KAZAKHSTAN'S PENSION SYSTEM:

PRESSURES FOR CHANGE AND DRAMATIC REFORMS

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Abstract : (*JEL* classifications **G23**, P35, J26)
Five years ago, Kazakhstan embarked on a dramatic reform of its pension and social security system in order to move from an unsustainable public defined benefit ("solidarity") system to one of defined mandatory contributions (accumulative system). While assessment of long-run success is premature, early results have exceeded expectations. This paper considers the reform's rationale and initial impact: Why did the Government of Kazakhstan decide to introduce a new pension system? What advantages did the state perceive? Was the Government's decision appropriate, and what alternatives existed? The paper also analyzes pension reform issues that have yet to be fully resolved.

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KAZAKHSTAN'S PENSION REFORM

As of January 2003, five years have passed since Kazakhstan embarked on a dramatic reform of its pension and social security system. The reform is an effort to move from an unsustainable public defined benefit ("solidarity") system to a system of defined mandatory contributions (accumulative system). It is not yet possible to declare whether the reforms will be successful in the long run, though the results to date have met or exceeded expectations. This paper therefore embarks on the more modest goal of addressing the rationale for the reform and its initial consequences. Specifically, we endeavor to answer three main questions: Why did the Government of Kazakhstan decide to introduce a new pension system? What kind of advantages did Kazakhstan as a state get from the new system? Was the Government's decision appropriate, and what if any alternatives existed? The following sections address these questions, while a concluding section also discusses issues involving the pension reform that remain to be fully considered by Kazakhstan's policymakers.

As Section I indicates, there can be no doubt that the existing pension system was untenable by the late 1990s, and demographic prospects ensured that the future would be grimmer still. Reform was therefore inevitable, though moving to an accumulative, defined contribution (DC) system was only one of several options. From the standpoint of the Kazakhstani Government, the DC reform as undertaken greatly reduced potential liabilities, thereby reducing macroeconomic imbalances and pressures on a state that at the time suffered considerable fiscal stress. The answer to the third question is more subjective; we conclude that, while plausible and effective alternatives did exist, that the Government's decision to move to a DC system was itself reasonable. However, our bottom-line assessment is that the external economic environment during the past five years has been exceptionally favorable for the accumulative system reforms, thereby making the reform decision appear less risky and more prescient than in fact it was. On the other hand, the reforms themselves have helped contribute to the favorable economic environment by creating demand for private financial sector activities that have been a critical institutional innovation.

I. Features of the pre-reform pension system

The first steps to reform Kazakhstan's pension system actually were taken before the USSR's collapse. In response to economic problems, in the late eighties the Soviet Government enacted the following pension legislation:

- Introduction of the law "On state pensions in USSR" (April 28, 1990)
- Introduction of the law "On pension provision in USSR" (May 15, 1990)
- Formation of the Pension Fund of the USSR (August 15, 1990)

In connection with these measures, the Kazakhstani republican division of the USSR Pension Fund also was established in August 1990. By establishing the USSR Pension Fund as an independent, "financial-banking system" separated from the state budget and funded by contributions from all type of enterprises and organizations, the Soviet Government signaled its desire to ultimately create a funded pension system. But in reality, the USSR Pension Fund operated on an unfunded basis, and therefore the Soviet "Solidarity" pension system remained a pay-as-you-go (PAYGO) program. The situation remained unchanged after Kazakhstan became independent and created its own, national Pension Fund of the Republic of Kazakhstan, since the law that served as its basis was adopted from the Soviet 1990 law on pension provision.

The fundamental problems with the reformed Soviet (and then Kazakhstani) PAYGO, defined benefit pension system emerged only in the post-Independence era. Most immediately, the Kazakhstan Government's structural reforms in the areas of privatization generated new economic principles that came into conflict with the "solidarity of generations" principle inherent in existing pension legislation, and which has remained a social principle even following the end of the Soviet era. In the absence of motivation to be concerned with future benefits, the growing private sector quickly learn how to evade paying mandatory pension contribution. Thus, as the share of employed in private and individual sectors increased from 32% in 1994 to 57.8% in 1997, the Pension Fund deficit increased from 12% to 53% (**Figure 1**). While individuals with non-payroll earnings are in principle obligated to make contributions, including 5% social tax payments, in reality contributions from individuals in small business and professional activities have been insignificant, especially in the early post-Independence years (for example, in 1994 such contributions comprised only 0.14% of total Pension Fund revenue). Given rampant non-compliance, then, it is easy to understand the growth of the accumulated pension debts of nearly 40 billion tenge by January 1, 1997 (**Table 1**).

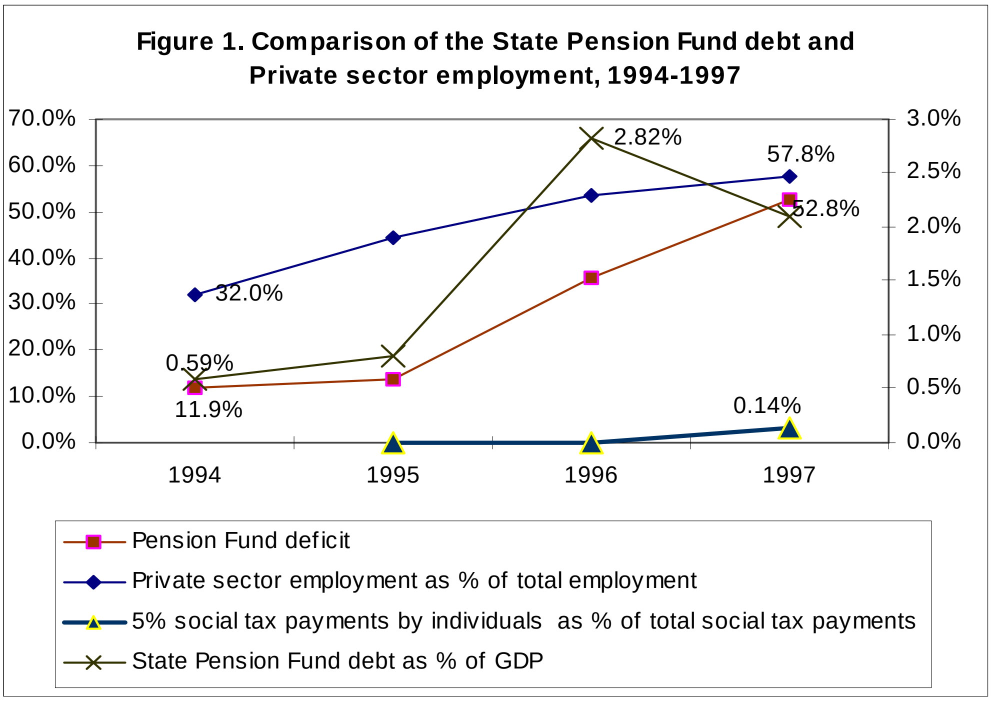


TABLE 1. KAZAKHSTAN'S PENSION SYSTEM: MAIN INDICATORS, 1994-97

(Billion *tenge*)

	1994	1995	1996	1997
Wage Bill	111.0	271.7	335.3	339.3
Pension Fund Revenue Collection:				
billion tenge	18.5	51.0	71.5	78.9
as % of wage bill	16.6%	18.8%	21.3%	23.2%
Mandatory contribution rate to the Pension Fund	27.0%	25.5%	25.5%	25.5%
Total amount of granted pensions and allowances:				
billion tenge	21.0	59.3	111.4	113.9
as % of wage bill	18.9%	21.8%	33.2%	33.6%
Total amount of paid pensions and allowances:				
billion tenge	18.5	52.8	79.8	139.0
as % of wage bill	16.6%	19.4%	23.8%	41.0%
Pension Fund Deficit:				
billion tenge	2.5	8.2	39.9	60.2
as % of total amount of granted pensions and allowances	11.9%	13.9%	35.8%	52.8%
Accumulated Pension Debt, billion tenge	2.5	8.2	39.9	35.0
As % of GDP:				
Wagebill	26.2%	26.8%	23.7%	20.3%
Pension Fund Revenues	4.4%	5.0%	5.1%	5.6%
Total amount of granted pensions and allowances	4.9%	5.8%	7.9%	6.8%
Accumulated Pension Debt	0.6%	0.8%	2.8%	2.1%
Amount of debt paid at the expense of transfers from Republican budget, billion tenge				35.0

Kazakhstan emerged as an independent nation at the end of 1991 under conditions of complete dependence on ruble zone partners and, especially, Russia. With the collapse of inter-republican trade, the simultaneous transition to the market economy, the starting point of which was the liberalization of prices early in 1992, inflation took off; demand and production collapsed, and formal sector employment fell dramatically. In 1992 alone, consumer price inflation exceeded 3000%, and GDP decreased by 11.3%. Worse was yet to come, though, as in 1993 Russia ended the ruble zone and stopped supplying other former Soviet republics with rubles, necessitating the creation of local currencies. The fall in social contribution compliance thus was accompanied by declining production even during the last years of the USSR, and then by collapsing GDP during the first years of Independence. Since Kazakhstan's Pension Fund was sustained by payroll contributions, these two factors together ensured that real contributions fell dramatically.

Figures 2-3 present the striking trajectories of the main pension-related economic indicators from 1991 (when Kazakhstan became sovereign state) and 1994 (when Kazakhstan became independent financially). Note that the rate of decrease of real pension payments in 1992 was significantly less than real wage declines. This unsustainable trend then reversed starting in 1995. Real pensions plummeted in comparison with the preceding year; average real wages actually rose slightly. However, this picture is somewhat misleading: by 1995, Kazakhstan's real GDP had fallen to 52.6% of its 1990 level, and the number of formal sector workers (and especially the number making regular social insurance contributions) fell rapidly and steadily. By 1995, formal sector employment had fallen by more than 30% relative to 1991; by 1997 the decline was by more than 50% (**Table 2**). Thus, as Becker and Urzhumova (1998) emphasize, the wage stability documented in Figure 3 pertained only to a rapidly dwindling share of Kazakhstan's labor force.

Of equal or greater importance from the perspective of the Pension Fund, wage stability in the mid 1990s did not translate into healthy receipts from payroll taxes, and hence a healthy Fund budgetary situation. Among enterprises that submitted reports to statistical authorities, the proportion that were unprofitable rose from a moderate 11% in 1991 to almost 60% by 1997. This rise translated directly into postponed tax payments to the State Budget, and accumulating wage arrears (so that recorded wages and actual wage receipts diverged sharply). Collection efforts also appear to have deteriorated – a point stressed by Auty (1998) and Baimateyeva (2002). By 1997, enterprises' overdue debt to the State Budget reached 7.3% of GDP, and wage arrears reached 16%

of the total wage bill. Largely as a result, Kazakhstan Government revenue as a share of GDP declined from 38.3% in 1990 to 16.7% by 1997.

FIGURE 2. MACROECONOMIC AND SOCIAL INDICATORS, 1991=100%

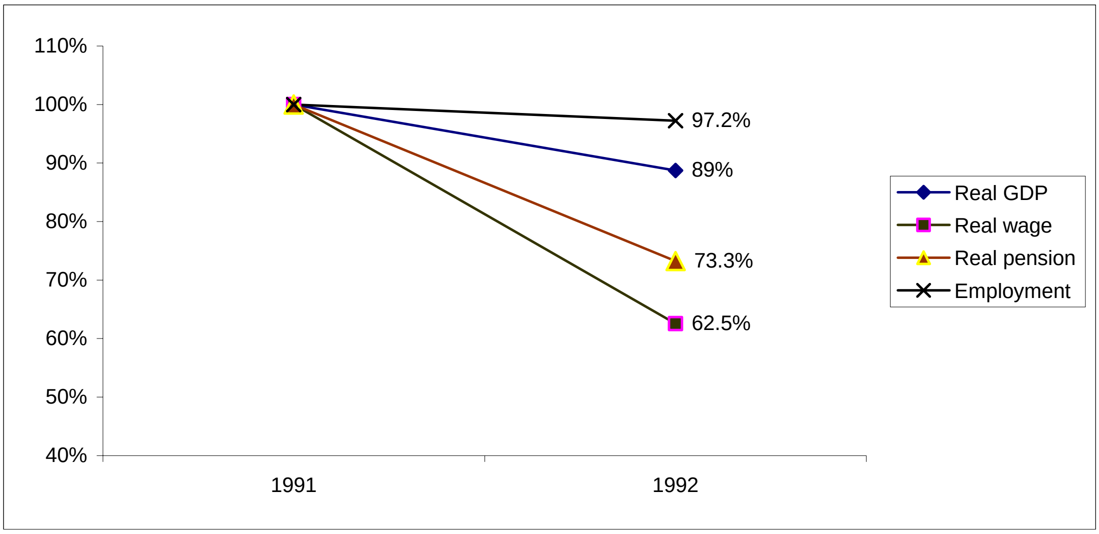
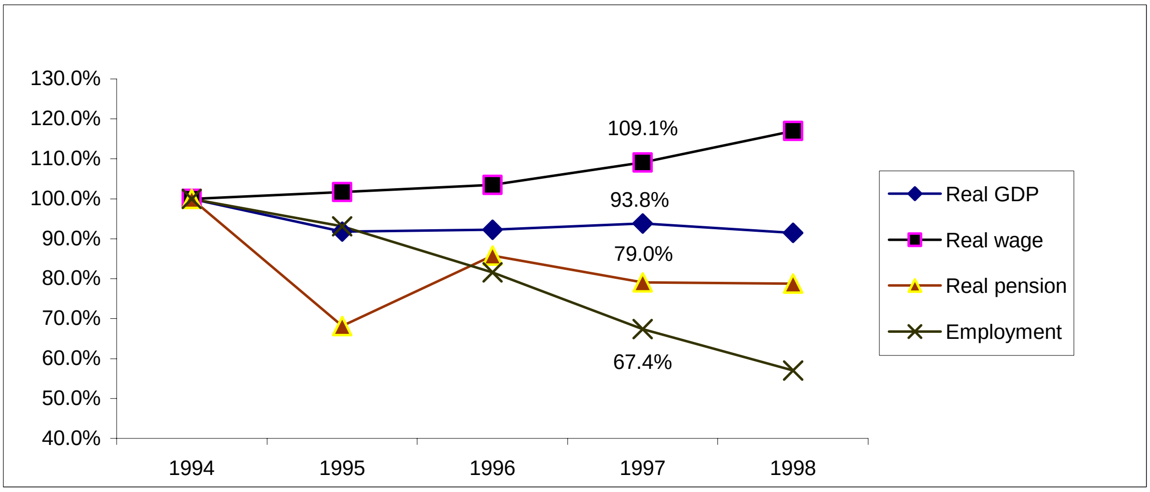


FIGURE 3. MACROECONOMIC AND SOCIAL INDICATORS, 1994=100%



The desperate employment situation inevitably had a large, adverse impact on the pension system's dependency ratio (defined as the ratio of pension and other social benefit recipients to the number of social insurance contributors). While there were almost 30 pensioners and beneficiaries per 100 workers paying insurance contributions in 1980, this number rose to 73 in 1997 and then to 83 in 1998 (**Figure 4**). During this period, the proportion of pensioners and other social benefit recipients in Kazakhstan's population rose from 11.9% in 1980 to 17.1% in 1997. The surging system dependency ratio also reflected post-Independence liberalization of pension eligibility. While nominal retirement ages (55 for females and 60 for males) did not change from Soviet levels, relaxed early retirement rules increased the numbers eligible for pensions.

