#### PENSION REFORM MODELS IN LATIN AMERICA AND CENTRAL AND EASTERN EUROPE

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#### Introduction

There is no clear-cut solution to the problems involved in different individual pension reforms. However, thanks mostly to the Latin America's experience there is little doubt as to which measures of these reforms work and which do not.

A workable solution to the pay-as-you-go system in most cases is found in the following three features of the reforms:

- private administration of the pension funds,
- capitalization, and
- individual accounts.

The challenges facing reforms based on the market and privatization approach have been identified in the prospect of market failures in the cases of:

- adverse selection, or cases when the highest risk groups buy private insurance, and if the premium is based on the average risk, only people of average or higher risk would purchase life insurance policies;
- moral hazard, or cases of deliberate actions of not caring about specific risks once people have insured themselves;
- incomplete markets encounter downturns, inflation and other sorts of "environmental" risks.

The first two of the above types of market failure are attributable to a large extent to pension systems based on life-insurance schemes rather than those based on schemes of accumulation and investment. The last type of failure is related to any type of pension system, and there are different ways of tackling these failures:

- intergenerational transfers in the pay-as-you-go system,
- tracking individual behavior in the life insurance system, and
- techniques to diversify risk in the investment/accumulation system.

### Lessons Learnt in Central and Eastern Europe

There are only few CEE countries that have copied that Chilean model. Most of these employed a mixture of the pay-as-you-go system and the capitalization based system, or a combination of these two plus different compulsory insurance schemes. Thus, most reforming CEE systems resemble the Argentine system, in which pensions are administered by the government and private pension funds.

In Poland, the capitalization of the system occurs through transfers to the individual accounts of younger and mid-career workers, while contribution rates remain compulsory for them. The deficit in the pay-as-you-go system is covered through privatization proceeds.

The Hungarian, or the most detailed and articulated reform, currently being implemented, is based on three pillars:

- compulsory social security pension,
- compulsory private pension,
- voluntary pension obtained via insurance.

Those beginning their careers have no choice but to turn to the private pension system, and currently middle-aged workers are expected to choose whether to stay with the old system or go into the private one. In the two compulsory systems, i.e.:

social security based (1),

and compulsory private (2),

the pension payments differ as follows:

1) == to the social security pension in the old pay-as-you-go system;

2) = reduced social security pension (3/4) + private pension.

Contributions are:

in 1) 24% from the employer in 1998, 23% in 1999, and 22% from the year 2000 onward; and from employees: 7% in 1998, 8% in 1999, and 9% from the year 2000 onward.

in 2), employees on the mixed system contribute 1% to the social security fund from 1998 onward.

Hungarian private pensions are financed on a compulsory contribution basis as well. Employees pay a 6% "membership fee" in 1998, 7% in 1999, and 8% in 2000 and thereafter. The starting points of the pension reforms look different in the different countries:

Country	employer contribution	employee contribution	total
Hungary	48.2%	11.5%	59.7%
Czech Republic	35.3%	13.3%	48.7%
Bulgaria	46.8%	2.9%	48.5%

The highest contribution to a pay-as-you-go system of an EU member country is in France: 62.1% (37.8% from the employer and 24.3% from the employee).

#### **Peculiarities of the Bulgarian Reform**

Bulgarian pension reform is a rather shining example of how such reforms should not be implemented.

As it is scheduled for the time being, it is based on pillars similar to those in the Hungarian, and to some extent the Argentine, system:

- the old system, which is expected to allocate 40-45% of the wages before retirement as pension benefits;
- compulsory additional pension financing; an individual account which is expected to equal 15-20% of the net salary before retirement as pension payments;
- additional volunteer pension insurance, financed by contributions from both the employer and employee, expected to equal 15-20% of the net wage before retirement as pension payment.

Logistical problems

#### **Background issues**

Since 1994 the pensioners-to-workers ratio in Bulgaria is around 80%.

In 1996 — six years after the initial attempt to implement market-based stabilization in Bulgaria — the economy fell into a deep crisis, which heavily affected Bulgarians' standard of living. In 1996 the share of households with incomes below the subsistence-minimum rose to 54% of the total number of households, an increase of 30 percentage points compared to 1990. In addition, the share of households with incomes below the poverty threshold as defined by the Ministry of labor and social affairs increased, from 41% in 1990 to 73% in 1996. The inequality of income distribution deepened in recent years; the ratio of the incomes of the wealthiest to the poorest groups in Bulgaria rose from 3.5 in 1990 to 5.8 in 1996.

Bulgarian household incomes have declined by 65.6% since 1990. The share of wages and pensions in total household income remained predominant, and was approximately 70% in 1996. Property income and income from entrepreneurship, which are the only sources of income without real erosion, continue to be only a small part of total incomes (6% in 1996), and cannot change the overall negative tendency.

