.3 | 1879.9 | 176.3 | 39.1 | 17.4 |
| Russia | 5.6 | 92.7 | 1353 | 895.9 | 302 | 190.1 | 47.8 | 14.7 |

Source: Mangiano, Marco (1998)

6) Dictatorial government

Kazakhstan is a democracy. Nevertheless, this does not preclude President Nursultan Nazarbaev from holding almost absolute power. This is because the Kazakh constitution included a clause that allows the President to force urgent legislation through Parliament (in one month) or dissolve Parliament and pass the same legislation by presidential decree. President Nazarbaev had also shown his willingness to use this power in 1995. Hence, legislation regarding pension reform was basically a *fait accompli* even before it was presented to parliament, as long as it was supported by the president, which it was.

Pension reform was put in the hands of a working group headed by Grigori Marchenko, with its members including the Prime Minister, Deputy Prime Minister, Minister of Finance, Chairman of the Central Bank, Minister of Labor and Social Protection, head of the National Securities Commission, two persons from the private sector, and two MPs. This working group worked in near secrecy, thus avoiding any conflict before the first proposal was drawn up.

While trade unions expressed dissatisfaction with the legislation, the legislation managed to pass through parliament essentially unchanged, except for the provision of special privileges for certain groups, the addition of price indexation of benefits, and the increase from 10% to 15% of the amount of payroll taxes that were to go towards financing the old system. In addition, a promise to pay all current pension arrears was included at the insistence of the World Bank and USAID.

Vladimir Putin was elected President of the Russian Federation in March 2000 after Boris Yeltsin's resignation. He won convincingly in the first round of the election, his popularity bolstered by his handling of the Chechen conflict (some cynics suggest that the entire conflict was instigated in order to propel Yeltsin's chosen successor, Putin, into power). (*factiva, white, mcallister*) Under Putin, the Russian Federation underwent a period of centralization, economic growth, and new assertiveness on the international stage. He also convincingly won a second term in 2004 (won over 70% of the votes). His

party, United Russia, also won a two thirds majority in the State Duma in December 2003.

A survey by *White and McAllister* show Putin drawing his support from a cross-section of Russian society, with slightly more females, and slightly older people supporting him. This diffuse support meant that the president had no obvious constituency to depend on, or to offend. Thus he could either push through reforms without fear of alienating too many of his supporters; or he could fear alienating even a small section of his supporters. His approval ratings fluctuate but remain high, from a low of 60% immediately after the Kursk tragedy to 81% in March 2004 to 66% after the Beslan school hostage disaster. More recently, there have been protests over the monetization of benefits, which is still ongoing.

7) Trust in Government

One potential factor for a pension system to reform from a PAYGO system to a funded system is the population's distrust of government ability to fulfill its promises to pay pensions in future. The entire viability of a PAYGO system hinges upon the government's ability to assure the population that in return for supporting retirees today, they will be supported by workers in future.

However, in Kazakhstan, it seemed that mistrust of both governmental and non-governmental financial institutions was widespread, especially with the recent collapse of the 3M fund in Russia, which was widely publicized in Kazakhstan. Nevertheless, Kazakhs still seem to trust the private financial sector more than the governmental financial sector – as evidenced by the growth in market share of the private pension funds, from 15% initially to 61% by the end of 2000. Thus, distrust of the government's fiduciary responsibility could have played a role in the pension reform. At the very least, it might have muted any potential objections to a decision that was made in an authoritarian manner.

In Russia, it has been estimated that only 700,000 of 3.8 million eligible workers had chosen to invest their funds with private pension funds. This could be due to the sheer complexity of the new pension system, which workers could not comprehend. The default choice is for these funds to be invested in the state pension fund. At the same time, the 1998 financial crisis meant that workers no longer trusted the private financial sector. This probably explains why 68% of households keep their savings at the state bank despite there being private options. (*Moscow times, opportunity of a lifetime*) Hence, this could also explain why Russians kept away from private pension funds, at least initially.

8) Influence of international agencies such as the World Bank/ USAID/ ADB/ Swedish officials

In Kazakhstan, the reform was basically designed by Kazakhs. Nevertheless, this does not mean that the reform was entirely insulated from outside influences. To begin with, the reform had been championed by the US Agency for International Development, which also provided technical assistance in the early stages of the reform. The government was also cognizant of the book *Averting the Old Age Crisis* by the World

Bank, which advocated a Chilean style reform. Grigori Marchenko, who was in charge of the special working group for pension reform, reports that he had been heavily influenced by the book, as well as by the World Bank – sponsored conferences he had attended. In addition, the World Bank's view was later sought on the initial design of the system, and the World Bank sent an expert advisory mission to Kazakhstan in May 1997. Furthermore, financing the reform was made possible with aid (USD 300 million) from the World Bank.

In Russia, while the pension reform took on the shape of a Notional Defined Contribution plan that was pioneered in Sweden, and later adopted by a few countries including Latvia, there was no indication that its pension reform was directly influenced by any foreign institutions. Nevertheless, the very idea of an NDC pension system was probably not endogenous to Russia. The reformed pension system was very much the result of politicking and compromise between various actors, including the President, the head of the Pension Fund, and the Minister of Economy, all of whom differed in their radicalism.

9) Part of general greater reform movement

With the fall of the Soviet Union, Kazakhstan has emerged as one of the most radical and eager embracers of the market economy. A PAYGO pension system was incompatible with the philosophy of the market economy, as it does not clearly delineate the relationship between effort and reward. Hence, in addition to privatization and capital market reform, pension reform was also emphasized as a stepping stone towards a fully liberalized market economy.

Russia, too has been taking steps toward reform of its economy in general. However, private businesses do not seem to have benefited much from the pension reform, as much of the accumulating pension funds are controlled by the state managed pension fund. In addition, the existence of restrictive investment rules meant that private funds would not have much potential to profit from these funds anyway. This also meant that in the Russian case, pension funds have not played a significant role in creating a domestic capital market.

In addition, in both countries, as part of the general reform, state enterprises were privatized, down-sized and/ or restructured. This led to a rise in early retirement and disability pensions in order to mask the resulting unemployment problem. Hence, this raised the number of people drawing benefits from the system at the same time it reduced the number of contributors to the system. The effect was the rising system dependency ratio we have already seen, which in both countries was higher than the demographic dependency ratio.

The dismantling of state owned enterprises also meant that where previously, pensioners have received their social services from these enterprises, a form of indirect transfer, pensioners now have to pay for everything. For example, previously some employers provided free healthcare services for its workers and pensioners, but after the fall of communism, pensioners had to pay for all healthcare services. This reduction in the provision of social services meant that their living standards would fall even without a change in the pension rate. In addition, the dismantling of price controls and subsidies

meant that pensioners also had to pay more for necessities, in addition to dealing with the uncertainties of fluctuating prices in the free market.

Also, because most funded systems are required to invest a majority of their funds in state securities, this provides a source of cheap and abundant loan money for the government, which could be used to finance other reform projects as needed.

10) Low retirement age (little penalty for early retirement, generous disability pensions); intra and intergenerational inequities

One of the reasons for the high system dependency ratio is the generally low retirement age, which is lower even than the official rate due to early retirement. One third of Russian pensioners, and one half of Kazakh pensioners, received early retirement pensions in 1998.

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