FIGURE 4. System Dependency Ratio Dynamics

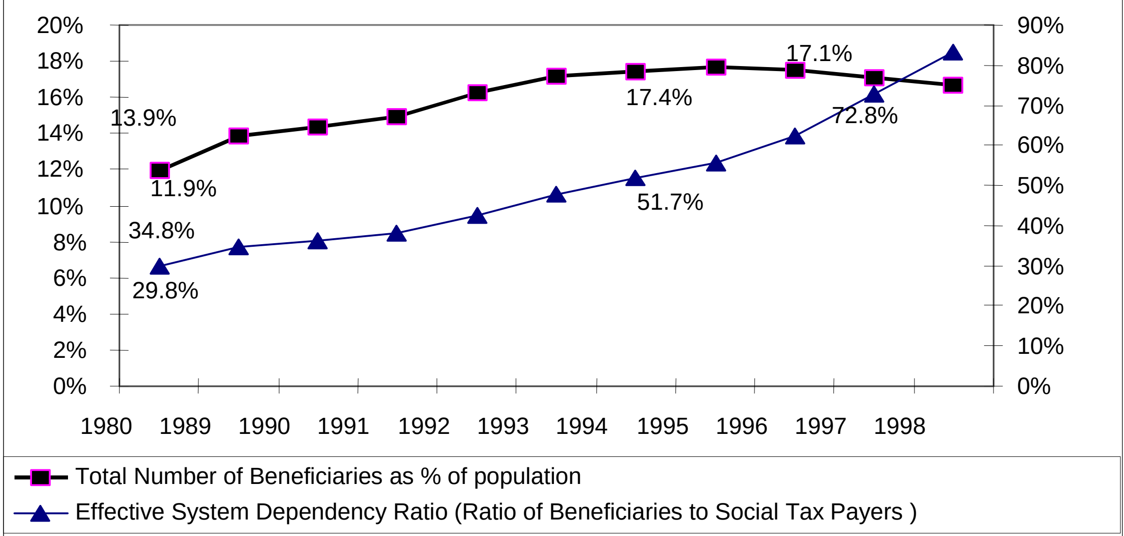


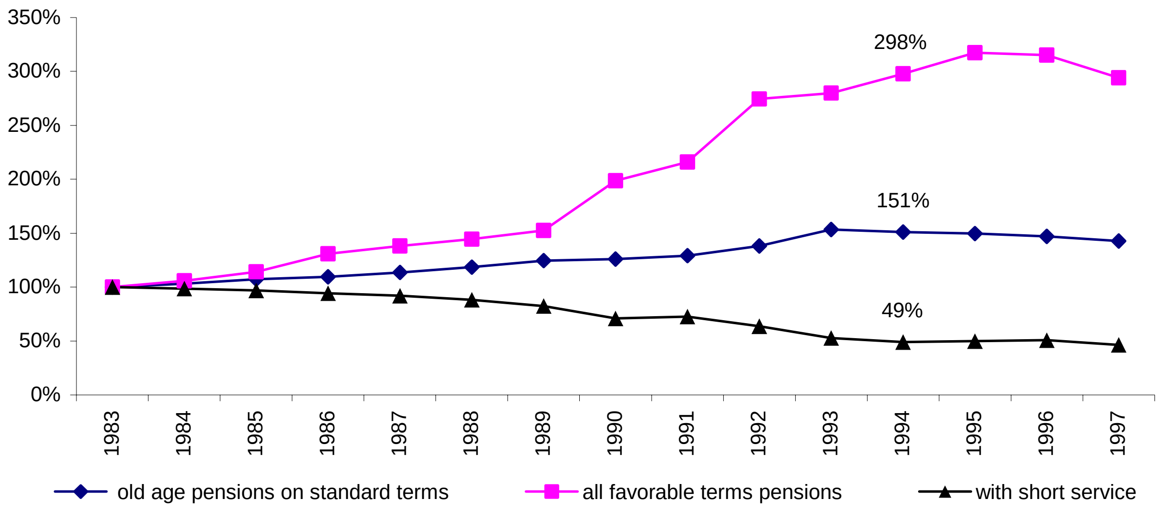
TABLE 2 KEY MACROECONOMIC INDICATORS, KAZAKHSTAN 1994 – 1997

	1990	1991	1992	1993	1994	1995	1996	1997
Consumer prices (annual average, % change)		190.9	1614.8	1758.4	1977.4	276.2	139.3	117.4
Market Exchange Rate, tenge per US Dollar (annual average)				5.31	36.35	61.12	67.76	75.56
Market Exchange Rate, tenge per US Dollar (end of year)				6.31	54.26	63.97	73.8	75.89
State Budget Revenues as % of GDP	38.3	31.6	20.8	24.1	21.7	21.6	17.2	16.7
Consolidated Budget Deficit as % of GDP			-7.3	-1.4	-6.5	-3.7	-2.4	-3.8
Actual number of employees in formal sector of economy, 1991=100		100.0	97.2	86.8	78.0	69.6	60.1	48.3
Share of unprofitable enterprises as % of enterprises that submitted reports to Statistical Agency		10.7	14.1	23.8	35.3	45.7	53.2	57.2
Enterprises Overdue Debt to the State Budget as % of GDP						5.50%	6.85%	7.27%
Enterprises Wage Arrears as % of Wage bill						12.0%	15.0%	16.1%

Note: These figures exclude revenues of extra-budgetary funds (and do not include privatization receipts, which are treated as a financing item).

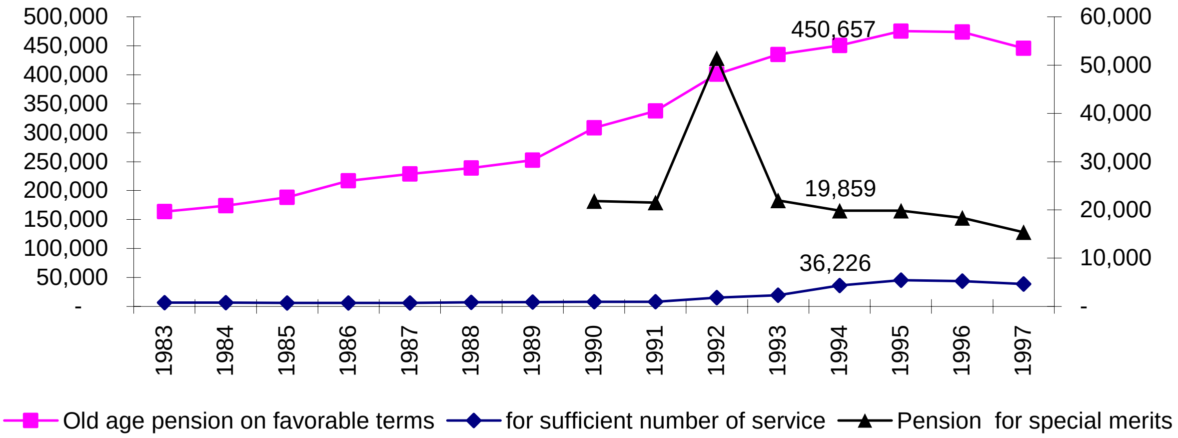
Shortly after Independence, the Kazakhstan Government amended the nation's Soviet-era pension laws (adopted in 1991) with Provision N1521-XII of July 3, 1992, according which the eligibility for early retirement (53 for females and 58 for males) was extended to those Kazakhstani citizens with at least 25 years of service for men or 20 years for women, and who were unable to find new employment after being discharged from their prior job due to layoffs or enterprise closure. Given the prevailing hyperinflation and deteriorating economic outlook in Kazakhstan in 1992-1993, this amendment provoked significant early retirement, increasing the number of old age pensions granted on standard and favorable terms by 19% and 30%, respectively, and decreasing the number of pensions with incomplete service by 27% in comparison with 1991 (**Figure 5**).

FIGURE 5. NUMBER OF PENSIONS, BY CATEGORY, 1983=100



These rule changes also changed the structure of Kazakhstan's pensioner population. The proportion of pensioners receiving supplemental payments (on "privileged" or favorable terms) increased from 20% in 1991 to 25% in 1996, while the proportion receiving the legal minimum pension (typically due to uncompleted service) fell from 4.3% to 2.5%. While this latter decline could at least in part have reflected decreasing voluntary turnover in light of general economic uncertainty, there are no structural labor market or demographic reasons for the sudden jump in favorable pensions. Rather, 1992 was a year of explosive growth in Kazakhstan's pensioner population overall: the number of new pensions due to standard years of service, old age favorable pensions, and pensions to individuals prior to normal retirement age on the basis of "special merit" rose by 19%, 80%, and 139%, respectively (**Figure 6**).[1]

FIGURE 6. TOTAL NUMBER OF ALL TYPES OF FAVORABLE PENSIONS, 1983-1997



Clearly, the categories of those eligible for favorable benefits and early retirement enjoyed a secular increase following Independence. Nonetheless, the abrupt jump in the number of pensions on favorable terms in 1992-1993 is astonishing. Indeed, especially given the economic decline during this time, it is near incredible that almost every second person who retired in 1992 did so under favorable (*льготный*) terms (**Table 4**). This surge in favorable conditions' retirements appears to lie in imperfections in old pension assignments legislation. According to Article 44 of the 1991 Law on Pension Provision,

> *"...in the absence of an employment record book (Labor Book) or lack of record-keeping in that book, confirming length of employment, it is permissible to present documents and other evidence of one's period of work, as well as certificates, confirming payments of insurance contributions into the Pension Fund of the USSR (since 1992, of RK). In the event that no documents on length of employment are available, the Committee on awarding pensions will determine it based on testimony. This testimony will not determine nature of work if the documents on period of work are available."*

Not surprisingly, the existence of many different possibilities to establish one's employment record made possible a wide range of falsifications. These came not only from employees, but also from employers interested in shifting older workers to pensions in order to reduce salary burdens

[1] Becker and Urzhumova (1998, Section 3) also identify the rise in early and favorable retirements as a destabilizing force that threatened the Solidarity system.

during the economic crisis. A simple falsification was simply to declare the loss of one's Labor Book: the worker could then get a new one and, with the connivance of management, record more advantageous records on the basis of forged documents. In addition, it seems virtually certain that corruption among social welfare workers contributed to the jump in the number of new pensioners. Social welfare workers themselves received very low wages, but had limited supervisory and auditing control over their activities; there was also a very low level of computerization of record keeping and reporting with regard to pension payments. Thus, these workers had ample opportunity and great need to solicit bribes in exchange for altering documents, and almost certainly did so liberally. Privatization of state enterprises added further to chaos during this period, making falsification easier still – and creating still greater incentives to do so. Thus, accelerating early retirement in early and middle nineties eventually resulted in an increase of pension recipients to total population above age 45 years from below 50% in the late Soviet period to more than 60% by 1994. This in turn brought the corresponding over-45 population share of the total number of beneficiaries (pensioners and social allowances recipients) to a peak level of 71% by 1995, a rise of ten percentage points on only four years (**Figure 7**).