Wages and pensions were seriously eroded by inflation in the last years. The average monthly wage in real terms in 1996 was just 42% of its 1990 level. The sharp depreciation of the lev in 1996 and the first months of 1997 drastically reduced wages in dollar terms. From about \$110 in 1995 the monthly dollar wage fell to \$20 in the first months of 1997. (Its level was almost the same in February 1991 when initial price liberalization took place.). With respect to the monthly dollar wage in 1996, Bulgaria ranks last among the transition economies and is the only one to have had such a sharp reduction. The average monthly pension has declined by 65% over the 1990-1996 period. In the beginning of 1997 its equivalent in dollars was just \$10.

The decline in income was directly reflected in the deteriorating structure of household expenditures. Food purchases as a share of total expenditures grew from 36.3% in 1990 to 47% in 1996. The relative shares of expenditures on clothing and footwear, education and leisure declined during the above mentioned period. The structural changes in household expenditures adversely affected the amount and quality of final consumption.

The sharp reduction in 1996 in real GDP (around 10%) had a negative impact on employment. The unemployment rate started to rise in mid-1996, and reached 12.5% in December, among the highest in the transition countries. Taking into account the needed structural changes to restore long-term economic growth, it will be not surprising if the unemployment rate in 1997 continues to increase.

The severe drop in the standard of living in recent years is reflected in the demographic indicators — the death rate increased and at the same time the birth rate fell. As a result the natural increase of the population worsened from -0.4 per 1,000 in 1990 to -5.0 per 1,000 in 1995.

#### **1991-1997: Reduction Stage**

Domestic demand in Bulgaria has decreased dramatically in recent years. This is due to the decreased purchasing power of the main consumer groups: citizens, the government and business consumption (intermediate consumption).

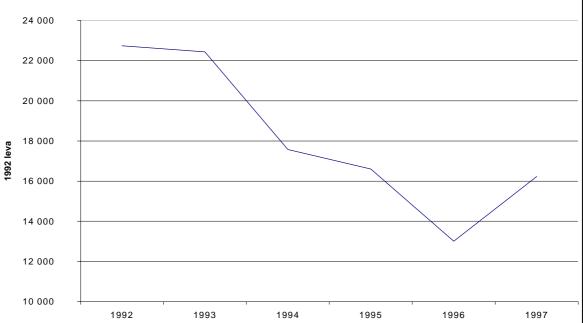
Since 1991, the real incomes of citizens have decreased. As result of this, the purchasing power of the population was almost halved over the period between 1992 and 1996. The reduction is more dramatic if data on the 1990 purchasing power of households (on the eve of the economic reforms in Bulgaria) and that in 1996 are compared. Thus, the purchasing power of households has decreased by a factor of 2.3 to 4, if measured by the purchase of particular goods.

#### **Household Consumption**

All of this has caused changes in the structure of household consumption. The structural change in household demand is more important than its reduction in volume, in spite of the fact that these are closely connected. The character of domestic demand has a much greater significance than its size. The share of foodstuffs in the total amount of consumption increased from some 36% in 1990 to about 45% by the end of 1996. That share achieved the extremely high level of 55% of total household consumption in the first months of 1997, when real incomes were extremely low. At the same time, in the 1993-1996 period, the share of clothes and shoes in total consumption decreased from some 9% to about 7%, while the consumption of other goods (electric appliances, etc.) decreased from about 35% to 29% by the end of this period. At the end of 1996, some goods were almost impossible to buy for citizens with average incomes. In 1996, a person earning the country's average annual wage could only have bought two refrigerators, or two television sets, or three washing machines.

#### Investment

The change in the structure of domestic demand concerns not only household demand, but intermediate business demand as well. This is especially true for Bulgaria, where 70% of companies registered are sole proprietors. (They report their income once a year and are not required to keep double entry books; thus, their financial (tax) reporting position is similar to that of households.) The demand for investment goods, which are mainly high-end products, reached extremely low levels in 1995 and 1996. The share in the GDP of expenditures on the acquisition of tangible fixed assets decreased from 18.3% in 1991 to 10% in 1996. It was 11% in 1997 and 1998. Thus, the most science-intensive manufacturing branches, such as electronics and electric appliances, the machine-building industry, etc., registered the greatest drop in their output in comparison with the end of the 1980s. On top of this, reduced investment activity by firms diminishes their ability to be competitive on the world market. In



Real average monthly wages

the case of business demand, the huge decrease in demand for high-end products is of crucial importance, because it does not contribute to the development of clusters for the production of sophisticated final commodities. Sophisticated business demand allows close contact between firms in the development process, and furthermore, creates opportunities for them to engage in a joint-development process.

#### **Government Debt**

Government demand has also decreased remarkably. It fell by a factor of more than two in the 1993-1996 period alone. Government borrowing for the first half of 1998 is zero. This tendency is determined by the government's huge debt burden to be serviced. It can hardly be expected that the volume and structure of government demand will be able to contribute to the improvement of the whole economy's competitiveness in the near future.