TABLE 3 STRUCTURE OF NEWLY RETIRED PENSIONERS, KAZAKHSTAN 1983 – 1997

	Old age pensions on standard terms	All type of pensions on favorable terms	Old age pensions with incomplete service
1983	79.2%	14.5%	6.3%
1984	78.8%	15.5%	5.7%
1985	79.1%	16.1%	4.8%
1986	76.1%	19.8%	4.1%
1987	74.8%	21.3%	3.9%
1988	78.9%	17.8%	3.3%
1989	78.8%	17.7%	3.5%
1990	77.9%	18.8%	3.3%
1991	77.5%	19.6%	2.9%
1992	**54.3%**	**43.1%**	**2.6%**
1993	78.0%	20.5%	1.5%
1994	63.9%	34.1%	2.0%
1995	66.0%	31.4%	2.6%
1996	70.8%	26.5%	2.7%
1997	84.9%	13.9%	1.2%

FIGURE 7. MAIN CATEGORIES OF PENSION AND SOCIAL ALLOWANCE BENEFICIARIES, AS % OF TOTAL POPULATION OVER 45

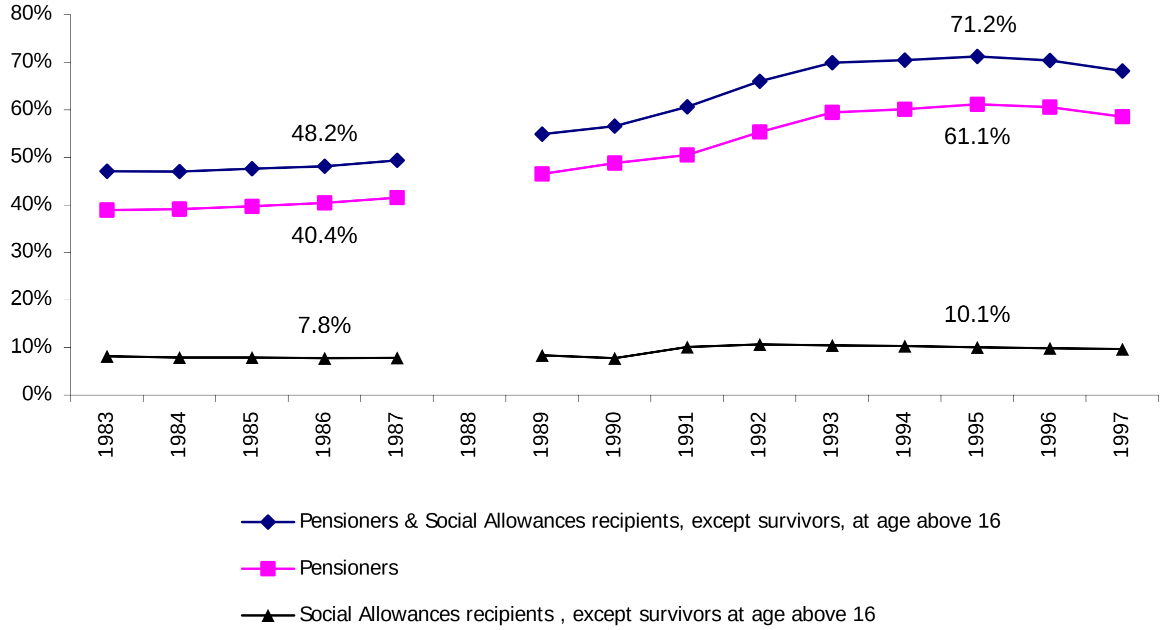
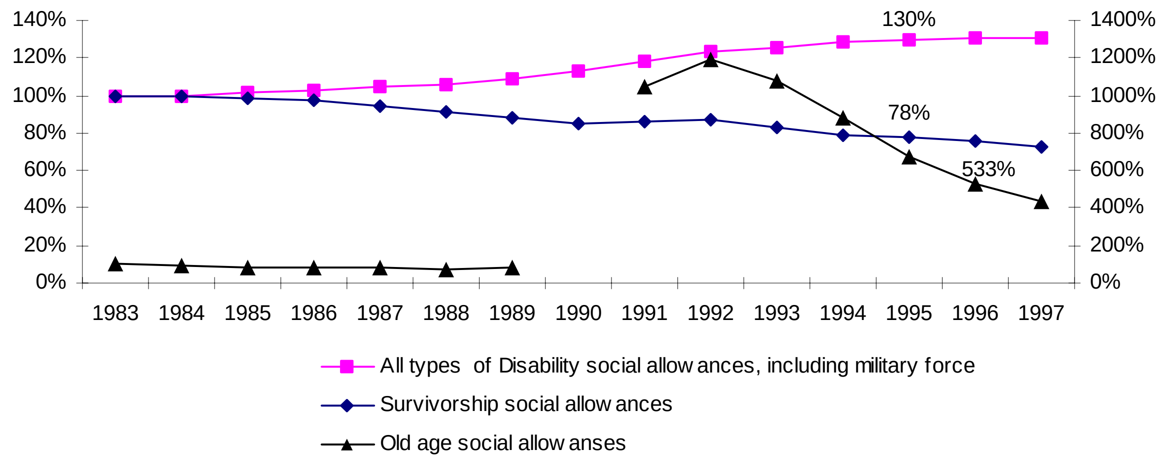


FIGURE 8. NUMBER OF SOCIAL ALLOWANCE RECIPIENTS, 1983=100



It is also apparent from Figure 7 that, unlike for pensioners, the share of adult social allowance recipients in the age 45+ population was relatively stable during period from 1983-1997, except for 1991, when the share of this category increased by 2.3%. The source and significance of this increase are clearer from **Figure 8**, which shows the dynamics of various social allowance categories. This figure also tracks the gradual (but accelerating during 1990-93) increase in the number of disability social allowances, and indicated that these numbers began growing before Kazakhstan's Independence. This rise appears to have been driven by enactment of the USSR 1990 Law on Pension Provision. Thanks to this law, social pensions (*i.e.*, allowances) began to be assigned to those citizens who lacked a right to labor service pensions, *i.e.*, old-age pensioners without sufficient work history, along with disabled individuals and survivors. By implication, the previous Soviet pension system did not cover all people who needed social support – despite the generally recognized claim that the USSR had for a long time provided comprehensive pension coverage. Consequently, Kazakhstan's post-Independence pension problems stemmed not only from the drastic expansion of beneficiaries because of massive early retirement in 1992-1993, but also because the Soviet Government had just made a generous commitment in 1990 to provide **all** elderly people, disabled and survivors with either adequate labor or social pensions. While these promises were well intentioned, they ultimately became a Soviet legacy to be borne by the successor independent republics, including Kazakhstan.

TABLE 4 STRUCTURE OF PENSIONER POPULATION AND PENSION EXPENDITURES

		1989		1993		1997	
		Number of pensioners as % of Total	Amount of Pensions as % of Total	Number of pensioners as % of Total	Amount of Pensions as % of Total	Number of pensioners as % of Total	Amount of Pensions as % of Total
Pensions, *Of which*		74.6%	81.0%	76.4%	82.4%	77.3%	81.9%
Old age pensions granted on standard terms		58.3%	62.5%	57.5%	62.5%	56.7%	59.5%
Old age pensions with incomplete service		3.9%	2.5%	2.0%	1.3%	1.9%	1.2%
Pensions granted on favorable terms *Of which:*		12.4%	16.0%	16.8%	18.7%	18.8%	21.3%
	Old age pensions	11.1%	14.5%	15.4%	16.8%	16.7%	18.6%
	Pensions for sufficient number of service	0.3%	0.4%	0.7%	0.7%	1.5%	1.7%
	Pensions for special merits	0.9%	1.2%	0.8%	1.2%	0.6%	1.0%
Social Allowances *Of which:*		25.4%	19.0%	23.6%	17.6%	22.7%	18.1%
All types of Disability social allowances, including received by military force		12.8%	10.9%	11.8%	9.1%	13.1%	10.0%
Survivorship social allowances		12.3%	7.9%	9.2%	7.5%	8.5%	7.5%
Old age social allowances		0.2%	0.1%	2.6%	1.0%	1.1%	0.5%
Total pensions and social allowances		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Overall, the 25% increase of number of pension beneficiaries between 1988 and 1993, coupled with the rising pension system dependency rate, gave rise to an increase in Government pension expenditures from 5.45% of GDP in 1989 to 7.87% in 1996 – though not before temporarily collapsing to 4.10% in 1993 as per pensioner payments shrank. Moreover, these expenditures would have been much higher if the government had completely indexed the benefit payments in accordance with inflation. In reality, though, increased expenditure demand has prevented the RK Government from ensuring even minimum benefits. Consequently, while the proportion of pensioners receiving old age social allowances increased from 0.2% of all pensioners in 1989 to 1.1% in 1997 (Table 4), their share of allowances only accounted for only 0.5% of total payments even in the latter year. Replacement rate dynamics with regard to old age social allowances (**Table 5**) and their average values' deviation from average rates for all categories of pensions (**Table 6**) testify to the decline of the minimum pension level. The biggest deviation (-36.8%) is observed in 1994; despite the fact that by 1997 it was reduced to -22.7%, the replacement rate with respect to social allowances was only 77.4% of that in 1989.

One way of inferring the causes of the rising pension population and pension dependency ratio is to relate these rates to underlying economic factors. Becker and Urzhumova (1998) use pooled regressions across regions (*oblasts*) for 1980, 1985, and 1990-95 to examine these linkages. They find that these ratios tend to rise as wages fall, and to be greater in areas with higher pension payments (and it is important to recall that regional governments were responsible for making social payments, so that actual payments undoubtedly varied far more than official rules would have indicated). Pension dependency also is strongly negatively related to the regional investment rates – although these economic forces appear to have worked mainly through the size of the contributing labor force.

Analyzing Tables 5 and 6 further, it appears that the replacement rate of the maximum pension (provided on favorable terms) relative to average replacement rates by 1997 had returned to the 1989 ratio. In contrast, social old age pensions for those with inadequate length of service were consistently further below the mean after Independence than they were in 1989. This deterioration mainly reflected the RK Government's inability to maintain all categories of pensions and allowances. Moreover, it is worth noting that stable replacement rates during a period of declining real wages mask falling real pensions: the maximum replacement rate fixed in 1994 (58.3%) was far from being identical in terms of its real content to the one in 1989. On the other hand, the low replacement rate during the waning years of Soviet power cannot but be a surprise: 35.4% in 1980 and 36.6% in 1989 (**Figure 9**). However, if one compares this figure to pension contributions by multiplying the average replacement rate by the average system dependency ratio (**Figure 10**), it appears that this replacement rate is consistent with social budget balance based on insurance contribution rates at that time.[2]

TABLE 5 REPLACEMENT RATE DYNAMICS, KAZAKHSTAN 1989 – 1997[3]

Categories of pensions and allowances	1989	1994	1996	1997	1997г. в % к 1989г.
Total pensions and social allowances, *including*	35.9	58,3	48,3	42,2	117,6
Pensions	38,8	62,7	51,0	44,8	115,2
Due to retirement age	38,4	61,8	51,3	44,7	116,3
On favorable terms	46,6	69,3	52,3	47,0	101,0
With incomplete service	23,0	35,4	31,3	26,5	114,9
Social allowances	27.7	43.5	38.9	33.5	120.8
Due to disability of all categories	29.9	50.4	42.0	36.1	120.8
Survivorship	22.9	48.1	43.2	34.5	163.5
Old age (social)	33.1	21.5	22.7	19.6	59.1

TABLE 6 PERCENTAGE DIFFERENCE (DEVIATION) FROM MEAN VALUES OF VARIOUS AVERAGE PENSION PAYMENTS

	1989	1994	1996	1997
Old age pensions	3.0	4.4	2,7	2,5
Due to retirement age	2,5	3,5	3,0	2,5
On favorable terms	10,7	11,0	4,0	4,8
With incomplete service	-12,8	-22,9	-17,0	-15,7
Social allowances	-8,1	-14,8	-9,4	-8,7
Disability of all Categories	-6,0	-7,9	-6,3	-6,1
Survivorship	-13,0	-10,2	-5,1	-4,8
Old age (social)	-2,8	-36,8	-25,6	-22,7
Range:max-min	23,7	47,9	29,6	27,5

[2] In fact, during the 1980s, insurance contribution rates varied across different branches of the economy. The maximum rate was 14% for workers in sectors such as civil aviation or machine building; the minimum of 4.4% was set for workers in agricultural enterprises.

[3] The replacement ratio (RR) shown in this table has been calculated by dividing the amount of the assigned average monthly pensions by number of pensioners as of the end of the year, unlike the RR shown in Figure 8 which has been calculated based on the average annual number of pensioners.

FIGURE 9. PENSION PAYMENTS AND REPLACEMENT RATE DYNAMICS

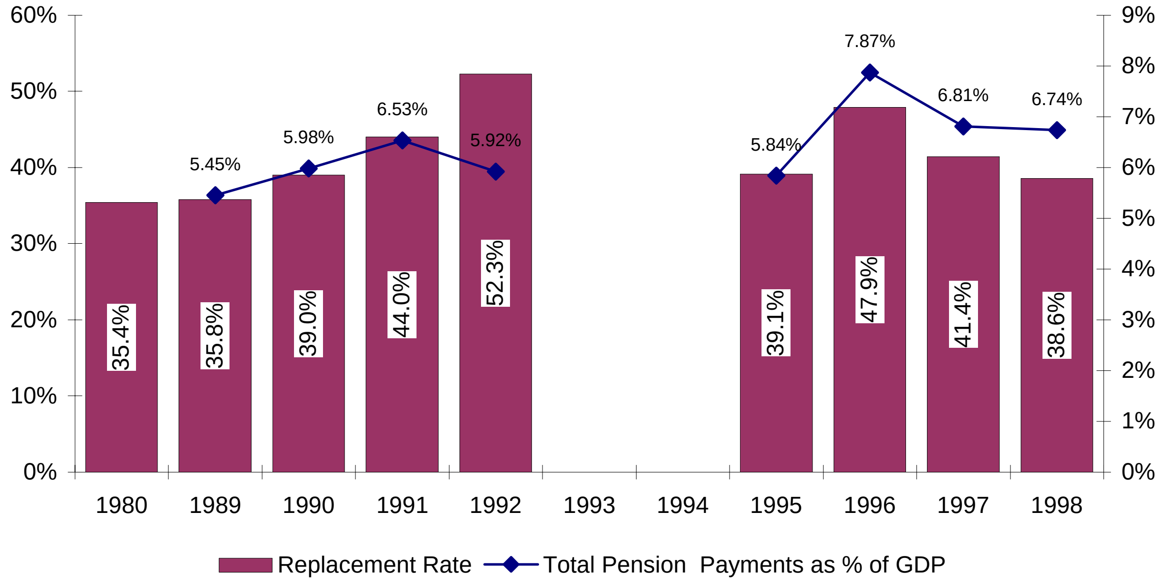
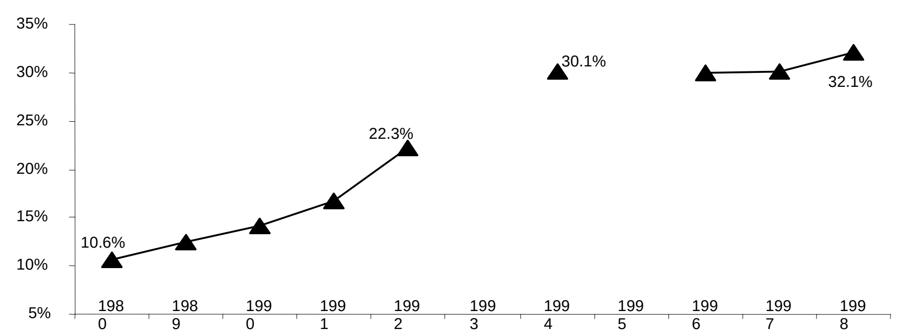


FIGURE 10. The Average Cost of Pensions (The Required Payroll Tax Rate or RR xDependency Ratio)



I.1 The rising payroll tax burden

For the economy as a whole, the required average payroll tax rate – the required rate of pension contributions from the wage bill (required payroll tax rate) shown in Figure 10 – has had a dramatic long-run upward trend from 1980 through 1998. Defined as the product of the average replacement rate and the system dependency ratio, it is apparent that the secular increase in the dependency ratio has been the main force in the trend. 1993 is the main anomaly, when the average replacement rate (28.6%) declined markedly, although, as we know, there was no sudden fall in the number of pensioners and hence in the system dependency ratio (47.7%).[4]

While large deficits emerged, the Kazakhstan Government did take a series of steps aimed at increasing revenue. Prior to 1992, insurance contributions were accumulated in the State Social Insurance Fund budget, which was part of the State Insurance Fund (*Госстрах*) and had been used for different types of social security including pension payments. Since 1993, after establishment of the Pension Fund of the Republic of Kazakhstan, the Kazakhstan Government started dividing total public social insurance contributions between the Pension Fund and Social Insurance Fund according to proportions approved annually in the Republican budget. Moreover, with the establishment of the Pension Fund, its funds were no longer included in the state budget. Standard rate of insurance contributions in 1992 was 30% of the wage bill, out of which 80.5% went to the Pension Fund, and 19.5% went to the Social Insurance Fund. Thus, the payroll tax for pension contributions in 1992 was 24.15%. In 1993, due escalating economic crisis, the payroll rate was increased up to 27% and maintained at the level until 1995.

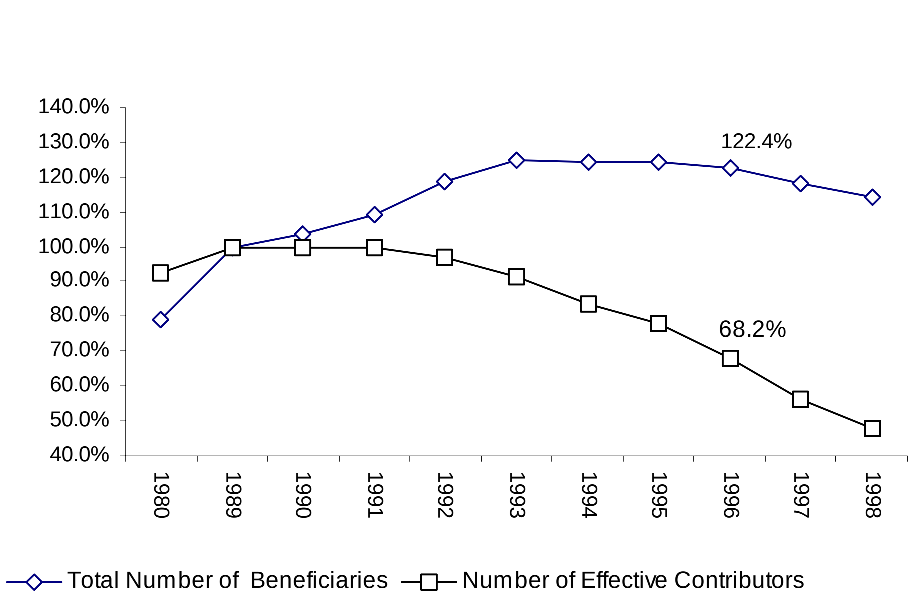
From 1995 through 1997, due to establishment of the Fund of Mandatory Medical Insurance (FMMI), the total amount of contributions for public social insurance was divided among the Pension Fund of the Republic of Kazakhstan, Fund of Social Insurance and FMMI in proportion 85: 5: 10. As a result, the rate of pension contributions decreased up to 25.5%, though as Table 1 shows, the Pension Fund deficit as a proportion of total payments continued to surge.

In summary, it is clear that increased payroll tax burdens on Kazakhstan's contributing workers, rising numbers of pensioners, and the deteriorating macroeconomic situation combined to create a powerful impetus for reform of the PAYGO pension system. During the period 1989 –

[4]There is also a major inconsistency in official data for 1993. Ministry of Labor and Social Protection (MLSP) data do not match the official data, and do not yield figures consistent with the recorded level of pension expenditures to GDP, namely 4.1%. In 1993, according to MLSP РИК-94 data, the total amount of monthly pensions comprised *tenge* 343.9 million, while average yearly number of pensioners was equal to 2829.4 thousand. Thus, average monthly pension was equal to *tenge* 124.7. If to take into account that official wage in the country was equal to *tenge* 127.5, then the replacement rate was at the level of 97.5%. The implied share of pension expenditures in GDP is then an implausible 14%. Given the data problems for 1993, we worked backward to infer the overall dependency ratio from GDP share data. The data problems are due mainly to the fact that all 1993 statistical data were recorded in the new national currency, the *tenge*, which was not put into circulation until November 1993. Given the high inflation that occurred for both the rouble and the tenge, it is inevitable that many effective calculation errors occurred.

1997, growth of the number of pensioners and recipients of social allowances was accompanied by a fall in the numbers of social insurance contributors (**Figure 11**), making pension security an increasingly critical issue for Kazakhstan's Government. Something had to be done: maintenance of Kazakhstan's Solidarity system with its current levels of funding as of January 1, 1998 simply was not an option. The question, then, was whether the PAYGO system could or should be retained in a reformed manner, or whether a completely new approach should be adopted.

Chart 11. TOTAL NUMBER OF BENEFICIARIES vs. NUMBER OF EFFECTIVE CONTRIBUTORS, 1989=100%



I.2 Demographics and growth: was the crisis temporary?

One possibility, of course, is that the explosive growth of Kazakhstan's pension and social allowance recipients between 1990 and 1997 simply reflected economic deterioration, and that normalcy would return with economic recovery. Obviously, the rising pension population *was* linked to economic decline, as was the shrinking contributor base (and their shrinking real wages). From the RK Government's perspective in 1997, though, it was far from clear when sustained recovery would take place. The pension reform decisions were made during a time of nascent but highly tentative recovery – a recovery soon to be halted by the Russian crisis.

More importantly, it was abundantly clear that the horizon was not brighter. The reason for this was simple: Kazakhstan has a gradually aging population, with declining birth rates more than offsetting rising adult and elderly mortality rates. The population projections in **Table 7**, reproduced from Becker, Seitenova, and Urzhumova (2000, Ch. 3, Table 24), are difficult for any pension system. While these figures are forecasts, it should be realized that those retiring in 2050 already have been born (in fact, 2050 will be the first year when most new retirees will not have been born in the Soviet era – assuming retirement ages are not increased in the next half-century). Thus, the trends depicted for the most part reflect demographic events that already have taken place or are underway. Underlying Table 7 is assumed gradual recovery of the total fertility rate (TFR) from its current below-replacement level (which appears to be happening, and which will increase labor force growth after 2020), and also gradually recovering life expectancy (for which there is very little evidence so far: see Becker, Urzhumova, and Seitenova, 2003). If adult mortality does not decline considerably in the years to come, then the retirement age population will grow more slowly, but for a very sad reason.

Assuming, then, that economic recovery will bring demographic recovery, Kazakhstan's population should have reached a trough in 2001 and then begin to grow, despite total fertility rates still below replacement level (and the latest data from Kazakhstan's National Statistical Agency appear to confirm this). This growth is driven by the large number of young adults, reflecting high birth rates in the 1980s. The combination of a rapidly growing labor force in coming years due to demographic momentum, and small cohorts of new retirees, causes Kazakhstan's pension population to stagnate in the coming decade. Overall, the number of old-age pensioners in 2010 will be virtually identical to the number in 1999, despite significant mortality recovery. However, starting at the end of this decade, however, the pension population will begin to grow rapidly, peaking at an annual growth rate of 4.0% in 2020.

Table 7. KAZAKHSTAN'S POPULATION STRUCTURE, 1999-2050, BASELINE ACTUARIAL SIMULATION				
Year	*Total Population (Million)*	*Retirement Age Population (Million)*	*Retirement Age Population Growth Rate (%)*	*Support Ratio: Work age population/ retirement age population*
1999	14.96	1.66		5.4
2000	14.92	1.57	-5.9	5.9
2001	14.90	1.58	1.0	5.9
2002	14.91	1.58	-0.4	6.0
2003	14.94	1.57	-0.6	6.1
2004	14.99	1.56	-0.4	6.2
2005	15.07	1.57	0.7	6.3
2006	15.15	1.59	1.1	6.3
2007	15.25	1.60	0.5	6.4
2008	15.37	1.61	0.8	6.4
2009	15.50	1.63	1.3	6.4
2010	15.64	1.67	2.4	6.3
2015	16.49	1.95	3.4	5.5
2020	17.40	2.34	4.0	4.6
2025	18.17	2.80	3.0	4.0
2030	18.84	3.12	2.0	3.7
2035	19.50	3.51	2.4	3.4
2040	20.16	3.90	2.1	3.1
2045	20.82	4.36	2.4	2.8
2050	21.42	4.88	2.2	2.5

These trends imply extremely heavy burdens for a PAYGO system. This is not to say that such a system could not be fashioned, but it would have to be one based on rapidly rising retirement ages, more stringent social allowance eligibility, or rapid formal sector employment growth. Whether these conditions could have been met is addressed in the concluding section. But the impetus for moving away from the Solidarity system toward a defined contribution accumulative system is easy to understand.

So, too, is the timing of the reform. As Table 7 shows, the period from the mid-1990s through 2004 is a period of declining (old-age) retirement age population, because this is the retirement era for the very small cohort born during the Second World War. If Kazakhstan was going to make a switch from its Solidarity system toward an accumulative system, and intended to lower PAYGO payroll tax rates as part of that reform, then the obvious time to make the switch would be during a trough in the elderly population. The reason for this is simple – the RK Government will experience a period of declining social contributions during the transition; its burden will be minimized during a small retirement cohort era. In short, the stage was set in 1997 for a dramatic reform.

II. The Kazakhstan Government's pension reform strategy

After nation-wide discussion, the law "On Pension Provision in the Republic of Kazakhstan" was adopted in June 1997. The reform adopted had the strong support of the President of the Republic, the macroeconomic and expenditure bodies of government (notably, the Ministry of Finance and the National Bank), and a contingent interested in liberalizing and developing Kazakhstan's financial system. Arrayed in opposition were many of the social ministries, many parliamentarians, and much of the popular press. The reformers ultimately prevailed, in part because of the persuasiveness of their arguments, in part because the reform's opponents advanced no viable alternative strategy for curtailing state spending, and in part because of strong support from the international donor community. Thus, in accordance with the new law, a major pension reform was introduced effective January 1, 1998. The reform pursued the following stated objectives:

- To decrease burdens on the state budget;
- To prevent demographic problems that would ultimately pressure even an initially viable PAYGO system;
- To establish a close relationship between pension contributions and benefit payments;
- To improve the efficiency and fairness of the pension system;
- To promote accumulation of savings, formation of capital and advance of economic growth.

To achieve these objects new pension system established in a "three pillar" structure along the lines and terminology initially suggested by Estelle James and her colleagues at the World Bank (World Bank, 1994). The first pillar is a mandatory Solidarity pension system (PAYGO) that provides old age benefits in accordance with length of service in the Solidarity system prior to January 1, 1998, as well as all disability and survivorship benefits. The core second pillar is a mandatory accumulation pension system based on mandatory pension contributions by the employers to the individual accounts of workers. These contributions are invested and accumulated by the private accumulation pension funds. Finally, a nascent third pillar involves a supplemental accumulation pension system based on the voluntary pension contributions of citizens.[5]

Notwithstanding the fact that the second pillar is designed to become the dominant component of the new pension system, the parameters of the traditional solidarity system are of interest both for the Government and citizens during the coming decades, as the Solidarity system will remain valid with regard to the following categories of citizens: 1) those retired before January 1, 1998; 2) those retired after January 1, 1998 having complete length of service as a sum of years of work before and after January 1, 1998; 3) those retired after January 1, 1998 having incomplete length of service as a sum of years of work before and after January 1, 1998; 4) those retired after January 1, 1998 having no length of service; 5) those retired before and after January 1, 1998 because of disability; 6) those who lost a breadwinner of able-bodied age either before or after January 1, 1998. Moreover, the Solidarity system will provide additional payments from Government to the citizens participating in the accumulation system, if a potential recipient's total pension under the reformed system appears to be less than a minimum guaranteed pension, or minimum social allowance in case of incomplete length of service, respectively. In short, the Solidarity system remains an important support pillar for nearly the entire labor force, and it is clear that Solidarity payments will be the main source of pension income for most pensioners for many years to come.

By design of the pension reform, the public Solidarity system of pension security must operate concurrently with the accumulation system during a transition period. Specifically, this means that present pension benefit payment include payments from the state Solidarity system according to years of service accrued up to 6 months prior the beginning of the reform (January 1, 1998), along with both mandatory and voluntary personal accumulations.