The decline in living standards led to the erosion of the credibility of the Government and vast political instability in the beginning of 1997. The ability of politicians, led by President Stoyanov, to avoid widespread unrest and to revive people's confidence in government institutions is encouraging evidence for the depth of the democratic process in Bulgaria.



#### **BIRTHS AND DEATHS PER 1000**

Bulgaria 1998-2005: IME Forecast						
Year	Real GDP	GDP growth %	Real GDP	Population	GDP per	
	(1997 BGL,		(1997 US \$, billions)		capita	
	billions)				(1997 \$US)	
1997	17,134	-	-	-	-	
1998	17,734	3.5	10.43	8,600,000	1,213	
1999	18,354	3.5	10.80	8,587,500	1,257	
2000	18,997	3.5	11.17	8,575,000	1,303	
2001	19,757	4.0	11.62	8,556,000	1,358	
2002	20,547	4.0	12.09	8,537,000	1,416	
2003	21,369	4.0	12.57	8,518,000	1,476	
2004	22,330	4.5	13.14	8,499,000	1,546	
2005	23,335	4.5	13.73	8,480,000	1,619	

## Economic growth appears to be a crucial problem for the years after 1998.

Assumptions:

1. BGL/USD exchange rate used: 1,700:1

2. Long-term decrease in population: according to NSI

Our assumption is that the real GDP in BGL will show growth of 3.5-4.5% until 2005. We forecast a gradual increase in growth, starting from 3.5 and gradually increasing. The reason for this is the slow process of the structural reform at the beginning of the period. The expectations show that sustainable growth will be reached after the year 2001. Real GDP per capita in BGL shows a stable trend of increase, caused by the GDP growth and the population decrease. The same indicator in USD should begin to grow after 2001, at a much slower rate. Given the above assumptions for GDP growth, significant GDP per capita growth is not to be expected until 2002.

# Decrease in the State Share and Capital Market Development Determine the Success of the Pension Reform

1. The low efficiency of the pay-as-you-go (PAYGO) system is obvious. The opportunity cost of the pensions that come from the mandatory schemes is the imaginary pension that would have been received if the installments were made in another type of social insurance mechanism – fully-funded schemes (FFS). A simple hypothetical model developed by the Institute for Market Economics, which assumes gradual future increases in pensions, as well

as an annual rate of return of the pension funds of 10%, proves the obvious inefficiency of the PAYGO system. The PAYGO system provides for future pensions by taking in more than 35% of wages. The hypothetical model shows that the future pensions would have been the same if the people made their contributions in a FFS.

**2.** The first pillar of the pension system should have a small share and be fully funded, if possible. The first pillar of the pension system, i.e. the basic mandatory social insurance, is in its current condition one of the main obstacles to the development of additional social insurance. Its share has to be lowered in order to let the people decide freely between the other two pillars – the additional mandatory and voluntary funds. It is clear by now that the pension reformers in Bulgaria have no intention of leaving the PAYGO mechanics in the first pillar. Thus, this scheme's share should be lowered, and should remain low as the other two pillars are introduced. The transition from a PAYGO system to an FFS or mixed one will open a financial gap, which should either be filled by privatization payments or foreign financing should be found for it.

**3.** The second pillar should be given to private companies. The second pillar is the additional mandatory social insurance. There is no doubt that it will be of the FFS type. Moreover, the funds serving this scheme should be privately managed. There are at least two reasons for this:

- A private company will manage the funds better than state;
- The problems in a pension scheme managed by the state immediately become fiscal problems, and therefore macroeconomic problems.

**4. Voluntary pension insurance in Bulgaria is just another experiment so far.** Additional and voluntary social security will be the third pillar of the system. The first law regulating the pension reform is the Law of Additional and Voluntary Social Security. The law introduces the most important institutional investors — pension funds — for the first time in Bulgaria. Because of the huge resources that they could accumulate they are viewed as panacea for the Bulgarian capital market. The fact is that they can in part solve the problems on the demand side of the market, but this will not be sufficient. Some of the biggest international institutional investors already operate on the Bulgarian financial markets, and if the problem were low demand, it would have been solved. These foreign companies prefer investing in our Brady debt, which is very liquid and has a market capitalization of about US \$5 billion. The problem lies rather in the small stock supply, which is closely connected to the privatization process in Bulgaria. Therefore the existence of the pension funds will hardly have an effect on capital market development. Furthermore, the underdeveloped capital market will be a big obstacle to the development and functioning of the pension funds.

**5. Mass privatization vouchers will hardly become "live" money.** The possibility of making pension contributions to separately established pension funds with mass privatization vouchers cannot increase the chances of higher pensions in the future. The reason for this is not the merging of pension reform and the privatization process, but the concrete conditions of the second "wave" of mass privatization in Bulgaria. Most of the enterprises included are small and have no clear prospects for the future. If there is, however, a bit of attractiveness in some of them, it is wiped out by the fact that only small stakes of up to 5% will be sold that way. Thus the pension funds will hardly receive any cash dividends or generate any capital gains, which means that most of the vouchers will simply turn into stocks that have no value.