In order to perform functions of the Solidarity pension system, a new State Center for Benefit Payments (SCBP) was created in place of the State Pension Fund, a Soviet-era legacy that has been abolished. During the first year of the SCBP's establishment, it collected all mandatory

[5] For a summary of these reforms and their rationale, see Palacios and Posarac (2000) for a World Bank viewpoint; for a fairly dispassionate political history of pension reforms in transition economies, see McKinnon, Charlton, and Konopielko (1999). Ghai (2002) also provides a broad overview from the standpoint of low and lower-middle income countries.

Solidarity payroll contributions (at a 15% rate on net wages) at the national level, and made all benefit payments to retirees. But, as of January 1999, SCBP retained responsibility only for payment of benefits and allowances, along with the maintenance of the national individual pension accounts' database, and assignment of individual identification numbers ("SICs") to all Kazakhstani citizens. This streamlining of the Solidarity system has been of considerable practical importance, as it transferred responsibility held by regional administrations and a semi-autonomous fund, and placed it in the hands of the national government. This transfer has meant a marked reduction in pension payments' arrears, along with the end (to our knowledge) of payments in kind (various food products) that characterized the early post-Soviet period in some regions.

To put the new accumulative system into effect, three types of new entities were created– pension funds, asset management companies and custodians. Moreover, after a period of debate and uncertainty, the National Bank of Republic of Kazakhstan (NBRK) assumed responsibility as the sole supervisor and regulator of accumulation pension system activities. Prior to 2001, these functions were carried out in part by the National Pension Agency (NPA), and in part by the National Securities Commission (NSC).

During the past five years during which Kazakhstan's pension reforms have been implemented, a large number of legal and institutional changes have occurred – in effect, the system has evolved in response to problems that have arisen, and as recovery has strengthened the RK Government's capacity and given rise to parallel developments in other areas of the economy. Nor were these changes limited to new accumulative system entities, as both the system of funding Solidarity pensions and the procedures for deducting pension contributions to the accumulative system changed as well. Clearly, the initial reform plans and parameters are not inherently the final ones, and it is plausible that they will be altered further depending upon the economic situation in the country.

II.1 Institutional reforms and fiscal achievements

During the first year of the reform, the Law on the Republican Budget of the Republic of Kazakhstan fixed the rate of mandatory pension contributions to the Solidarity system – that is, to the SCBP – at 15% of net wage payments. However, from 1999 all mandatory wage deductions, including wage bill deductions paid to the Mandatory Medical Insurance Fund (3%), Fund of State Social Security Fund (1.5%), and State Employment Fund (2%), were replaced by a single social tax. This payroll social tax rate in turn underwent certain changes, and was raised from 21% at the beginning of 1999 to 26% by the end of the year. As of July 2001 the social tax rate was again reduced to 21%.[6] Upon introduction of a social tax, benefit payments as well as social allowances started to be funded from the Republican budget.

Though the rate of payroll contributions to the accumulative system has remained at its initial 10% level since the reform was enacted, responsibility for the contribution burden has changed fundamentally. Until March 15, 1999 pension contributions to the Accumulation Pension Funds (APFs) were calculated based on the wage bill of enterprises. Since then, they have been deducted directly from employees' wages. In effect, this change has shifted the immediate burden from employers to employees. While in economic theory there should be no long-term difference, in practice it appears that wages were not immediately adjusted upward in compensation in many and probably most cases.

Table 8 shows how the various changes in the contribution rates to the Solidarity pension system have affected overall pension security since enactment of the reforms. As can be expected during a period of transition from a PAYGO to an accumulative system, the immediate impact is to transfer much of the burden for financing pension expenditures to the national government budget. This burden emerges most immediately because of the reduction in individual payroll contributions for the Solidarity system from 31% to 21%, as this tax was reduced in order to maintain the overall payroll rate, given that 10% was diverted to individual accumulation accounts. In addition, the Republican Government assumed responsibility once again for pension payments – recall from Section I that the State Pension Fund was separated from the Republican Government budget from 1990 through 1997 – and made a commitment to reducing arrears and non-cash payments.

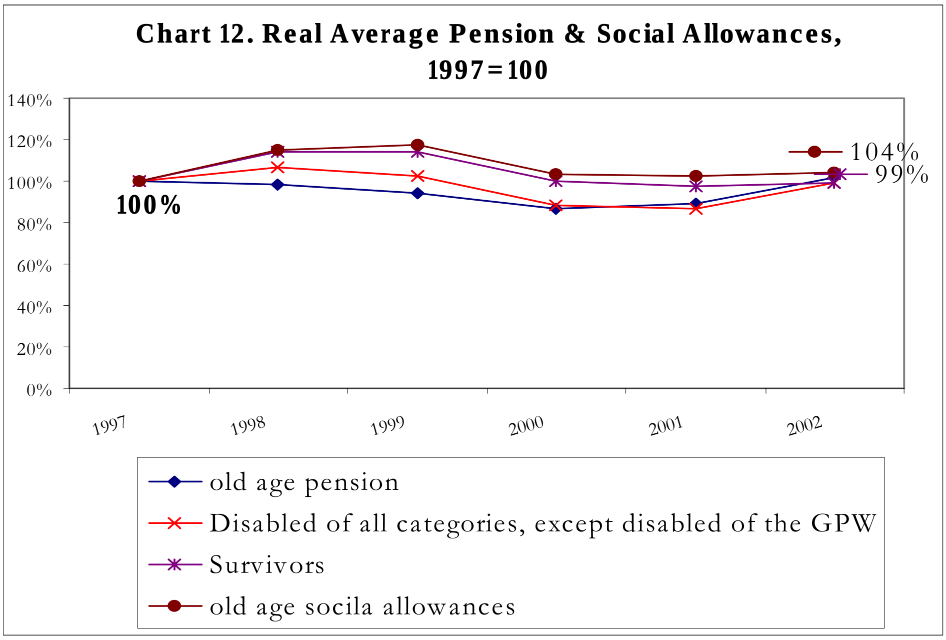
[6] This 21% rate applies to regular non-agricultural employees. Foreign administrative and technical staff are taxed at 11%; agricultural enterprises make quarterly general tax payments based on output.

II. TABLE 8. COMPARATIVE PARAMETERS OF PENSION SECURITY, 1997-2002

	1997		1998		1999		2000		2001		2002 (Est)	
	Billion *tenge*	Percent of total	Billion *tenge*	Percent of total	Billion *tenge*	Percent of total	Billion *tenge*	Percent of total	Billion *tenge*	Percent of total	Billion *tenge*	Percent of total
TOTAL	**140.4**	**100.0%**	**119.7**	**100.0%**	**158.9**	**100.0%**	**169.9**	**100.0%**	**186.7**	**100.0%**	**201.5**	**100.0 %**
Total RK Government budget	26.5	18.9%	25.4	21.2%	158.9	100.0%	169.9	100.0%	186.7	100.0%	201.5	100.0 %
Republican (national government) **budget**	N/A	n/a	20.1	16.8%	140.8	88.6%	149.8	88.2%	156.1	83.6%	164.3	81.6%
Social security *including*					139.7	87.9%	145.2	85.5%	141.6	75.9%	162.8	80.8%
Solidarity Pensions					99.8	62.8%	101.1	59.5%	105.7	56.6%	120.4	59.8%
Government Social Allowances			20.1	16.8%	28.4	17.9%	27.7	16.3%	28.9	15.5%	34.2	17.0%
Special Government Allowances					10.7	6.7%	16.1	9.5%	5.5	2.9%	5.8	2.9%
Burial Allowances					0.9	0.6%	0.2	0.1%	1.3	0.7%	1.8	0.9%
Social support					0.1	0.1%	2.2	1.3%	0.7	0.4%	0.9	0.4%
Other social support					0.9	0.6%	2.4	1.4%	13.8	7.4%	0.6	0.3%
Local government budgets			5.3	4.5%	18.2	11.4%	20.0	11.8%	30.6	16.4%	37.2	18.4%
State Pension Fund	78.9	56%										
State Pension Fund arrears paid via transfers from Republican Budget	35.0	24.9%										
SCBP (15% payroll contributions for Solidarity pensions)			35.9	30.0%								
Transfers from Republican Budget to SCBP			58.4	48.8%								
Government Spending on Social Security & Support , including emergency spending through transfers to State Pension Fund(1997) and SCBP(1998) as % of GDP	3.7%		4.8%		7.9%		6.5%		5.7%		5.4%	
in real terms	100.0		79.6		97.6		92.2		93.5		95.2	
Number of Pensioners & Beneficiaries, 1997=100	100.0		96.7		93.2		90.9		88.0		*n/a*	
Pension Lump Sum Payment from Pension Funds due to old age retirement			0.1		1.0		0.8		0.8		1.7	
Withdrawal of money from Pension accounts due to emigration			0.05		0.5		5.5		2.5		3.5	

The number of new pensioners during the past five years has been abnormally low, in part due to massive early retirement in 1992-1997, and in part because of the small size of the Second World War cohort. While these forces should work to reduce Solidarity expenditure growth, and indeed both the numbers and real Solidarity pension expenditures have fallen, the GDP share of RK Government expenditure on pension and social protection remains relatively high even in comparison with the Soviet era. In 1989, Kazakhstan's pension expenditures made up 5.6% of GDP. By 1997, the total share exceeded 10% of GDP (transfers from the Republican Government budget to cover State Pension Fund arrears alone came to 3.5% of GDP), and the Republican Government budget cost peaked at 7.9% of GDP in 1999. Even with dramatic GDP growth and curtailed social security expenditures in recent years, though, the RK Government is still spending about 5.5% of GDP on Solidarity pensions and other social support payments.

It is not straightforward to calculate total monthly income received by pensioners and social allowances recipients for each separate category. However, mean monthly pension and social allowances are reported by category, and it is possible to convert these into constant *tenge* terms and calculate growth rates (**Figure 12**). The obvious point from Figure 12 is that real pensions and social allowances in 2002 were roughly the same as in 1997, despite very large increases in real wages and per capita GDP during this period. Depending on one's perspective, it is evident that the Kazakhstan Government maintained budgetary discipline, but that it did so in part by curbing payments to a needy part of the population.[7]



[7] Although the types of social payments reported in Figure 12 make up about 75% of total government expenditure on social and pension provision, they are used by the National Statistics Agency as the sole indicator of social support to pensioners and beneficiaries. This, in turn, distorts to some extent the real situation with respect to pension provision in Kazakhstan. As Table 8 indicates, along with Solidarity pension and government social allowances, there are some other types of social support and security financed jointly by Republican and local budgets.

It is an overstatement to claim that payments by the State to all types of pensioners and social allowances recipients, and particularly to disabled persons, are sufficient to ensure a normal living standard. On the other hand, the share of old age pensioners receiving the minimum pension (in 2001, an amount equal to only 87% of the "living minimum" according to an assessment by the National Statistical Agency) declined from 58% in 2000 to 15% in first half of 2002. Details on the pensioner and social allowance recipient population appear in **Table 9.** The old age category of pensioners, with 70% of all recipients, is the biggest category among all pensioners and beneficiaries.

TABLE 9. NUMBER OF PENSIONERS AND SOCIAL ALLOWANCES RECIPIENTS, CIVILIAN POPULATION 1998-2002

	1998		2001		July 1,2002	
	Number, persons	structure, %	Number, persons	structure, %	Number, persons	structure, %
Pensioners and Social Allowances Recipients	**2,582.0**	**100.0%**	**2,349.0**	**100.0%**	**2,324.6**	**100.0%**
PENSIONERS	1,985.8	76.9%	1,705.9	72.6%	1,675.7	72.1%
Old age pensioners	1,932.0	74.8%	1,658.3	70.6%	1,628.6	70.1%
Including:						
on favorable terms	431.3	16.7%	420.3	17.9%	412.5	17.7%
With incomplete service	50.8	2.0%	31.8	1.4%	30.3	1.3%
Other old age pensioners (on standard terms)	1,449.9	56.2%	1,206.3	51.4%	1,185.8	51.0%
Pensions for sufficient years of service	40.3	1.6%	37.7	1.6%	37.5	1.6%
Pensioners for special merit, except WWII disabled	13.5	0.5%	10.0	0.4%	9.7	0.4%
Social Allowance Recipients	596.2	23.1%	643.0	27.4%	648.9	27.9%
Disabled (all categories)	344.2	13.3%	386.4	16.5%	387.4	16.7%
Survivorship social allowance recipients	232.2	9.0%	238.5	10.2%	244.0	10.5%
Old age social allowance recipients	19.8	0.8%	18.2	0.8%	17.5	0.8%

Of course, in an ideal world all pensioners would receive adequate payments. In practice, such social largesse is unreasonable to expect in a middle-income country such as Kazakhstan, and virtually no non-transition nations at its level of development have pension expenditures as great. Reality (as reported in Palacios and Pallares-Miralles, 2000) is that no East and Southeast developing and middle income countries spend more than 3% of GDP on public pension provision, and most spend far less. Public pension spending ranges from 3.7% of GDP in Turkey, to 4.2% in Jordan, to 1.4% in South Korea, 0.4% in Mexico. The only non-socialist middle-income countries that exceed Kazakhstan's pension expenditure shares are Uruguay (15.0%), Argentina (6.2%), and Chile (5.8%) – and all three countries are struggling to contain these expenditures. In a competitive world, high payroll taxes and government spending pressures have serious effects on employment and economic growth, and it is difficult to argue for more liberal social expenditure policies. This is especially true for pension and social allowances in a nation such as Kazakhstan, which faces severe educational system deterioration, and a need to recover public health services.

The forces underlying both Solidarity and accumulation system contributions can be seen from **Table 10**. Payments into both pillars are sensitive not only to GDP and employment; rather, it is important to analyze labor force structure in order to determine the potential number of contributors of social tax and pension contributions to Accumulation Pension Funds (APF).

TABLE 10. SOCIAL TAX COLLECTION INDICATORS, 1997-2001

	1997	1998	1999	2000	2001	2002
Total Wage Bill of Actual Contributors, billion tenge, *of which:*	339.3	331.6	344.6	435.4	546.4	
Wage Bill of Large & Medium Enterprises	*325.2*	*312.0*	*319.2*	*395.4*	*498.9*	
Wage Bill of SMEs	*14.1*	*19.6*	*25.3*	*40.0*	*47.5*	
Actual Collection of Social tax (in 1998 -Mandatory pension Contribution to SCBP):						
Nominal terms, billion tenge	78.9	35.9	70.5	99.1	124.3	133.9
Real terms, 1997 Prices	78.9	33.5	60.8	75.5	87.3	88.8
Real collections, 1997=100	*100.0*	*42.5*	*77.1*	*95.7*	*110.7*	*112.6*
Social Tax rate, annual average (in 1998: mandatory pension contribution rate to SCBP)	*25.5%*	*15.0%*	*21.8%*	*25.8%*	*23.1%*	*21%*
Potential Tax Collection, billion tenge	*86.52*	*49.74*	*67.60*	*101.10*	*113.68*	
Compliance Rate	*91.2%*	*72.2%*	*104.3%*	*98.0%*	*109.3%*	
Actual Contributors - Full-Time Workers of Large, Medium and Small enterprises:						
Thousand	3,377	2,918	2,514	2,645	2,793	
Index, 1997=100	*100*	*86*	*74*	*78*	*83*	
As % of Economically active population	*45.4%*	*41.4%*	*35.6%*	*37.2%*	*37.3%*	
as % of Employed population	*52.2%*	*47.6%*	*41.2%*	*42.7%*	*41.7%*	

In the absence of detailed information on taxpayers and delineation into defined categories of both individuals (by income) and firms (by type), one of the main ways of acquiring information on the structure of contributors and their participation in for formal sector and compliance with contribution requirements is to examine statistics related both to employment in small enterprises (**Table 11**) and in medium and large enterprises (**Table 12**). Official statistics reveal a considerable number of indicators that describe both employment and wages in Kazakhstan. However, when we limit consideration to regular tax contributors, then attention must naturally be restricted to regular, full-time workers. Thus, in assessing the number of those making regular number of social tax contributors, it is logical to use the number of workers in medium and large enterprises who are recorded as having a formal, strong attachment to their jobs (thereby excluding, for example, women on maternity leave, or on leave to take care of children; or furloughed workers who left their posts at the initiative of management). For small enterprises, it is most appropriate to use the number of those workers on regular assignment (excluding substitutes and other temporary workers) at each firm, and whose names have been submitted to the tax and statistical organs.

TABLE 11.
SMALL ENTERPRISES' PARTICIPATION IN SOCIAL TAX CONTRIBUTIONS, 1997-2001

	1997	1998	1999	2000	2001
Number of enterprises:					
registered			107,134	93,400	120,500
operated					
active			71,853	84,396	93,926
Of which submitted reports to National Statistical Agency:			35,389	45,124	53,982
Units submitting reports, 1997=100			100.0	127.5	152.5
as % of registered enterprises			33.0%	48.3%	44.8%
as % of active enterprises			49.3%	53.5%	57.5%
Number of Full-time workers, thousand	204	233	271.1	352.8	390.4
Number, 1997=100	100	114	133	173	191
Wage Bill, 1997 prices, 1997=100	100	128	146	213	239
Real wage growth, 1997=100%	100	115	113		144

As the data for Tables 10-12 demonstrate, in 2001 there were some 2.8 million regular contributors of social taxes. Of these. 2.4 million (86%) were employed by medium and large enterprises, and only 0.4 million (14%) were employed in small businesses. On the basis of annual wage data recorded for those workers analyzed, we are able to estimate the levels of social tax contributions. These sum to some 113.7 billion tenge, which is 10.6 billion tenge less than the officially recorded social tax collections in 2001. Considering that 12.5% of receipts in the social tax budget are set aside to be used in an account to cover Solidarity debts from pervious years, then it is not difficult to realize that the share of individuals engaging in entrepreneurial activity, purely on the basis of social tax payments, must have exceeded payments from the previous year (2000) only modestly. In 2000, participation of individual entrepreneurs in the entire social tax fund came to only about 2% of the total. Just how tiny this figure is can be judged by comparing it with the total self-employed population, the share of which in total employment rose from 33% in 1997 to 42% in 2001.

TABLE 12.
LARGE AND MEDIUM ENTERPRISES' PARTICIPATION IN SOCIAL TAX CONTRIBUTIONS, 1997-2001

	1997	1998	1999	2000	2001
Number of enterprises:					
Registered		13,378	13,776	12,983	12,978
Operated		11,370	12,304	11,496	11,533
Active		10,777	9,236	10,617	10,910
Of which submitted reports to National Statistical Agency:	11,717	7,637	6,063	4,730	4,695
Units submitting reports, 1997=100	100.0%	65.2%	51.7%	40.4%	40.1%
As % of registered enterprises		57.1%	44.0%	36.4%	36.2%
as % of active enterprises		70.9%	65.6%	44.5%	43.0%
Number of Full-time workers, thousand	3,173	2,685	2,242	2,292	2,403
Number, 1997=100	100%	85%	71%	72%	76%
Wage Bill, 1997 prices, 1997=100	100%	89%	80%	92%	109%
Real wage growth, 1997=100%	100%	106%	120%	128%	142%

This negligible increase in social tax payments by the self employed, despite a growing labor market share, implies rising evasion: we estimate that the proportion of the labor force not making social contributions has risen from 48% in 1997 to 55% in 2001. In such a setting, only the sharp real wage growth of formal sector employees (by some 42-44% in 2001 compared to 1997) helped the Kazakhstan Government to stabilize its social tax revenue situation. These increases were not sufficient to enable social tax collections cover all social expenditures during 1999-2001, though the need for Republican Government budget subventions did decline during this period to a (relatively) manageable level of about 2% of GDP.

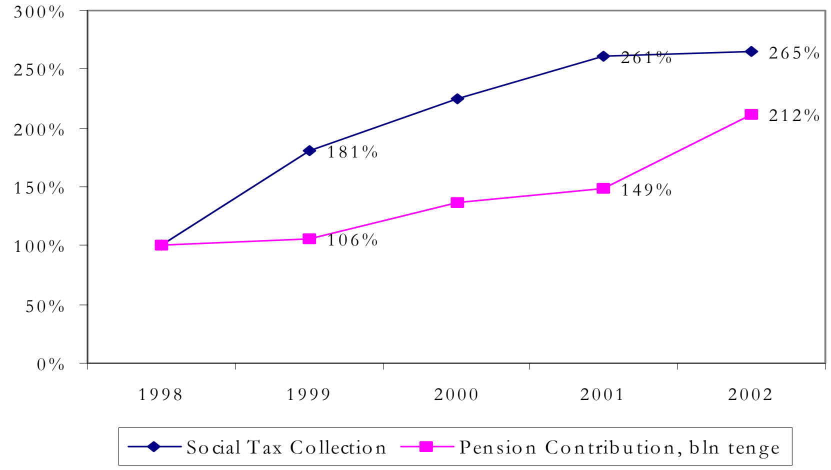
The reduced pressure on pensions and social allowances clearly played an important role in the Kazakhstan Government's fiscal stability, with overall budget deficits in 2000-2001 down to only 0.1% to 0.2% of GDP. But these improvements took place during a time of high oil prices and rising oil and gas exports. While there can be no doubt that Kazakhstan's public accounts are dramatically more positive than they were only a few years ago, it remains to be demonstrated that the pension reforms were essential to this improvement – though there can be no doubt that the international financial environment perceived the reforms' contribution to have been important (for example, Fitch, 2002: 2), and perceptions themselves are important. Thus, the obvious questions to arise are whether the pension reforms enabled Kazakhstan to take otherwise unfeasible strategic steps. For that matter, what advantages did the Kazakhstani state get from the new pension system? Was the Government's decision prescient, was it flawed in any clear manner, and what if any alternatives existed?

II.2 Achievements of the Accumulation Pension System: illusory or real?

To answer these questions, it is necessary to examine the progress made by the new accumulative pension system. The obvious point of departure is to consider collection of pension contributions to accumulation pension funds, and in particular to compare it with social tax collections, since in principle the two types of contributions should be in fixed proportions (correcting for changes in social tax collection rates). **Figure 13** uses 1998 as a base year, in part because it was the first year of the pension reform, and also because the collection rate of pension contributions by the SCBP in 1998 (76.1%) and by pension funds (71.1%) did not differ dramatically. Differences begin to emerge in 1999, when social tax collections started to exceed the same indicator for pension contributions to accumulation pension funds (APFs). By implication, 1999 social tax liability compliance exceeded payment of pension contributions to the APFs. Some of this difference can be attributed to changes in legislation, according to which (since March 15, 1999) employers are to pay APF contributions from wage deductions rather than from their own funds. On the other hand, presumably some of the differences also reflect initial lack of confidence in the accumulative pension system, and hence rampant evasion. That uncertainty as to the effectiveness of the accumulative system should have been great in 1998-99 is hardly surprising in light of the Russian debt crisis, collapse of the ruble, and the shock effects that were quickly transmitted to the Kazakhstan economy, and in particular to the consumer goods' industrial sector. The appreciation of the tenge vis-à-vis the ruble slowed economic recovery and added to hardships for many firms, thereby inducing at least some of them to delay social tax and, especially, accumulation pension payments.

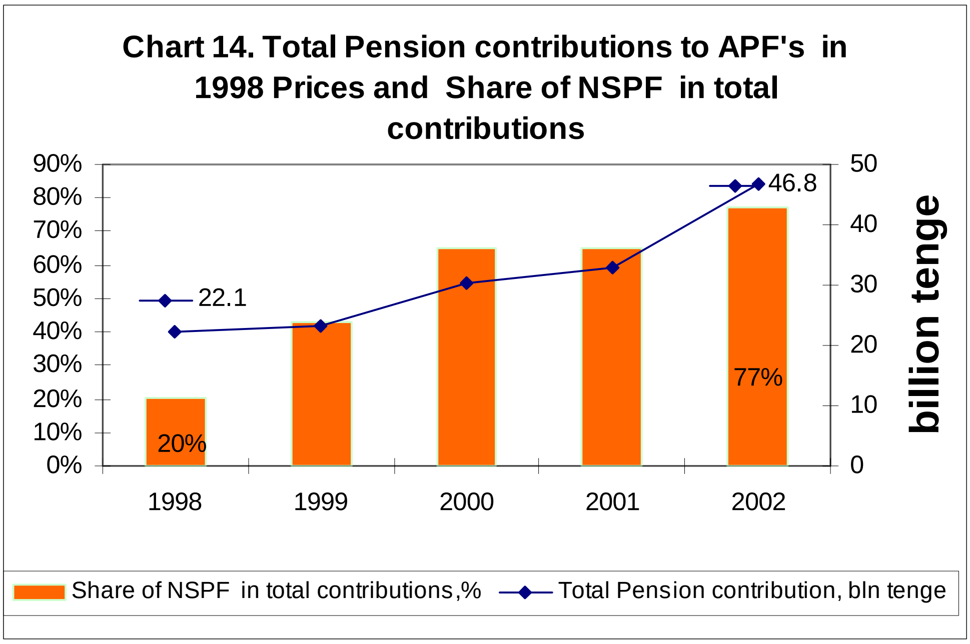
Indeed, confidence in the efficacy of any reform inevitably will reflect the underlying economic situation. Marked improvements in macroeconomic indicators (including rapid real GDP growth and controlled inflation) by 2002 had an positive affect on the discipline with regard to payment of pension contributions to the APFs. Thus, pension contributions collection rose by 42% in 2002 compared with previous year, while the social tax collection grew less than 2%. This, in turn, provides evidence that the contingent of contributors of social tax and pension contributions are nearly identical, and that with continued recovery, accumulative pension contributions are likely to catch up with social tax payments.

Figure 13. Real Social Tax Collection vs. Pension Contributions to APF, 1998=100



In addition to rapid growth of accumulative pension funds as a whole, there has been an even more dramatic rise in contributions to private pension funds. This accelerating rise of share of non-state accumulation pension funds (NSAPFs) in total volume of pension contributions for the past four years **(Figure 14)** strongly indicates increased interest among population in independent selection of pension funds to which they can trust accumulation of their future pensions. At least in major urban centers, it is clear that workers near the top of the income distribution have begun to regard their pension accumulations as real assets to be guarded carefully. A telling indicator of this phenomenon is the currently high rate of transfer of assets by individuals from one fund to another.

By the fifth year of the reform, Kazakhstan's increasingly mature and improved regulatory, legal, and oversight system has resulted in the stable functioning of 16 pension funds. By the end of the 2002 the total amount of net pension assets of the pension funds was equal to 258.6 billion tenge (approximately USD 1.6 billion). As of January 2003, 36.6% of assets of the pension funds were invested into short-term, medium-term and long-term securities of the Ministry of Finance, 12.7 % were in the National Bank's notes, and 27.5% were held in shares and bonds of the issuers included in A listing (**Table 13**). Reduction of the share of investment in state securities from 99.4% in 1998 to 49% in 2002, and a corresponding rise of the investment share into corporate bonds can be regarded as a major step toward pension funds' participation in investment in Kazakhstan's real sector.



Indeed, the Russian crisis resulted in an early crisis for Kazakhstan's nascent pension fund accumulations that prompted RK Government intervention on April 5, 1999. Kazakhstan had introduced a floating exchange rate for the tenge in early 1999, largely in response to the collapse of the Russian ruble, and this caused a sharp decline in the value of Kazakhstan Government T-bills. In response, the Government of Kazakhstan offered Accumulation Pension Funds the option of converting part of their tenge T-Bills into 5-year US dollar T-Bills at the pre-devaluation exchange rate.

This move demonstrated GoK's commitment to ensure a comparatively high level of protection to pension accumulations from the influences of unforeseen inflation and devaluation. As of January 2000, the fraction of ABMEKAM T-bills alone in pension funds total investment equalled 40.6%. Further restructuring occurred in April 2000 while allocating 7-year GoK Eurobonds. Currency bonds worth USD 244 million (the total emission of 5-year special currency bonds issued by the GoK Ministry of Finance in April, 1999) were exchanged for USD 221 million in new Eurobonds (62% of the total emission). Taking into consideration higher yield on these Eurobonds (11.1% per year), this exchange was highly favorable for the APFs, and should ultimately increase total pension assets. Taken as a whole, these measures, plus the evident movement of the accumulative pension system toward greater balance between the State Accumulation Fund and the various private APFs, indicate growing maturity of Kazakhstan's accumulation system.

TABLE 13. PORTFOLIO STRUCTURE OF ACCUMULATION PENSION FUNDS, 1998-2000

Type of investment	**1998**		**1999**		**2002**	
	bn. tenge	structure, %	bn. tenge	structure, %	bn tenge	structure, %
T-Bills	**22.2**	**99.4%**	**48.6**	**94.6%**	**126,693**	**49.0%**
Including :					-	0.0%
short-term (maturity - up to 1 year)	17.4	78.0%	6.9	13.5%	33,076	12.8%
Including:					-	0.0%
NBK Securities	0.5	2.1%	1.6	3.0%	32,827	12.7%
MINFIN securities	17.0	75.9%	5.4	10.4%	249	0.1%
Medium and long term (maturity - 1 year and more)	4.8	21.4%	41.7	81.1%	93,617	36.2%
Including:					-	0.0%
ABMEKAM-60	-	-	20.9	40.6%	-	0.0%
Eurobonds	3.5	15.7%	20.9	40.6%	58,823	22.7%
Securities of international financial organizations	**-**	**-**	**0.4**	**0.7%**	**15,203**	**5.9%**
Shares and bonds of issuers included in listing A	**0.1**	**0.4%**	**1.1**	**2.1%**	**71,106**	**27.5%**
Securities of local executive authorities of the RK	**-**	**-**	**0.2**	**0.4%**	**1,135**	**0.4%**
Deposits of second level banks	**0.0**	**0.2%**	**0.9**	**1.8%**	**22,825**	**8.8%**
Securities of foreign issuers	**-**	**-**	**0.2**	**0.5%**	**21,663**	**8.4%**
TOTAL	22.3	100.0%	51.4	100.0%	258,626	100.0%

From a macro-financial standpoint, Kazakhstan's pension reforms were a key element of the establishment of its international credibility. In 2001, Kazakhstan became the first Central Asian nation to receive investment grade status ratings on its sovereign debt. While high oil prices played an important role in Fitch's (2002) rating decision, rating agencies do not anticipate permanently high oil prices, and efforts to achieve long-term macroeconomic structural balances were perhaps equally important. Thus, Fitch forecast RK Government deficits to be in the 2.1% to 3.3% of GDP range for 2001-03, and these forecasts are likely to prove pessimistic. But the key point is that the rating agency greatly discounted their importance, since their analysis made clear that the APFs could easily absorb that much debt, and more.[8]

Markets are less certain about the desirability of the growing concentration of Kazakhstan's financial sector, including both in banking (where the top four banks control 60% of all assets: Fitch, 2002: 10) and similarly concentrated pension funds. Because of the system's openness to new domestic entrants and the regulators' policy of actively encouraging potential foreign entrants throughout the financial sector, the consolidation that has taken place to date seems generally positive. Its main effect appears to have been the elimination of very small entities that had no potential to become viable. At the same time, the pension fund industry is characterized by several aggressive small funds that seek to either gain market niches, or to find new approaches that will enable them to compete aggressively with the large, established funds.

Taking all factors together, domestic and international financial analysts clearly are optimistic about developments in Kazakhstan's financial sector during the past five years, and also clearly attribute much of the success fo the emergence of APFs and the underlying pension reforms. Yet it is important not to forget that a great deal remains to be achieved. Monetization of the Kazakhstan economy remains limited: as of the end of 2001, total banking system assets (around USD 5 billion) were only about one-quarter of GDP; M3/GDP was only 17% (Fitch, 2002: 10).[9] Even as of early 2003, total APF assets are well below 10% of GDP. APF asset growth is currently around 2% of GDP, a significant but not yet huge share. Whether this annual absorption capacity of Kazakhstan's pension funds increases further will depend on overall economic growth, compliance with legal contribution requirements (and, in aggregate, the "re-formalization" of the economy), returns on existing assets, and withdrawals from the system, currently mainly due to emigration to Russia (at

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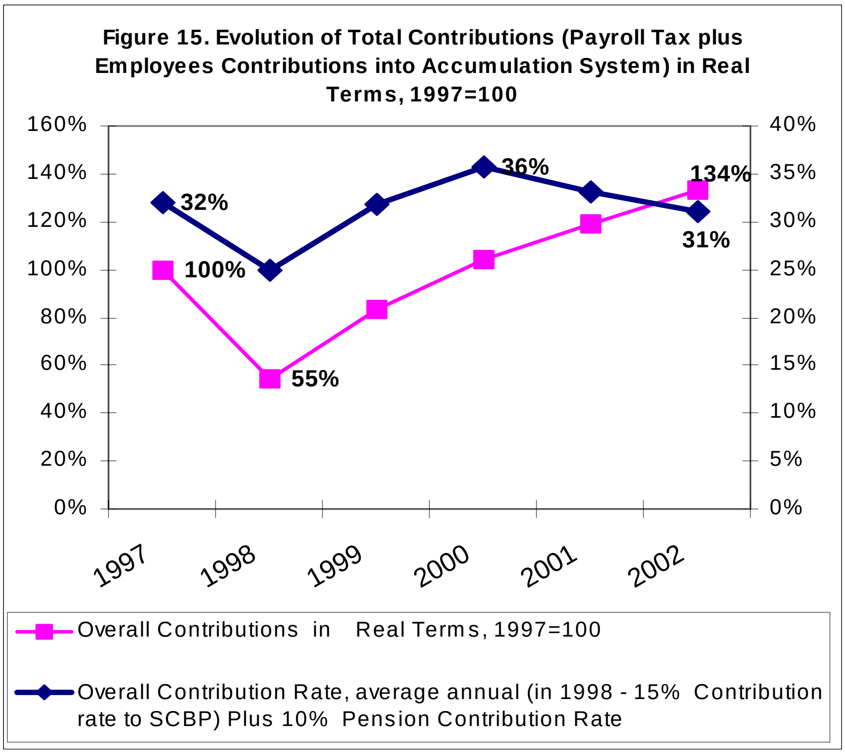
[8] Specifically, Fitch (2002: 1) states: *A further support to the ratings is provided by the pension reforms started in 1998. Pension reform has reaped benefits by limiting the fiscal implications of the previous system, stimulating growth in domestic capital markets and (for the time being) providing a near-captive market for government paper. Pension funds hold nearly half of the outstanding stock of sovereign eurobonds, and demand for new government paper remains strong, providing the authorities with a relatively easy means of debt refinancing, at lower costs than might otherwise be the case.*

[9] As the Fitch (2002) report notes, Kazakhstan's banking system also remains heavily dollarized, with about 60% of all domestic deposits denominated in US dollars. Pension funds assets are also heavily invested in euro or dollar-denominated assets.

which point contributors are allowed to cash in their assets) but in the future due to growing retirments of contributors.

A looming long-term problem for Kazakhstan's pension funds is the lack of asset diversity (Fitch, 2002: 11), which in turn reflects low levels of investment demand outside the nation's petrochemical industry (which taps international resources of a completely different scale). Low aggregate investment demand means few bond issues by firms or local governments; given restrictions on international asset holdings of pension funds, this inherently means great asset concentration (especially when one considers that bank deposits by the funds ultimately are largely investments in government debt). As of the end of September 2001, pension fund holdings included 62% sovereign eurobonds and RK Government paper, as against 20% invested in corporate bonds and 7% in A shares (Fitch, 2002: 11). While development of a mortgage market, new municipal bond issues, and economic growth all will contribute to asset diversification, it is clear that there is a very long way to go. At present, the pension funds still provide semi-captive savings to the Kazkahstan Government.



Indeed, a final irony of the current situation is that, quite contrary to its initial expectations, the Kazakhstan Government does not need these savings (**Figure 15**) nearly to the extent initially envisioned. High oil prices and rapid economic growth have enabled the Kazakhstan Government to weather the initial pension reform period with declining and currently modest deficits, despite the fact that reduced social contributions create a short-term deficit balloon. Limited demand for savings from the Republican and local governments, and from private investors, when coupled with growing supply of pension fund assets, inevitably causes a crash in yields, and this is exactly what has happened. Yields on RK Government T-bills have plummeted (to below 8% as early as the end of 2001, and even lower since), and maturities of issuance have lengthened markedly as well. While these developments greatly reduce long-term debt service costs for the Kazakhstan Government, they simultaneously greatly reduce short-term profitability of the nation's accumulation pension funds.

This situation was not one foreseen until quite recently. Initial concerns were that the move from the Solidarity system would simply cause the "marketizing" of the nation's social expenditures, and that in a high-demand, low-savings environment, the RK Government would pay unsustainable yields to fund asset holders. With economic growth and high oil prices, the reverse is far closer to coming true, and there are now grave concerns that pension funds will not be able to offer substantially positive returns (a point emphasized by Ramazanov, 2003, who also discusses liquidity problems arising from the limited bonds market). This problem ultimately is not one that can be solved by the pension system, however – the true underlying limitation is a low level of investment demand outside the petrochemical industry, and addressing this "real sector" problem is one of the nation's greatest tasks.

III. Initial assessment and remaining issues

As heated debates in Kazakhstan's press have made clear, the nation's pension reform has had both strong proponents and opponents. The former group considers the reforms as one of the Kazakhstan Government's major achievements, while many of the latter regard it as socially calamitous. Between these groups like neutral observers whose initial skepticism is slowly being replaced with cautious optimism – and who recognize that success will depend largely on successes in other economic spheres. In light of the accumulative system's clear ability to generate a sizeable, liquid savings pool, unbiased observers also recognize that the reforms have contributed significantly to the emergence of a nascent, modern financial sector.

It is premature to support or oppose unambiguously Kazakhstan's pension reforms involving a move from a conventional state-run PAYGO system to a largely private system of individual accumulation accounts. The record to date invites optimism – it is very difficult to read an outline of the achievements (such as in Marchenko, 2002) and not be impressed – but five years is a very short time from the perspective of pension reforms.

What can be claimed without question is that the reforms were important to the Kazakhstani state, and that they greatly reduced fiscal pressures – an especially important matter when the reforms were initially conceived, during a period of low oil and minerals' prices. But there were other ways to reduce social spending obligations and achieve macroeconomic instability, and the question remains whether these fiscal benefits merited such a controversial reform, while other former Soviet nations with similar problems undertook more gradual steps, either moving more cautiously toward a funded pension system or keeping the solidarity system while reducing its expenditures.

Beyond improving fiscal balances, however, Kazakhstan's pension reform was viewed as an integral component of its capital market development strategy.[10] Opponents' criticism that radical pension reform was premature in the absence of developed capital market misses this point, as the strategy of the National Bank and economics ministries was to undertake a bold but risky simultaneous advance on two fronts.

Indeed, Kazakhstan's reform was more than bold: it appears to have been virtually unprecedented.[11] While Kazakhstan's reformers consciously copied the Chilean model, at the

[10] While never officially stated, the reform appears as well to have been intended as a signal both to the world and to its own population that Kazakhstan intended to be one of the most rapidly transforming formerly socialist states, and that its Government was determined to break irrevocably with the nation's socialist past.

[11] Among other reformers, only Hungary could conceivably claim to have taken a comparably bold step prior to Kazakhstan (for a multi-country review, see McKinnon, Charlton, and Konopielko, 1999). In contrast, Russia's reform is following Kazakhstan's by four years (Afanasiev, 2003).

inception of pension reform in Chile in 1980 there were 32 different social security institutions, regulated by numerous laws (Infante, 1998: 24). Relative to Kazakhstan, Chile's pre-reform social expenditures were quite small, as the nation' social welfare system was far from comprehensive (Rajnes, 1998). Thus, it was possible for Chile to cover system transition costs fairly easily, especially as it enjoyed large privatization proceeds during the early transition period. Also unlike Kazakhstan, Chile has a market-oriented economy that has developed institutions since the 19th century, and as such had a far more developed financial system than did Kazakhstan in 1997. Indeed, before 1998, financial institutions in Kazakhstan were limited to commercial banks and insurance companies. Despite the circumstances under which pension funds were introduced, however, it is apparent that they have become important very quickly. A lower-bound indication of the role of pension-related entities is given by **Table 14**, which shows financial sector assets in both 1997 and 2001 – though only net assets for the pension funds.

TABLE 14. THE STRUCTURE OF KAZAKHSTAN'S FINANCIAL SYSTEM

	1997			2002		
	Number of registered entities	Assets		Number of registered entities	Assets	
		Billion *tenge*	As % of total		Billion *tenge*	As % of total
All Financial Institutions	203	2.3	100.0%	240	9.0	100.0%
Including:						
Commercial banks	82	2.2	97.6%	38	6.7	73.9%
Credit Unions	2	0.0	0.0%	38	0.0	0.2%
Pawnshops (Ломбарды)	35	0.0	0.2%	53	0.0	0.1%
Insurance companies	70	0.1	2.2%	34	0.1	1.5%
Pension Funds (*net* assets only)	0	0.0	0.0%	16	1.7	19.3%
Other Institutions, fulfilling some banking operations	14	0.0	0.0%	43	0.5	5.1%
Including:						
Pension asset management companies	0			7		
Custodians	0			11		

The emergence of pension funds, asset management companies and custodians were consistent with Kazakhstan's move toward a market economy. Creation of such market participants in fact does not appear to have been premature, especially as the Kazakhstan Government concurrently introduced a well-conceived regulatory structure "to provide for a clear separation of accounts and responsibilities so that a system of checks and balances could thwart any fraud and abuse" (Andrews, 2001:18). On the contrary, such diversification of the financial system's institutional structure has had a striking number of longer term effects – from added competition and new financial products, to dramatically improved financial computerization and record-keeping, and the creation of new actuarial skills necessary not only for the pension system, but also for professional development of insurance and other markets.

To fully grasp the significance of the concurrent development of a private pension industry and a modern financial system, it is important to recognize that all of the institutions of the accumulative pension system were established on what was practically a *tabula rasa*. Even without raising the issues of the importance of credits from the World Bank, and technical assistance from USAID and other international organizations in enabling Kazakhstan's pension reform to take place, it is necessary to emphasize that these credits and assistance were basically spent on developing the most basic financial and fiscal system infrastructure:

1. Installation of a State Center for Benefit Payments' central and oblast/raion computer system to provide a central data base to record the receipt of contributions to individual accounts;
2. Development of modern tax collection techniques;
3. Establishment of a training program for individuals to build human capacity for both pension funds and asset management companies;
4. Establishment of training programs for individuals to build human capacity for the National Bank of Kazakhstan, the National Securities Commission, the National Pension Agency, the State Center for Benefit Payments, and the State Accumulation Fund;
5. Development of regulations for the State Accumulation Fund, the non-state (private) accumulation funds, and the asset management companies, concerning licensing, commissions, reporting and disclosure, accounting and auditing, asset transfers, prudential regulation, portfolio limits, and minimum capital requirements satisfactory to the National Bank; and
6. Development of Kazakhstan's actuarial capacity.

Even a seemingly straightforward step such as developing actuarial capacity in reality involved starting from nearly a clean slate – and also has had many implications for Kazakhstan far beyond the immediate pension reform process. Pension reform, to the extent that it entails moving to a private accumulative system, cannot proceed without the development of an actuarial profession. The forecasts of future pension incomes of contributors and payment obligations cannot be undertaken without actuarial modeling and analysis. This holds true for private pension funds; it also holds at the macroeconomic level, to the extent that the Government of Kazakhstan continues to meet pension and disability obligations to those who contributed mainly to the Solidarity system, or who for other reasons have not built accumulation accounts.

At the outset of the reforms, the Government depended on the assistance of foreign consultants and local specialists who had independently acquired macro-actuarial modeling skills, or who had taken corresponding short-term training under a World Bank technical assistance program. While not ideal, this sufficed as long as analysis was restricted to assessments of the soundness and obligations of the nation's Solidarity system, and to simple projections of likely outcomes from a switch to a mixed system with a substantial accumulative component. But limited domestic actuarial capacity was not viable once the reforms were underway, and private pension funds were up and running. Moreover, with the adoption by the Government of Kazakhstan of the new Law on Insurance Activities that came into effect on January 1, 2001, the training of professional actuaries became a matter of utmost urgency – as these actuaries through the newly-established Actuarial Society of Kazakhstan were charged with the legal right and obligation to give mandatory actuarial assessments of insurance reserves.

Consider from another standpoint the willingness of the Government of Kazakhstan to take an unprecedented risk by creating a private pension system designed to help its "parent" financial system mature, rather than to emerge as an offspring. Pushing ahead with financial market development undoubtedly was a high priority for the Government – and was a priority that had strong international approval, as reflected by the official market status accorded Kazakhstan by the EC in 2000 and by the United States in 2002. Could the financial system have developed as rapidly without pension reform? We believe not. At any rate, there was a clear impact on rapid financial development by the emergence in place of the giant State Pension Fund of new institutions, including pension funds, asset management companies, and custodians.

To critics of pension reform, the new system seems both hopelessly complex and lacking a social safety net. Complexity is inherent in a system of checks and balances, in which each of these new institutions and each new technical development plays a particular role in a structure designed to minimize risks of falsified pension claims and erroneous (in either direction) benefit payments.

Again, while it is early to draw conclusions, the initial impression is that regulation has been effective, and fund management has been professional, both in the private and state sector. This absence of fraud and theft will in turn translate into increased confidence in both pension funds and in the financial sector more broadly – and restoring confidence is a key element of economic recovery. Indeed, absent reform, who could have guaranteed that the old State Pension Fund could have avoided the destiny of the Mandatory Medical Insurance Fund, whose former general director stole 150 million tenge from the Fund in 1998 and has since disappeared?

Beyond macro considerations and financial development, the Government of Kazakhstan had a third critical motive. Recall that early retirements exploded in Kazakhstan in the early Independence years. While efforts were taken to restrict this trend, their long-term success was uncertain. Only by moving to a system of individual accounts could the Kazakhstani Government ensure a dramatic reversal of the incentive to retire early – and with the post-war baby-boom generation approaching middle and late-middle age, long-run economic and labor market stability demanded a response.

It is true that there are options that would change the rules of the Solidarity system in order to restore macroeconomic balance. However, effective Solidarity reforms would also have proven to be unpopular, especially as the likely point of departure would have been an increase in retirement age, and likely restrictions on premature pensions. Indeed, it seems unlikely that these moves would have been more palatable politically than moving toward an accumulative system. Furthermore, success in curtailing Government obligations would not be guaranteed – there would always be strong pressure to increase payments, roll back retirement age increases, and offer liberal premature retirement options, even if social tax collections fell way behind system costs. The new accumulation system has been criticized heavily because of accounting errors (especially early in the reform, when SCBP often had multiple records for individuals), but it is also clear that there has been much data manipulation in the Solidarity system.

Therefore, from the standpoint of the Kazakhstani Government, reforming the Solidarity system had costs and disadvantages at least as great as those associated with the accumulative system. Nor did it have any of the advantages that made the accumulative reform so attractive to the economics ministries – its contribution to the development of the financial sector, and more ironclad control over social spending, and hence improved macro balances. This reduced social obligation was expected to encourage foreign capital investment (which, outside the minerals' sectors, remains disappointingly small) and enhance Kazakhstan's international credit rating (which in fact has been achieved). The recent emergence of nascent domestic bonds and mortgage markets, both aimed at tapping retirement savings pools, suggests that the simultaneous pension and financial reform may indeed have positive spillovers in both directions. In short, the accumulative system reform was a bold but natural step for a government determined to achieve economic recovery.

III.1 Remaining issues

While it is not surprising that market-oriented reformers supported Kazakhstan's pension reform, and while many of the reform's opponents raised criticisms without recognizing the costs of viable alternatives, it is also true that many problems associated with the reform have not been addressed effectively. Because the reform was adopted as part of a financial development push, it is also not surprising that the main issues deal with social questions.

The most discomforting aspect of the reform is its gender inequity. Women earn lower wages than men in Kazakhstan as elsewhere, and spend only half as many years working, per year of expected retirement, as do men. This latter disparity reflects longer retirement life spans for women, labor force withdrawal to raise children, and the five-year gap in retirement age. Consequently, any pension reform that reduces the insurance component provided by a pooled, defined benefit system is also going to be beneficial to men and disadvantageous to women. The accumulative system sharply reduces the redistributive role of social security, thereby benefiting high-income men at the expense of low-income women. The extent to which different gender/income groups win and lose is documented in Becker, Seitenova, and Urzhumova (2000); whether poor women will are made absolutely worse off will depend on the rate of return to pension assets, and the base level of government support. This issue would be of limited importance in a society with virtually universal marriage; however, sharply falling marriage rates in Kazakhstan (and a sharp spike in age-specific marriage rates) imply that many women will never marry.

To date, the Kazakhstani Government has not addressed the gender inequity issue, although there is no doubt that it does not want to deliberately disadvantage women. An easy option would be for the state to make pension contributions for a woman during maternity leave. Yet another possibility is to require retirees with savings above a certain level to purchase annuities, with the mortality rates that determine annuity payouts pooled over both men and women (thus preventing shorter-lived men from receiving higher annual payouts than women receive from an identical savings pool). These issues have little practical impact on pension payments today, and therefore are not urgent, but need to be addressed in the near future.

A second issue that relates to the impact of the reform on poor, single women concerns the level of the Government of Kazakhstan's minimum pension. This minimum is provided to all disabled and elderly retirees who have not accumulated adequate amounts. In practice, it amounts to a continuation of the Solidarity system, but at a fixed minimum, for a substantial portion of the population. Given that very few of the 40+ percent of Kazakhstanis who live in rural areas can expect to accumulate adequate private savings, and that many urban dwellers also will fail to do so, it is likely that the majority of Kazakhstan's elderly will receive minimum pensions for decades to come. This should not be taken as a criticism of the accumulative system, though – rather, it reflects the fact that Kazakhstan is a middle-income country. However, it does imply that all concerned should recognize that the "accumulative system" is really an "accumulative plus Solidarity" system, and will continue to be for the foreseeable future.

The level of these minimum pensions in turn depends on the Government of Kazakhstan's overall targeted level of spending on pensions and social allowances. The Government faces domestic political pressures for this spending to grow in real terms as the economy recovers, and increases are in fact likely. The rate of increase is a very emotionally charged one: on the one hand, the state spends considerable resources on infrastructure and prestige projects that might be diverted to social expenditures. At the same time, though, deteriorated schooling, public health, and maternal and child care in particular are also high priorities, and it is difficult to criticize the Government for giving preference to at least some of these concerns over pensions and social allowances. However, it is fair to say that she share of public spending that should be committed to pensions and social allowances has not yet been resolved, and needs to be addressed. It is also clear that there is enormous popular pressure (and hence pressure from populist politicians) to increase pensions. By the standards of transition economies, Kazakhstan's Solidarity pensions provide a replacement rate that appears to be well below average (Palacios and Posarac, 2000: 13), and also below historic Soviet averages.[12]

A fourth set of issues concern the uses of the savings generated by private pension contributions. The underlying problem is the low level of investment demand outside of the minerals' sector, along with the fact that oil and other minerals require investments on a different scale than those that could be funded by pension savings to date, and that the minerals' sector has access to international sources of capital. At present, high oil prices have reduced Government's need for deficit financing as well, and interest rates have fallen sharply. While there are some new initiatives involving municipal bonds and mortgages, at present Kazakhstan's pension funds face a dearth of investment opportunities.

Thus far, the Kazakhstani Government shows no inclination to abandon fiscal rectitude and borrow these available assets cheaply (and then spend the proceeds). At the same time, it has not taken the audacious and somewhat risky move of strongly encouraging local infrastructural development by underwriting local government debt. To do so requires further political decentralization, and for many reasons the Government is moving cautiously along this path. Nor has a system of underwriting (and hence encouraging) corporate debt issuance emerged. Moves along these lines have risks and costs as well as benefits, but there is little doubt that the ultimate success of an accumulative pension system requires healthier levels of investment demand.

Finally, some have criticized the Kazakhstani Government for introducing a defined contribution plan instead of retaining a defined benefit (DB) plan, to be funded at the enterprise or national level, but not on a PAYGO basis. DB at the enterprise or pension fund level in principle transfers risks from the individual contributor to the firm or pension fund. As is apparent from Tables 2, 11, and 12, many enterprises until recently could not have absorbed this risk. With the development of human capital (experienced actuaries and financial analysis) and technical conditions (computerization and institutional structure), it is possible that pension funds and insurance companies could begin moving toward providing DB products in the coming years. An obvious

[12] However, Kazakhstan's public pension replacement rates are comparable to Russian rates. As economic recovery restores Kazakhstan's per capita income to Soviet-era levels, though, there is great pressure to raise pensions and to prevent replacement rates from falling further.

example is the provision of plans with guaranteed payments or rates of return – although the insurance component of such an option is not a free good. At present, regulatory restrictions remain that make the emergence of such products problematic, and one hopes that further maturation of the new system will be accompanied by the removal of these constraints. On the other side, it is also impossible at present for a pension fund to offer a menu of portfolios, or for an individual contributor to hold multiple assets at a single fund, as is common in, say, the United States. Ultimately, liberalization in this area is desirable as well.

III.2 Completing the circle

Kazakhstan's reforms have created an environment in which the flow of pension contributions has become transparent for contributors. Most pension reform opponents forget that the State Pension Fund was separated from the Republican Government Budget in 1990. To this switch corresponded a legal obligation by the USSR Pension Fund (which transferred as an obligation of the Kazakh SSR Pension Fund and, in 1993, the Republic of Kazakhstan Pension Fund) as follows: guarantee of a full accounting and registration to payers of mandatory insurance and social contributions, undertaken concurrently by supervisory organs of the nation's tax service, and intended to ensure in full the collection of means to provide pension security. Organization of accounts of contributions and expenditures was directed to be undertaken to comply with this guarantee. In practice, this assignment could not be effectively realized because of the absence of personified accounts of social insurance contributions, and because of the low level of computerization of the organs of social security, and because of various deficiencies in the legal base from which they would be operating. The fact that this intended reform from the late Soviet era was not carried out prior to the 1998 reforms does not mean that the law and associated directives were invalid, however. Rather, these earlier actions signaled an intention to create transparent, individual accounts nearly a decade before action was taken. While the late Soviet reforms occurred in the absence of a private financial market (and thus were intended to be the forerunner of a "notional" defined contribution system), it is clear that the reforms actually undertaken in large part reflect the spirit of these earlier reforms – and then went beyond them in the new environment.

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